Date: August 28, 2020

Public Hearing: 18-1607-EL-BGN: Emerson Creek Wind Farm Project

Speaker: Cheryl Mira
11110 State Route 269
Bellevue, OH 44811
Erie County, Groton Township

Good Afternoon, Chairman Randazzo & Other OPSB Members:

When I think about the Emerson Creek Wind Farm project and all of its supporters that has enabled this project to get to this point…

I become angry/ frustrated regarding the rich tapestry of lies, deception, destruction, greed, and secrecy. Big Wind with its claims of producing green energy is really promoting the biggest scheme of modern time to transfer wealth from the poor to the rich.

Moving onto the Karst, the Staff Report (page 37) identified six turbines along State Route 269 – four Turbines (34, 37, 38 and 87) on the south side of Bellevue and two Turbines 73 and 74 just north of town and Knauss Road. ***(See Attachment I)*** While Turbine 74 is the closest to a known sinkhole (approximately 0.15 mile), there are so many sinkholes (identified and suspected) within a mile radius of each turbine listed.

The karst formations are arguably the most important reason why a wind farm should not be built in this area. All 6 of these turbines fall within the six-mile wide karst zone from Seneca Caverns to the Blue Hole, where thousands of sinkholes exist and the underground waters flow directly into Lake Erie. ***(See Attachment II, pages 4 & 5)***

I can attest to that, my mother and I live 1.0 mile south of Turbine 74. Over my lifetime, I have seen sinkholes develop overnight, grow bigger, and water rush over the highways surrounding houses.

Furthermore, Firelands Wind does not address the potential for oil finding its way into Lake Erie, should a turbine fail. It is not acceptable to put Lake Erie at risk nor is acceptable to place a highly-populated, rural community in danger also.

Please deny these 6 permits.

Moving onto the Report's, **Socioeconomic Impacts** (page 34). The report identifies a list of economic benefits related to job creation (primarily jobs for out-of-area contractors) and property taxes increases for the life of the project.

There may well be economic benefits, but they have failed to address the economic deficits, resulting in the **biggest transfer of wealth** from the little people to corporations. Their model is to promote "property value devaluation without compensation" in order to "grow" even more wind farms at the expensive of the little people.

Would you purchase a home within one or two miles of a 652-foot industrial wind turbine, aka 60 story skyscraper? **No!** Our view shed will be forever changed. From our house, we will see 11 IWTs *(previously stated 9)* in total – 2 will be north of us by one mile (Turbines 74 and 73) and another 9 will be east of us between Route 269 and Route 4 within 2 to 2.5 miles. Big Wind wants to force homeowners to abandon their biggest investment or to sell their homes at 25% to 40% less than its fair market value, if a wind turbine wasn't your neighbor. More wind farms follow.
(See Attachments III & IV)

Today, I am asking the State of Ohio to pull the plug on renewal tax subsidizes just as Mexico recently announced. Mexico has chosen to redirect taxpayers' dollars from production tax credits to helping the community fight the pandemic. Safety of the residents should come first. We don't need wind energy here at the expense of destroying our entire communities – Bellevue, Monroeville and Flat Rock. ***(See Attachments V & VI)***

Third, wind turbines and solar farms will make Ohio residents "energy poor". Once these farms are up, utility companies will pass the costs of maintaining dual transmission systems onto all electrical users. Energy rates have the potential to go up as much as 4% to 25% higher just like California, Germany, and Italy; thereby forcing some residents to make decisions on which bills get paid. ***(See Attachment VII)*** *I have personally experienced Italy in the cold weather, the entire country is forced to turn off all furnaces from April 1 through November/December 1st to preserve their electrical resources, or face stiff fines. Electrical prices are so high. Can you see the United States residents supporting this decision?*

All three of these elements need to be deducted against the socioeconomic benefits.

Due to the time constraints, I indicated that I would be providing additional information.

Continuing with Property Values and Placement of the Turbines. Location, Location, Location!

