



Noise modeling results at Merricourt for Layout v69
Coordinates reported in UTM datum NAD83 Zone 14

Receptor ID	Easting [m]	Northing [m]	Noise [dB]
16	490283	5105421	44.92
9	500078	5108882	43.92
17	493302	5105806	43.24
15	495120	5108250	42.94
8	498719	5109392	42.88
5	498236	5110200	42.07
7	493436	5110464	41.94
22	495757	5105037	41.91
6	497191	5110317	40.40
23	492488	5104255	39.52
14	500243	5106869	37.76
25	489541	5104486	37.02
24	490239	5103986	35.81
21	497769	5104152	33.83
2	493612	5112879	32.24
1	493771	5113184	31.43
10	503221	5109799	30.95
3	494256	5113407	30.80
26	497902	5102858	30.73
4	495901	5113848	29.34
18	502098	5105119	29.05
27	500571	5102128	26.73
34	497559	5099194	24.88
13	506005	5107911	24.17
33	501205	5100191	23.81
28	504260	5102971	23.66
32	501750	5100252	23.45
12	506625	5109337	23.14
42	497919	5097919	23.13
35	501219	5098859	22.39
41	496475	5096801	22.32
20	505904	5103621	22.30
11	507698	5110376	21.45
29	506768	5102402	20.70
38	504339	5097824	19.61
39	504524	5097792	19.47
19	509583	5104876	19.06
31	507435	5100144	18.95
40	504993	5096786	18.55
30	508386	5100217	18.31
43	511145	5108851	18.04
36	508449	5099327	17.86
37	507752	5096650	16.98
44	511544	5098216	15.55
45	511147	5096893	15.28

Shadow flicker modeling results at Merricourt for Layout v69
Results for all receptors with more than one hour of shadow flicker per year.

Receptor ID	Easting [m]	Northing [m]	Shadow flicker [hours/yr]
8	498719	5109392	24.7
15	495120	5108250	12.4
5	498236	5110200	11.7
6	497191	5110317	7.6
23	492488	5104255	6.9
7	493436	5110464	5.7
9	500078	5108882	5.4
16	490283	5105421	3.6
17	493302	5105806	3.5

Noise modeling: EDF performed noise analysis on residences within and surrounding the proposed wind farm of 75 Vestas V100-2.0 primary wind turbine locations (150 MW) near Merricourt, ND. All noise modeling assumptions were equal to or more conservative than the refined noise analysis previously reported by EAPC in "Merricourt 187.5 MW Wind Farm Preliminary Noise Analysis Merricourt, North Dakota."

The notable differences are that EDF has modeled the sound power levels at occupied residences at 4 m above ground level [AGL] rather than the 1.5 m AGL previously modeled. EDF also added in a 2 dB buffer to each octave band to take into account the uncertainty within the noise model and any future noise monitoring. Both these changes lead to more conservative results compare to the previous report. The results of this analysis are presented in the table.

Shadow Flicker: EDF performed shadow flicker analysis on residences within and surrounding the proposed Merricourt Wind Farm. All shadow flicker assumptions equal the refined shadow flicker analysis previously reported by EAPC in "Merricourt 187.5 MW Wind Farm Preliminary Shadow Flicker Merricourt, North Dakota." The results of this analysis are presented in the table.

As stated in the EAPC report, the home locations in question have significant wind breaks around the property, so it is likely that actual shadow flicker values would not be as high as reported in the above results.