

2016 Survey in Buffalo Ridge 2 near Toronto, SD

Completed by Mark Junker - B.S. Civil Engineering

Meredith Junker - Dr. Pharmacy

They left Deuel County about a year ago.

There are 24 existing wind turbines in Deuel County according to 2015 satellite imagery. Interviews were conducted with residents who live within 1 mile of the existing wind turbines.

17 Deuel County residences were counted within 1 mile of the existing wind turbines.

There were 13 interviews with Deuel County residents.

The 2 interviews in Brookings County were with residents who live just south of the Deuel-Brookings county line road.

Residents were simply asked what it was like living next to the wind turbines. If a resident voluntarily shared concerns about noise or shadow flicker, some follow up questions regarding the level of noise and frequency of shadow flicker were asked.

All interviews were conducted in person (by Mark Junker) at the residence. All interviews were ended with a question regarding if the owner was receiving any compensation from the wind developer.

NOISE RESULTS

40% Negatively Impacted (Remember they were asked what it was like living next to wind turbines.)

- "it sucks"
- "limit outside activity"
- "never sleep with windows open"
- "noise inside home"

27% Mildly Affected

- "noise really bad in freezing fog"
- "hear turbines in house every winter"

These percentages compare favorably with other surveys that I have read.

FLICKER RESULTS No Flicker was in the Ordinance

33% Negatively Impacted

- “1 / 2 hour morning & evening, Nov. to Feb.”
- “20 min. per evening ,but not summertime”
- “most months of year”
- “happens all the time”

20% Mildly Affected

- “in kitchen – Feb. & Mar.”
- “Feb. & Mar.”

OTHER CONCERNS

- Property Values
- Wildlife
- Flashing Red Lights
- House Vibrating

Conclusion

Although not scientific, there is nothing unique about the residents that were interviewed. Therefore, the sample of people interviewed is representative of the Toronto-White area wind development.

All interviews conducted (both negative and positive) are contained within this report.

There is a wide range of reactions from residents living next to the wind turbines.

There is sufficient evidence from the interviews to demonstrate that a substantial number of Deuel County residents are negatively impacted from noise and shadow flicker generated from wind turbines.

Therefore, the current ordinance does not protect a substantial number of residents from noise and shadow flicker generated from wind turbines.

When current ordinances are not protecting people being forced to live among 2.0MW turbines, what would you expect life among much more powerful turbines such as those proposed here or 4.2 MW in other counties? I have enclosed a comments letter regarding these concerns.

Over the past years I have become acquainted with an Industrial Noise Engineer. William Acker has more than 40 years of experience in his field and is intimately knowledgeable regarding the Shirley Wind Farm. I asked his thoughts on these larger IWT like a 4.2 MW. He replied "They scare the hell out of me."

I asked if I may quote him.

"Yes, and they should scare anyone living near them."

BROWN COUNTY, WI

Shirley Wind Farm declared a "Human Health Hazard" that was the headline.

Why? The Brown Co. Board of Health (BOH) took the time to understand, educate themselves & draw a conclusion with regard to Health, Safety, & Welfare not based on any industry standard.

- The Shirley Wind Farm contained 8 IWT 2.5MW each.
- The assigned Health Officer was directed to take action; Chua Xiong & her Grad. Student, Carolyn Harvey decided to review the literature. The Health Officer concluded: "Currently there is insufficient scientific evidence-based research to support the relationship between wind turbines and health concerns." She further went on that this was her "final decision" and she would only monitor the situation "on an annual basis".

- Some months later, through a Freedom of Information request of emails between Ms Xiong & Ms Harvey, the following was reported: "Carolyn the times that I have been out there at the wind turbines I get such migraine headaches. I think I should take some preventative Tylenol before I head out there." It is not difficult to understand why she would only monitor on an annual basis. And by the way, if they did a review of the literature, they would have known that headaches are a symptom for some of those who are more sensitive to infrasound & low frequency noise.

SD needs to be for Safe Responsible Renewable Energy (SDSRRE). I ask you to please deny this application and use your authority to accept only safe setbacks: 2 miles with a waiver.

Thank You.