If approved, every one of the proposed 71 industrialize-size wind turbines in the Erie and Huron counties would be built too close to:

- **Non-participating and non-suspecting Bellevue residents**, for example:
    - Turbine 24 (Bauer and Prairie Road's grouping of 4 turbines) would sit less than 0.5 mile from Bellevue Reservoir #4 and within 1.3 miles of Bellevue Reservoir #1, 2 and 3. This could significantly impact the entire City of Bellevue's water quality if a turbine failure allowed oil to enter the karst's underwater table. ***(See Attachment VIII)***
    - Please see **Attachments IX and X** or the maps that I sent to Columbus, highlighting the one-mile and the two-mile radius , respectively, around Turbine 24, which clearly identifies major sections of Bellevue's East and Northeast sides being negatively impacted. Turbine 24's two- mile radius sweeps:
        - West: from Monroe St/Bauer Rd/VFW Hall to downtown's historical Tremont Hotel (center of town),
        - East: primarily farmland or empty land (pass Route 4 and the former Jolly Lanes),
        - North: from Tremont Hotel to Goodrich Road/just short of Shumaker School, and
        - South: primarily farmland.

  I am in the process of finalizing the homes and businesses impacted. My best guess would be approximately 2,000 residential households plus 50/100 businesses. Please deny the permits for these 4 turbines until proper buffering is put in place to keep Bellevue, Monroeville and Flat Rock safe.

- **Major highways such as State Route 4**
    - As traffic flows from Columbus/Bellevue to Sandusky, there are three (3) turbine permits that should be denied because of safety. Each turbine would be built closer than the safety manual recommendation of 3,280 feet. How does Firelands Wind plan on stopping vehicles and trucks from not using State Route 4 on their way to the Ohio Turnpike or to Sandusky when it rains? ***(See Attachment XI)***

- An actively working stone quarry that frequently dynamites has two turbines (T1 and T2) on its rim is unsafe. Does the Quarry plan on closing down? Deny these two permits ***(See Attachment XII)***

Moving onto Pages 55 and 56: Decommissioning

Megawatt-scale wind turbine generators typically have a life expectancy of 20 to 25 years. The current industry trend is to upgrade older turbines with more efficient ones while retaining existing tower structures. If not upgraded, turbines typically go into a period of non-operation and, where no expectation of re-operation exists, are generally decommissioned at such time.

Decommissioning megawatt-scale wind turbines in a utility-scale project involves the reclamation and restoration of the project area's topography that existed prior to construction. Decommissioning activities include, but are not limited to, removal of turbine structures, partial removal of turbine foundations, and removal of associated facility components. Additionally, the turbine foundation areas must be backfilled, graded, top soiled, and re-seeded. In accordance with Ohio Administrative Code 4906-4-09(I), the Applicant has committed to providing a decommissioning plan to Staff and the Huron and Erie County engineers at least 30 days prior to the preconstruction conference that includes the removal of the facility components and provides financial assurance to ensure that funds would be available to decommission the project.

A fully funded decommissioning plan must be a part of the application, and must be assessed by the OPSB prior to approval of the project. Approval of the project without such a plan puts the local population at risk. Remember, this is not a single-site generating facility. Even without a statutory requirement to provide such a plan, the OPSB has it within its power to require it.

Final Observations

These are hard decisions that the OPSB needs to make. They will be life alternating for everybody for or against this project. The community is divided and that rift will only get bigger.

As Warren Buffet has indicated, if you give me a credit, I will build a wind turbine. Firelands Wind is a business entity with partners who can write every investment dollar off on their taxes. The little people will walk away with little compensation when they abandon their homes or sell at a fraction of their life investment/dreams. Some people might not be able to recover from this destruction.

Thank you for allowing me to incorporate more material.

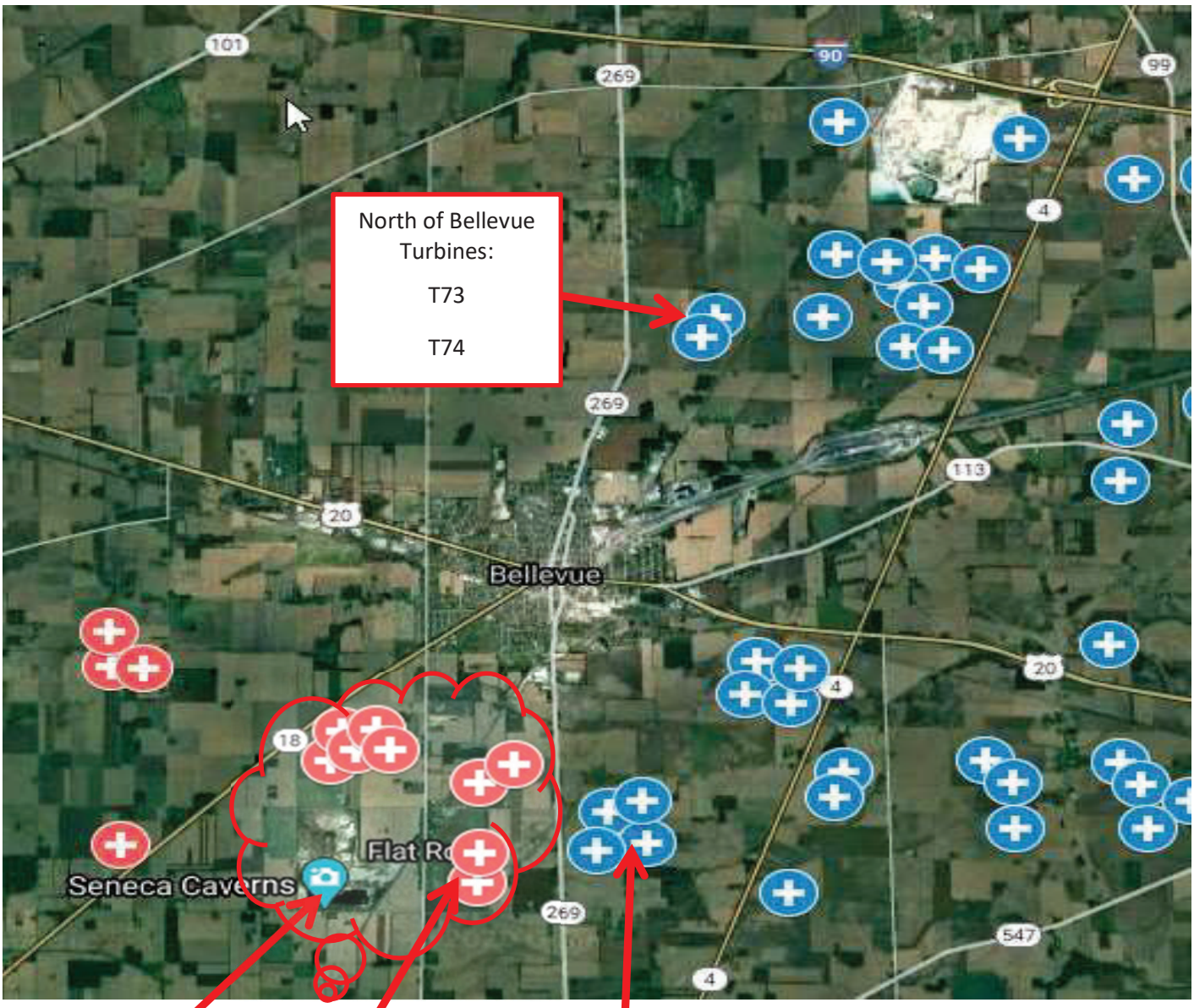
Cheryl Mira

ATTACHMENT I

Emerson Creek Wind Farm

Turbines Around Bellevue, Ohio

Turbines Within the Bellevue-Castalia Karst Zone



North of Bellevue Turbines:

T73

T74

Seneca Caverns

Republic Wind Farm

Turbines in Karst Area

T40, T42, T39, T41, T43
T46, T47
T45, T44

South of Bellevue Turbines:

T34 T87

T38 T26

Attachment II

Karst:

- ODNR: Ground Water Induced Flooding in the Bellevue, OH area

Spring & Summer 2008 (select pages)

Ground Water Induced Flooding in the Bellevue Ohio Area Spring and Summer 2008

ODNR—Division of Water

James Raab, Bill Haiker, and Wayne Jones

and

ODNR—Division of Geological Survey

Michael Angle, Rick Pavey, Mac Swinford, and Donovan Powers

ODNR Division of Water Technical Report of Investigation 2009-1

January 2009

Ground Water Induced Flooding in the Bellevue Ohio Area Spring and Summer 2008

INTRODUCTION

On March 18, 2008 ground water levels rose to 40-year-high levels in the Bellevue, Ohio area. Sinkholes, rounded depressions in the landscape formed by solution of bedrock or collapse of an underlying cavity, which typically accept surface water, were acting as springs. Flooding of fields, roadways and homes occurred because of the lack of a defined surface drainage. The purpose of this report is to outline the geologic, hydrologic, and meteorological conditions that led to the flooding experienced in the vicinity of Bellevue, Ohio in the spring and summer of 2008. Figure 1 is a map showing the areas that experienced flooding. A combination of geologic conditions present at the surface and near-surface, and unique increases in precipitation, created a situation where a rising ground water table breached the ground surface, flowed from existing sinkholes, filled existing closed basins and karst features, and drained slowly over the course of months.

SUMMARY OF HYDROLOGIC CONDITIONS

Unlike most flooding events caused by surface water runoff, the flooding that occurred in and north of Bellevue in the spring and summer of 2008 was caused by excessive ground water upwelling through near-surface openings in the underlying limestone bedrock. Although this phenomenon is common to the north of this area as represented by the perpetual flow from the "blue holes", flooding due to upwelling ground water in the area in close proximity to Bellevue has happened only six times since 1800. The last two occurrences prior to 2008 were in 1969 and 1937. All three of these occasions were in response to heavy precipitation events.

Ground water supplies are replenished by precipitation; especially by the rain and snow that falls from November through April, a period referred to as the ground water recharge season. Record and near-record amounts of rain had fallen throughout much of Ohio during the recharge season of 2008. Cumulative precipitation from October 2007 through March 2008 in the North Central climatic region of Ohio, which includes the Bellevue area, had totaled a record 23.55 inches, 9.14 inches above normal (Kirk, 2008). This surpassed the previous record of 21.56 inches set in 1898. Ending this wet period was near-record precipitation that fell in March, averaging 5.41 inches for the north-central region, making it the third wettest March in the past 114 years. Much of this precipitation fell as snow and did not melt until mid-month. Due to the karst geology in this area, much of this surface water flowed into the sinkholes causing the ground water levels to rise.

GENERAL GEOLOGY

The Bellevue area surface and near-surface geology is unique, creating a situation which allowed the unusual karst flooding to occur in a localized area. Beneath the city of Bellevue and areas to the north and south of the city is a six- mile-wide band of limestone bedrock, the Delaware and Columbus Formations (denoted as Dc and Dd on Figure 2). This band trends in a generally north-south direction from Lake Erie through Central Ohio. The Olentangy Shale (Do) and Ohio Shale (Doh) are younger bedrock formations that overly the Delaware Limestone to the east. The Salina Dolomite (Ss) underlies the Columbus Limestone and is present at the surface to the west. Contacts between the bedrock units generally run north and south because of the gentle eastward tilting of the bedrock units as they descend into the Appalachian Basin to the east. Figure 2 is a bedrock geology map of north central Ohio.