George L. Holborn

[REDACTED]

Sioux Falls, SD 57110-7617



SDPUC Docket EL18-026

2 messages

Ruby Holborn [REDACTED]
To: Mark Junker <mark_junker@hotmail.com>

Thu, Jul 5, 2018 at 8:47 PM

Mark,
I would like to disseminate your survey that you did with the residents near Toronto, SD living in the Buffalo Ridge II Wind Farm. When you sign below, you are giving me permission to present your survey to the SD PUC regarding Docket EL18-026.

Thank You.

Regards,
George L. Holborn

Mark Junker: _____

Sent from my iPhone

Mark Junker <mark_junker@hotmail.com>
To: Ruby Holborn [REDACTED]

Sat, Jul 7, 2018 at 9:04 PM

George, you have my permission

Mark

From: Ruby Holborn [REDACTED]
Sent: Thursday, July 5, 2018 8:47 PM
To: Mark Junker
Subject: SDPUC Docket EL18-026

[Quoted text hidden]

Toronto Area Interviews

The purpose of these interviews is to investigate how residents are reacting to living next to the wind turbines south of Toronto in Deuel County.

There are 24 existing wind turbines in Deuel County according to 2015 satellite imagery. Interviews were conducted with residents who live within 1 mile of the existing wind turbines.

According to 2015 satellite imagery, 17 Deuel County residences were counted within 1 mile of the existing wind turbines.

15 interviews were conducted as shown on the following pages. 13 of the interviews were with Deuel County residents. The 2 interviews in Brooking County were with residents who live just south of the Deuel-Brookings county line road.

The number of wind turbines within a mile of each residence is shown on each interview. Distances listed were measured off satellite imagery from the center of the house to the center of the wind turbine. All distances were rounded to the nearest 100 feet. The distances are also shown in miles for informational purposes.

Residents were simply asked what it was like living next to the wind turbines. If a resident voluntarily shared concerns about noise or shadow flicker, some follow up questions regarding the level of noise and frequency of shadow flicker were asked. All interviews were conducted in person (by Mark Junker) at the residence.

Also noted on each interview is any other relevant information that was volunteered. All interviews were ended with a question regarding if the owner was receiving any compensation from the wind developer.

Interview #1 w/ owners June 4 and 12, 2016 Deuel County

Turbine	Distance (feet)	Distance (miles)
1	1200	0.23
2	1500	0.28
3	1900	0.36
4	2500	0.47
5	2900	0.55
6	3300	0.63
7	4100	0.78
8	4700	0.89

Noise:

- describes noise as bad & loud (comparable to jets at an airport)
- noise prohibits the joy of campfires in the evening
- noise prevents house windows from being opened at night

Shadow Flicker:

- describes shadow flicker as bad
- shadow flicker occurs approximately ½ hour in morning and evening from approximately November to February
- can't block the shadow flicker out of the house

Other:

- owners worried about property value
- owners do not receive any compensation from the wind developer

Interview #2

w/ owner

June 4, 2016

Brookings County

Turbine	Distance (feet)	Distance (miles)
1	1300	0.25
2	1700	0.32
3	1700	0.32
4	2300	0.44
5	2300	0.44
6	3000	0.57
7	3100	0.59
8	3300	0.63
9	3800	0.72
10	4300	0.81
11	4500	0.85
12	4600	0.87
13	5000	0.95
14	5100	0.97

Noise:

- complained of noise

Shadow Flicker:

- complained of shadow flicker

Other:

- described living next to wind turbines as "it sucks"
- described a blade flying off of a wind turbine and stabbing in the ground in an upright position – unclear on exact distance the blade landed away from the wind turbine – described distance as "a ways"
- said deer were coming back to the area after being gone since construction of the wind turbines
- owner does not receive any compensation from the wind developer

Interview #3

w/ owner

June 4, 2016

Brookings County

Turbine	Distance (feet)	Distance (miles)
1	1200	0.23
2	2100	0.40
3	2200	0.42
4	2300	0.44
5	2600	0.49
6	3100	0.59
7	3200	0.61
8	3500	0.66
9	4300	0.81
10	4400	0.83
11	4700	0.89
12	4800	0.91
13	5000	0.95

Noise:

- noise really bad in freezing fog

Shadow Flicker:

- shadow flicker around 2 pm from approximately February to March

Other:

- owner does not receive any compensation from the wind developer

Interview #4 w/ owner's adult son October 2, 2016 Deuel County

Turbine	Distance (feet)	Distance (miles)
1	1900	0.36
2	2600	0.49
3	3400	0.64
4	4600	0.87

Noise:

- no noise complaints except can hear wind turbines in the house during the winter
- described moving parts of the wind turbines as louder in the winter (compared it to your vehicle making more sounds in the cold)

Shadow Flicker:

- none

Other:

- complained field/access road washes out
- father (owner) receives compensation from the wind developer

Interview #5

w/ owner

October 2, 2016

Deuel County

Turbine	Distance (feet)	Distance (miles)
1	1900	0.36
2	2200	0.42
3	2800	0.53
4	2900	0.55
5	3600	0.68
6	3700	0.70
7	3800	0.72
8	4000	0.76
9	4100	0.78
10	4200	0.80
11	4600	0.87
12	4700	0.89
13	5200	0.98

Noise:

- no noise complaints

Shadow Flicker:

- owner did not complain of shadow flicker
- owner mentioned that a guest did wonder what the shadow moving across the guest bedroom was

Other:

- only real complaint was they were dealing with some compaction issues in some fields yet due to construction traffic outside of the access roads
- owner receives compensation from the wind developer

Interview #6

w/ owner

October 2, 2016

Deuel County

Turbine	Distance (feet)	Distance (miles)
1	2200	0.42
2	2400	0.45
3	3000	0.57
4	3300	0.63
5	3800	0.72
6	3800	0.72
7	3900	0.74
8	3900	0.74
9	4200	0.80
10	4400	0.83
11	4500	0.85
12	4700	0.89
13	5200	0.98

Noise:

- can hear noise in the house with the windows closed
- claimed noise can be "10 times louder than today"

Shadow Flicker:

- shadow flicker once in a while in the winter

Other:

- owner receives compensation from the wind developer

Interview #7 w/ owner's fiancé October 2, 2016 Deuel County

Turbine	Distance (feet)	Distance (miles)
1	4500	0.85
2	4600	0.87
3	4700	0.89
4	5300	1.00

Noise:

- described noise as light whooshing sound
- no noise problems

Shadow Flicker:

- unknown

Other:

- not known if owner receives any compensation from wind developer

Interview #8

w/ owner

October 2, 2016

Deuel County

Turbine	Distance (feet)	Distance (miles)
1	5000	0.95
2	5000	0.95
3	5200	0.98

Noise:

- noise described as minimal

Shadow Flicker:

- none

Other:

- owner does not receive any compensation from the wind developer

Interview #9

w/ owner

October 2, 2016

Deuel County

Turbine	Distance (feet)	Distance (miles)
1	4500	0.85
2	5100	0.97

Noise:

- describes noise as similar to military aircraft with propellers
- does not sleep with windows open due to noise
- does not wear hearing aids outside to avoid hearing the noise

Shadow Flicker:

- shadow flicker in evenings for approximately 20 minutes
- no shadow flicker in summer time

Other:

- the blinking lights on the wind turbines at night are an annoyance
- had house for sale 79 days this summer, owner's opinion is that there was no interest in the house due to the wind turbines
- owner does not receive any compensation from the wind developer

Turbine	Distance (feet)	Distance (miles)
1	1300	0.25
2	1300	0.25
3	2200	0.42
4	2500	0.47
5	3200	0.61
6	3600	0.68
7	4100	0.78
8	4100	0.78
9	4800	0.91
10	5100	0.97

Noise:

- described noise as bad
- wind turbines are much noisier than they are today
- can hear noise inside the house with windows closed (owner also noted it was a very well built house)

See David
2 DEC 16
AM

Shadow Flicker:

- shadow flicker is a problem most months during the year

high noise
during Hazy
foggy
days

Other:

- owner wants to sell house, but can't
- owner hates the wind turbines
- no geese in the area since construction of the wind turbines
- owner does not receive any compensation from the wind developer

Interview #11 w/ owner October 8, 2016 Deuel County

Turbine	Distance (feet)	Distance (miles)
1	1200	0.23
2	2000	0.38
3	2400	0.45
4	2800	0.53
5	2900	0.55
6	3500	0.66
7	3800	0.72
8	4500	0.85

Noise:

- owner was used to the noise – no noise complaints
- can't hear noise in house

Shadow Flicker:

- no shadow flicker complaints

Other:

- owner does not mind the wind turbines
- not known if owner receives any compensation from wind developer

Interview #12 w/ owner October 8, 2016 Deuel County

Turbine	Distance (feet)	Distance (miles)
1	2500	0.47
2	3300	0.63
3	4100	0.78
4	4800	0.91
5	4900	0.93
6	5000	0.95
7	5100	0.97

Noise:

- described noise as bad
- described a vibration inside the house at times from the wind turbines
- dogs go nuts sometimes due to noise

Shadow Flicker:

- described shadow flicker as happening all the time

Other:

- no geese or wildlife around anymore due to wind turbines
- owner #@!#&% hates the wind turbines
- owner does not receive any compensation from the wind developer

Interview #13

w/ owner

October 8, 2016

Deuel County

Turbine	Distance (feet)	Distance (miles)
1	2700	0.51
2	3000	0.57
3	3500	0.66
4	4100	0.78
5	5000	0.95

Noise:

- owner can hear them
- owner cannot hear them in the house

Shadow Flicker:

- some shadow flicker in kitchen in winter time

Other:

- owner does not receive any compensation from the wind developer

Interview #14

w/ owner

October 8, 2016

Deuel County

Turbine	Distance (feet)	Distance (miles)
1	3300	0.63
2	3700	0.70
3	3900	0.74
4	4100	0.78
5	4400	0.83
6	5100	0.97

Noise:

- can hear noise in the house with the windows closed

Shadow Flicker:

- no shadow flicker problems in the yard

Other:

- complained of erosion in the fields next to the access roads
- says red lights flashing at night on the wind turbines are annoying
- owner does not receive any compensation from the wind developer

Interview #15 w/ owner October 8, 2016 Deuel County

Turbine	Distance (feet)	Distance (miles)
1	2700	0.51
2	2700	0.51
3	3300	0.63
4	4200	0.80
5	5100	0.97

Noise:

- used to the noise
- no noise in the house

Shadow Flicker:

- no shadow flicker

Other:

- couldn't get TV reception with antenna anymore after wind turbines were built
- owner does not receive any compensation from the wind developer

Results

Noise:

- 6 out of 15 (40%) of residents interviewed are negatively impacted by the noise generated from the wind turbines (#1, #2, #6, #9, #10 and #12)
- 4 out of 15 (27%) of residents interviewed are mildly affected by the noise generated from the wind turbines (#3, #4, #13 and #14)
- 5 out of 15 (33%) of residents interviewed are not affected by the noise generated from the wind turbines (#5, #7, #8, #11 and #15)

Shadow Flicker:

- 5 out of 15 (33%) of residents interviewed are negatively impacted by the shadow flicker generated from the wind turbines (#1, #2, #9, #10 and #12)
- 3 out of 15 (20%) of residents interviewed are mildly affected by the shadow flicker generated from the wind turbines (#3, #6 and #13)
- 7 out of 15 (47%) of residents interviewed are not affected by the shadow flicker generated from the wind turbines (#4, #5, #7, #8, #11, #14 and #15)

Other:

- 1 resident interviewed reported devaluation of property due to the wind turbines (#10)
- 1 resident interviewed claimed difficulty selling house due to the wind turbines (#9)
- 1 resident interviewed worried about property value (#1)
- 3 residents interviewed reported wildlife has been negatively impacted due to the construction of the wind turbines (#2, #10, and #12)

Conclusion:

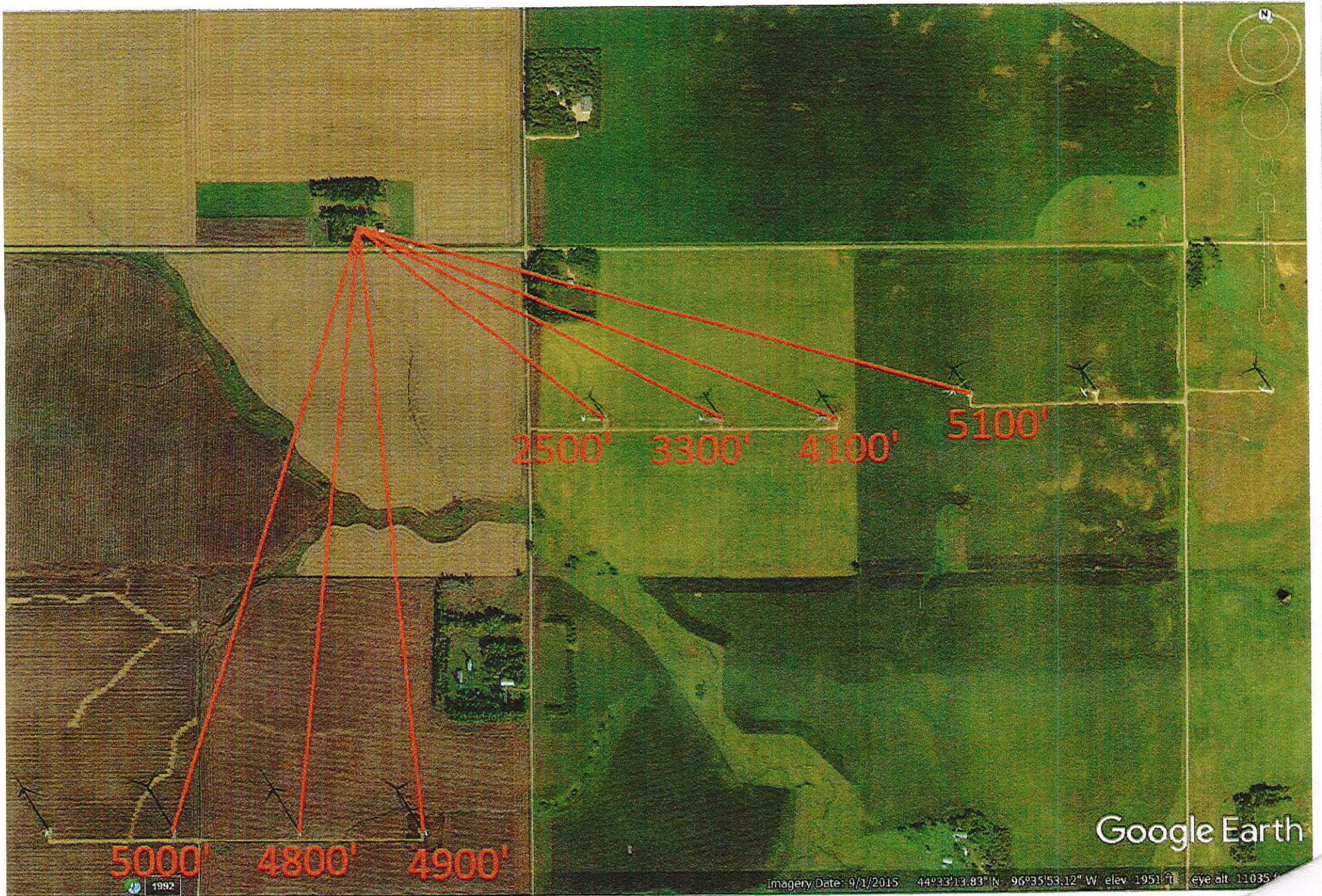
Although not scientific, there is nothing unique about the residents that were interviewed. Therefore, the sample of people interviewed is representative of the Toronto – White area wind development. All interviews conducted (both negative and positive) are contained within this report.