The Columbus Limestone, and to a lesser extent, the Delaware Limestone are prone to the formation of sinkholes, caves, and caverns (collectively called karst) due to the dissolution of the high-calcium, generally coarsely crystalline nature of the rock. Slightly acidic ground water flowing through pore and fracture spaces in these formations dissolve the limestone and result in the numerous karst features in this localized area. Collapse of more competent limestone above the solutioned zones has formed some of the caves and caverns in this area. Seneca Caverns, the largest cavern in northern Ohio, was formed in this manner. Appendix A shows a typical progression in the development of karst geology. The Olentangy Shale and Ohio Shale to the east are not prone to the formation of karst. Thus, karst features abruptly stop near the interpreted contact with the Delaware Limestone and the overlying Olentangy/Ohio Shale. Figure 3 shows the area prone to karst features. To the west, the Salina Dolomite is near the surface, but dolomite (chemical composition of Mg Ca CO_3) is less prone to dissolution than limestone (chemical composition of Ca CO_3) and therefore karst formation is less frequent or developed.

The glacial geology of the area also contributes to the development of karst in the Bellevue region. Ice Age glaciers covered north central Ohio on several occasions and commonly deposited 50 or more feet of clay-rich glacial till. However, in the Bellevue area the thickness of the glacial drift is commonly less than 20 feet or not present at all. The lack of glacial till allows

Figure 1.—Location map of the study area..

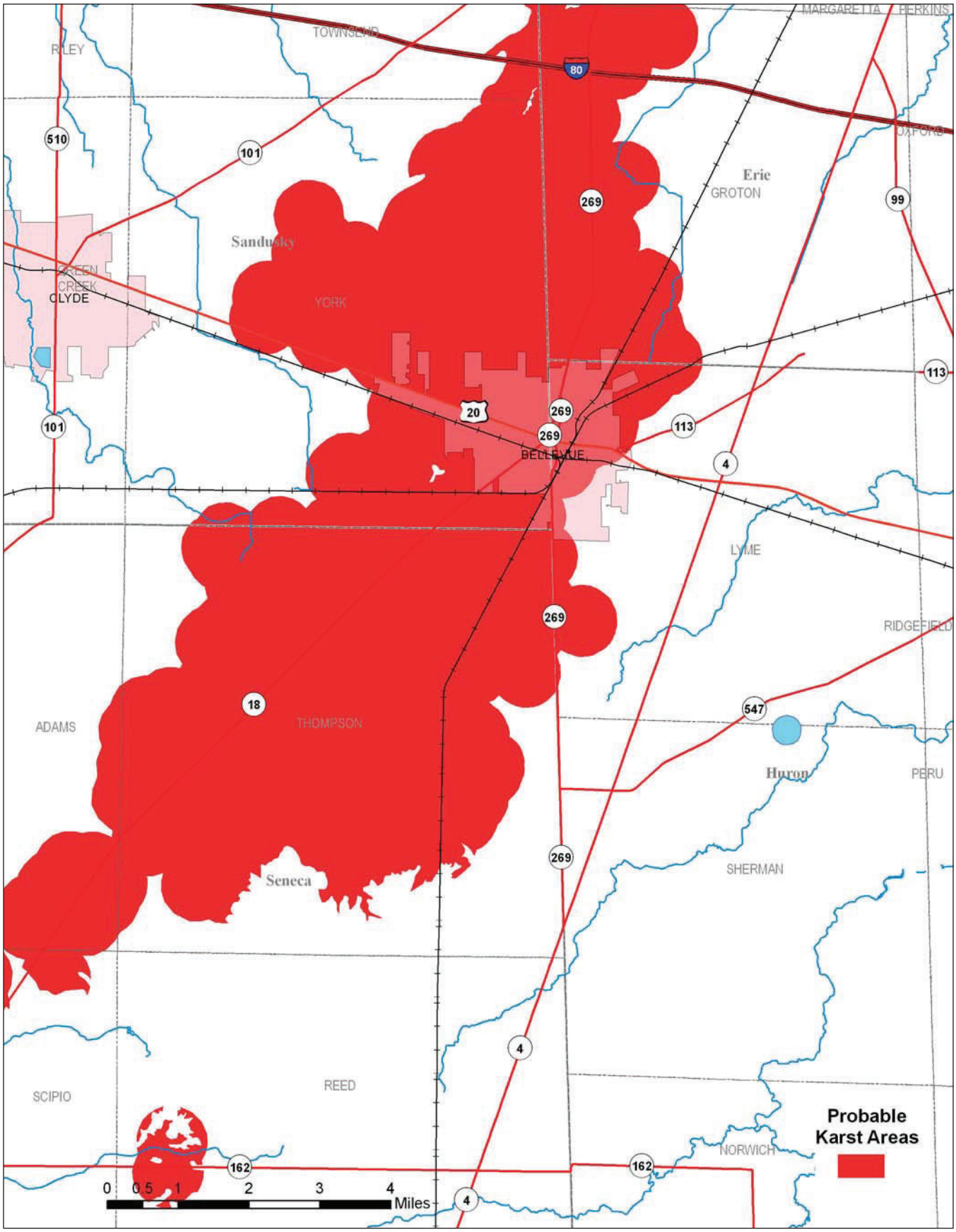


Figure 3.—Karst areas in north central Ohio. Modified from Known and Probable Karst, Pavey, R. et al.

the surface water direct contact with underlying limestone and provides more opportunity for dissolution. The drift thickness map (figure 4) shows the approximate areas of less than 20 feet of glacial drift. Karst is generally best developed where thin drift overlies the Delaware and Columbus Limestones. One potential reason for the thinner glacial drift in the vicinity of Bellevue is that the Columbus Limestone was resistant to erosion and formed a ridge that impeded glacial erosion and minimized deposition. Another cause is that the Bellevue area was inundated by waters of Lake Maumee and other ancestral lakes, and wave erosion from these lakes stripped much of the previously deposited drift away. Prominent sandy beach ridges associated with these ancestral lakes are visible just to the west of Bellevue and Castalia. The Columbus and Delaware Limestones are subject to dissolution where highly permeable sandy beach ridges overlie these units and thick clay deposits are absent. Thicker drift deposits covering the Delaware and Columbus Limestones probably protected the units from contact with significant amounts of surface water, preventing initiation of large dissolution features. Other regions of the state that have well-developed karst features, such as along the Scioto River in Delaware and Franklin Counties, and portions of Highland and Adams Counties, occur in limestone and dolomite units in areas of thin glacial drift or areas in which glacial drift is absent.

Joints (breaks in rock along which no movement has occurred) are found throughout the local bedrock formations. Regionally, the joints in bedrock generally trend NE-SW and NW-SE and are natural pathways for ground water to flow within the rock formations. These narrow joints are widened through the dissolution of the limestone by the surface and ground water that flows though them, leading to the eventual widening of the joints into a pathway. The northeast-southwest trending joints play a particularly important role in the travel of ground water in the Bellevue area and are crucial to understanding the karst flooding along the trend.

The relationship between these joint patterns and sinkholes is complex and variable. Two adjacent sinkholes may or may not be interconnected by joints. Water will preferentially flow along certain joint patterns. The net result is that different sinkholes are able to accept water at different rates, and in reverse may "flood" areas with different intensities if hydraulic pressures build up like they did in the spring 2008.

GROUND WATER LEVEL RESPONSE TO HEAVY PRECIPITATION

The presence of over 1000 sinkholes in Thompson, York, Lyme, and Groton Townships allow surface water to flow directly into the ground water system. Surface runoff flows into these sinkholes. With no soil present to act as a filter, millions of gallons of water were able to flow into the ground water system over a short period of time, causing a quick rise in the water table level. Sinkholes located north of Bellevue that typically accepted water became springs because the water table had risen above land surface.

A 1992 ground water study conducted by the ODNR - Division of Water (DOW) determined that ground water levels in Thompson Township of Seneca County had risen 27 feet in four days in response to receiving less than 3 inches of rain (ODNR, 1994). After 17 days, the water table had declined only 14 feet. Another storm later that same year dropped approximately 5 inches of rain over a six day period. Ground water levels increased almost 50 feet in three days. After one month of intermittent rains, the ground water level was still 30 feet higher than before the initial 5-inch rainfall event. It would take approximately 70 days to return to pre-storm level if little to no precipitation occurred.