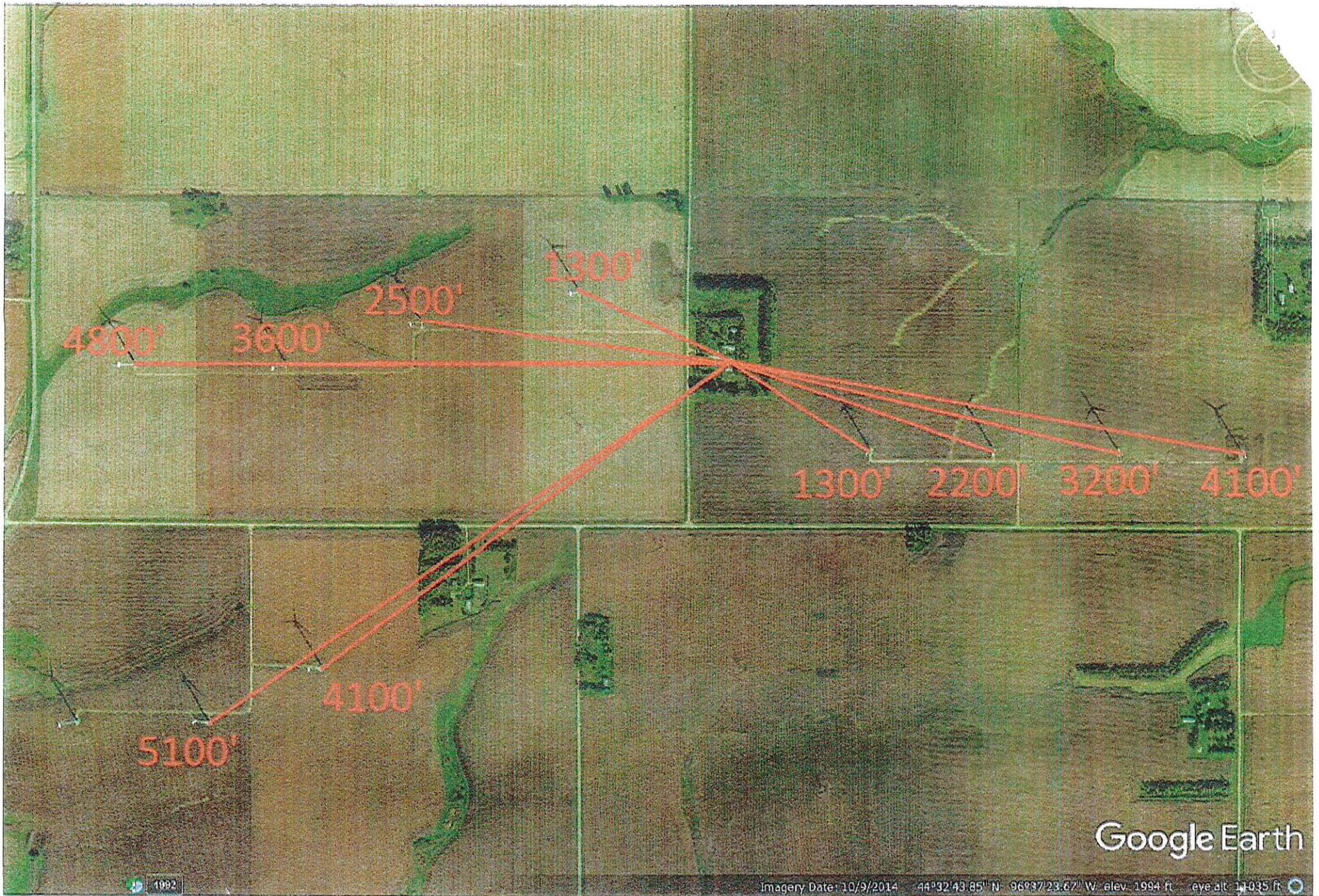
There is a wide range of reactions from residents living next to the wind turbines.

There is sufficient evidence from the interviews to demonstrate that a substantial number of Deuel County residents are negatively impacted from noise and shadow flicker generated from wind turbines.

Therefore, the current Deuel County ordinance does not protect a substantial number of residents from noise and shadow flicker generated from wind turbines.

Interview
#12





EL18-026 - In the Matter of the Application by Prevailing Wind Park, LLC for a Permit of a Wind Energy Facility in Bon Homme County, Charles Mix County and Hutchinson County, South Dakota

EL18-003 - In the Matter of the Application by Dakota Range I, LLC and Dakota Range II, LLC for a Permit of a Wind Energy Facility in Grant County and Codington County, South Dakota

George L. Holborn 07/09/2018

My wife and I have been following the SD Wind Energy Dockets EL17-055 Crocker Wind Farm and EL18-003 Dakota Range Wind Farm. I find of special interest Mr. Hessler noted the ambient in Clark County was 15-21 dba (quiet). Other acousticians suggest when the ambient is exceeded by 10 dba, the new noise become dominant (possible annoyance/sleep deprivation). You may recall southern Lincoln County, SD had an ambient of 26 dba. I know of no reference made regarding an ambient for Codington or Grant County. I would imagine the ambient would be comparable.

What are Mr. Hessler's thoughts on the above?