Dick Bell, owner of the Seneca Caverns, noted that on April 1, 2008; the ground water level at the Caverns was approximately 35 feet below land surface (pers. comm., 2008). By July 28, the ground water level had dropped approximately 47 feet or to 82 feet below land surface. This translates to an average rate of decline in the aquifer of 0.4 foot/day. Mr. Bell noted that during dry times the water table dropped 8-12 inches/day but after different rainfall events, the water table stabilized for one to two days at a time.

Spring discharge data has been collected by personnel at the Rockwell Springs Trout Club. This spring is located near the intersection of County Roads 310 and 247 in Sandusky County and is down-gradient of the flooded areas. Data for the past 18 years was sent to the DOW. This spring is very responsive to precipitation events, which indicates that it is connected to the shallow ground water flow system. Data for 2007 and 2008 shows that the spring discharge was slightly above normal starting in December 2007, but then peaked the third week of March, more than doubling the average flow for that time period (see Figure 5). Spring discharge stayed above average until the third week of August.

The DOW has been in the process of mapping the potentiometric surface within the aquifers in Ohio. These maps, which use existing water well record data, show the direction and gradient of ground water flow. By using these maps, the ground water capture zone for the flooded areas in York and Groton Townships was determined to be approximately 57,000 acres in size. Figure 6 shows the approximate ground water recharge area that contributed to the flooding. This area encompasses most of Thompson Township and portions of Reed, York, Lyme and Groton Townships. Most of this area, especially Thompson and York Townships, has minimal surface drainage because of the high concentration of sinkholes. Ground water recharge is

almost instantaneous in these areas as surface water enters the sinkholes. Assuming 30% of the precipitation that falls within the capture zone drains into the sinkholes and thus the aquifer, of the 5.41 inches that fell during March 2008, approximately 2.5 billion gallons recharged the aquifer. Since the air temperature was fairly cool in March and evapotranspiration was low, the amount of precipitation that entered the ground water system could have been higher.

SYNOPTIC GROUND WATER LEVEL SURVEY

On September 3, and October 22, 2008, personnel from the DOW measured the depth to water in 26 water wells in the area north and west of Bellevue, Ohio. This area lies within both Sandusky and Erie Counties. This is the area that experienced the most severe ground water flooding during the spring and summer 2008. The purpose of the study was to record synoptic ground water levels and to document the changes in the water table in the limestone aquifer.

Table 1 shows the data that was collected in addition to the existing information obtained from the water well records on file with the DOW. The original static is the depth from land surface to the water table as measured by the driller when the well was installed. The M Static 9/3/08 and M Static 10/22/2008 columns record the depth to water measured by DOW personnel on those dates. The Water Level Difference column is the difference between the October 22 static water level and the September 3 static water level. A negative number indicates that the ground water level was higher on September 3 than on October 22, 2008. All but two wells had a higher ground water level on September 3rd than on October 22nd.. The average decline in ground water levels over this 49 day period was approximately 7 feet. This translates to a decline in ground water levels of approximately 2 inches/day. Using flood elevation data collected by the Erie County Engineer's Office as a high ground water level mark, ground water levels have declined 45-50 feet in the heaviest hit areas since the end of March. This is equivalent to a decline in the ground water levels of approximately 3 inches/day. Of the 26 wells that were measured, the average depth to water was within one foot of the average static water level measured when these wells were drilled. This indicates that ground water levels had returned to near-normal conditions by the end of October.

Contour maps were created using the data from both synoptic water level surveys (see Figures 7 and 8). These maps show the locations of the wells that were measured along with the corresponding elevation of the water table that was measured. This data was contoured using a 10-foot contour interval. Ground water flows from areas of high elevation to areas of lower elevation, in a direction perpendicular to the contour lines. From Figures 7 and 8, it shows that ground water flows from the west, south and east into the area that experienced the worst flooding. Synoptic water level data collected in Thompson Township in the early 1990's also support this finding (ODNR, 1994). The orientation of this ground water low coincides with the orientation of the major joint trend observed in the Columbus Limestone.