We understand with every increase of 10 dba, the receptor perceives a doubling of the noise. How would Mr. Hessler compare a 20-25 dba average increase over ambient at a non-participating receptor with the computer models offered by Dakota Range?

In the early 1980's, complaints as far as 1.8 miles from an experimental 2.0 MW industrial wind turbine (IWT) were documented. You and Mr. Hessler know this history, but I think it is worth mentioning. Dr. Neil Kelly (a physicist) conducted extensive research on IWT. The Wind Industry was included in this research. Subsequently, the wind industry began installing much smaller turbines than the 2.0 MW that elicited complaints as far away as 1.8 miles. For instance, in 1993 the first IWT installed on the Buffalo Ridge near Lake Benton, MN were 0.75 MW output. These smaller turbines presented few or no complaints except for vista, day and night. At the turn of the century, the Wind Developers determined more money could be made with a larger turbine. As the output increased the complaints increased. Sleep deprivation being one of the most frequent complaints and as Mr. Hessler pointed out a small percent in extreme cases people left their homes. Is it possible a non-trivial % of non-participants want to leave?

To the best of my knowledge, turbines in the 1.5 - 2.5 MW size can and have abandoned homes. I am aware Mr. Hessler collaborated with [REDACTED] on a study of the Shirley Wind Farm in Brown County WI. This Wind Farm consists of eight 2.5 MW IWT's. Homes were abandoned out to 1.38 miles from the nearest turbine. The Shirley Wind Farm was declared a Human Health Hazard by the Brown County WI Board of Health. The MN Dept. of Commerce claims there are no 4.2 MW turbines operating in MN and I know of none operating in SD. The larger the turbine equals more money and more complaints. Does Mr. Hessler share the concerns Robert Rand has with these larger IWT? Would Mr. Hessler know what the relative amount of infrasound (in general) from a 2.0 MW vs a 4.2 MW output? I don't think it is directly proportional, it may be more. Perhaps the question should be:

Does the Wind Developer have scientific data that a 4.2 MW IWT will not give rise to sleep disturbance?

Does Mr. Hessler believe the Dakota Range computer models account for worst case scenarios? As I understand from both visiting with those living among the turbines and my readings, many problems are realized during evenings when wind is calm at the receptor but 4-500 feet above the wind may be blowing fast enough for the turbines to operate at or near peak efficiency. This coupled with associated weather conditions, for example foggy periods, others report winter is more problematic. One family complained their home would occasionally vibrate (1-2x per year). The nearest 2.0 MW IWT is nearly half a mile away. At the same time a dog was howling and the horses were milling around in the corral. I grew up on a ranch and when the animals were aroused, they were sensing something we did not sense. When this happened at least one of us would reach for a rifle or shotgun. I have not heard of any reports that the Governor's mansion occasionally vibrates. It seems to me a computer model, or an ordinance for that matter, of 40-45 dba average (Mr. Hessler's numbers) is of little consolation for the receptor if a period spike as high as 68 dba or infrasound he or she can or cannot hear but can feel and said person is awoken by spike or is trying to go to sleep.

What are Mr. Hessler's thoughts on the above "run-on" sentence?

Admittedly people are different. For example my wife and I may be awoken at 2am by whatever noise. She can fall asleep in a few minutes, but I maybe awake for the day.

Deuel County, November 2016 at a Zoning Board Meeting, three people testified about their life among the turbines. All reported a sense of hopelessness in that no one, including the Wind Developer or any government entity, cared about their family's plight. Two, as it seemed to me, looked as though they were just plain worn out (tired). Two of the three were called liars by wind proponents. At a subsequent meeting one was asked to leave. They didn't use those meetings as an opportunity to lie; they saw it as a chance to warn us of our future when more are forced to live among the turbines. It is not difficult to understand why others refuse to come forward to tell their story about life among the turbines. It is more preferable to sell your property and quietly leave. By the way, these people live in Buffalo Ridge II Wind Farm based in Brookings County and in southern Deuel County just south of Toronto, SD. These turbines are a 2.0 MW output. They were among a number of people surveyed by Mr. Mark Junker, a civil engineer. He submitted his survey to Deuel County Zoning Board in the fall of 2016. This survey provides a window of life among the turbines in SD. Mr. Junker and his family moved out of Deuel County more than a year ago.

Some of Mr. Hessler's peers, (independent acousticians), have indicated a number less than 40 dba average would be more appropriate. I found Mr. Hessler's comments on Steven Cooper's work of great interest. Does Mr. Hessler agree with Cooper's assertion in the Master Resource interview on page 4 "dBa doesn't work"? Does Mr. Hessler agree with Cooper's assertion on page 6 "What you can't hear cannot hurt you, is incorrect"? What are Mr. Hessler's thoughts on Cooper's comments on page 11 "The residents report greater sleep disturbance over time and more people have had to abandon their homes."? Does Mr. Hessler agree with Cooper "Sleep is the problem. "And also sleep deprivation associated with living among the turbines is more than a non-trivial number of people? Mr. Hessler's thoughts on the last two pages of the Master Resource interview may provide insight or knowledge to help us understand what many people must endure living among the turbines and why.

Regarding Mr. Lawrence's testimony, my understanding is a larger body of evidence and more time to draw a conclusion one way or another would be beneficial. Beyond that, my interpretation of his testimony is a buyer is reluctant to admit it was a mistake to purchase a residence among the turbines, but when the residents are forced to live among the turbines; those people are more likely to find it objectionable. They could find problems with annoyance and or sleep deprivation. I noticed a similar situation in the Junker survey; those who are or have a family member being paid by the Wind Developer are reluctant to complain. For me, I am unable to live among the turbines. I cannot imagine all things being equal; anyone would choose to live among the turbines. Property values may not go down, but they may not increase at the pace of those 10 miles away. I have asked a number of Wind Developers if they live in a wind farm; none do. Why?

We asked several politicians, local and US delegation. None wanted to live among the turbines.

██████████, Lake Benton, MN is maybe the only exception. At that time he claimed to be both a politician and wind developer. He also claimed he lived 750 feet from a 2.6 MW turbine and Lake Benton had turbines right next to the lake. Actually the nearest turbine to the lake was roughly a mile away. The largest turbine in the area was 1.5MW and it was 1504 feet from his home. By the way, he stated flicker does not bother him. Flicker bothers me. The first time I encountered flicker was East of White, SD on Hwy 30. It was a bright spring day near lunchtime. I immediately became disorientated and pulled onto the shoulder of the road. It is difficult to show statistical significance in this matter; however, ask anyone; ask yourself; all things being equal, would you rather live among the turbines or live somewhere else?

At a 2016 Deuel County Zoning meeting, a wind developer proclaimed a residential property value would increase right along with adjoining farm property. The attendees of about 150 people roared with laughter. Since I was a board member, I was able to ask him again. He continued when we explain to you (us) how it will happen we will agree. The crowd roared with laughter again. I listened several hours at two additional meetings and property values were never ever brought up again. When I offered a phone interview between our County Commissioner and a well-known RE Appraiser, our County Commission never found the time. The only information our Zoning Board and County Commission had on property values was provided by the wind developer.

In all the meetings (a considerable number across eastern SD) of County Planning and Zoning Board, County Commissions, and SD & MN PUC, it seems that wind developers offer only the information they feel necessary for project approval. "The truth, the whole truth, and nothing but the truth" has never been a consideration. The non-participating receptor has been no more than a minor footnote in the rules for project approval. There are so many known unknowns regarding life among the turbines. Dakota Range Docket EL18-003 should be denied and a moratorium on any future project until the information vista is clear.

Finally, when the non-participating receptor is no longer forced to bear the burden, both emotional and financial, this political exercise in crony capitalism will no longer require so much needless attention. The solution, in my estimation, exists when the non-participating receptor is no longer forced to live among the turbines. The wind developer should be required to negotiate a contract with all those living among the turbines, participating and non-participating receptors, alike. The solution should be a 2 mile setback with a waiver and when these larger turbines are used a greater setback should be considered. The participating as well as the non-participating receptors is treated equally under this regime. The wind developer must negotiate with the non-participating receptor as if he was a participant and he or she will help determine the distance to the nearest turbine.

With that I would like to thank the PUC staff or whoever thought it would be useful to include Mr. Hessler and Mr. Lawrence in the process. My wife and I found Mr. Hessler and Mr. Lawrence's testimony of great interest.

Thank You so much.

Regards,

George L. Holborn

[REDACTED]

Sioux Falls, SD 57110-7617