A contour map was created that shows the change in ground water over this 49-day period (see Figure 9). There is a band of wells that measured greater than a 10-foot decline. This band trends in a northeast direction and coincides with the center of the ground water basin. This is the area that experienced the most prolonged flooding. The well located at the corner of State Route 269 and Portland Road shows a much higher static water level elevation. After examination of the water well record, it appears that this well did not intercept any cavities or fractures. The original test rate was 8 gallons per minute (gpm) with total drawdown after one hour. Wells that encounter fractures or cavities can be pumped at rates exceeding 100 gpm (Walker, 1986). The well located on Deyo Road that was measured in this study shows similar ground water fluctuations. The characteristics of these two wells indicate that these wells do not intercept any major fractures or cavity zones. Ground water flow to these two wells is through primary porosity.

CONCLUSIONS AND RECOMMENDATIONS

The extent and duration of flooding that was experienced in and north of Bellevue during the spring and summer 2008 was not the typical sporadic surface flooding of a few sinkhole basins. The flooding during this time period was due to the ground water levels rising above ground level in many sinkhole basins. Record October 2007 to March 2008 precipitation levels, culminating with 5.41 inches of rain in March, added billions of gallons of water into the aquifer. The last two times this type of flooding has occurred in this area were in 1969 and 1937.

The formations present in this area that are favorable for karst development are the Columbus Limestone and to a lesser degree the Delaware Limestone. These limestones outcrop in a six-mile-wide band that trends almost north-south. The thin-to-absent glacial drift over these limestones makes the Bellevue area prime for karst development. Regionally, the joints in bedrock generally trend NE-SW and NW-SE and are natural pathways for ground water to flow within the rock formations.

The presence of over 1000 sinkholes in the Bellevue area allows surface water to rapidly flow directly into the ground water system. Ground water levels were not measured in the Bellevue area prior to the flooding. However, ground water levels measured in a previous study showed that ground water levels can rise up to 50 feet over a few day period in response to five

inches of rain, but take weeks to return to pre-flood conditions. Ground water levels at Seneca Caverns declined on average 4 inches/day and had dropped approximately 65 feet from April 1 to October 22, 2008. Ground water levels measured in October 2008 by DOW staff indicate that the water table has declined 45 to 50 feet north of Bellevue since the spring 2008. This equates to a 3 inches/day decline.

The approximate size of the ground water watershed that contributed water to the flooded karst area is 57,000 acres. This area encompasses most of Thompson Township and portions of Reed, York, Lyme and Groton Townships. Synoptic ground water level surveys conducted in the fall 2008 indicate that there is a ground water low area. This low parallels the major joint orientation measured in the Columbus limestone and lies beneath the area that experienced the worst flooding.

This document along with figures and maps can be used as an historic document, so that steps can be taken to avoid property damage when flooding occurs again. Local government agencies should consider mandating no permanent structures within the areas that flooded and recommend no basements in structures located adjacent to these areas.

Best management practices, such as sinkhole structures and grassed buffer strips and waterways should be implemented around sinkholes to minimize ground water contamination and to keep the sinkholes open to prevent surface flooding.

Even though ground water levels have returned to normal levels, two or three wells completed in the karst zone should be regularly monitored to get a better understanding of how ground water levels change in response to precipitation events. The monitor well located at 10318 State Route 269 could be used as one of these wells. Other monitor locations would be southwest of this well. Equipping these wells with pressure transducers that record ground water levels multiple times per day would lead to a better understanding of the dynamic nature of the karst aquifer system.

During the time of the flooding, a Frequently Asked Questions fact sheet was put together by the DOW. Since then a few other questions were raised. Appendix B is a list of frequently asked questions with responses from DOW personnel.

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Attachment III

Property Values:

- **Deliver the "Dream" or the "Nightmare"?**

- **Industrial wind turbines may result in $27 million property value decline**

Attachment III

Property Values: Deliver the "Dream" or the "Nightmare"?

Why do all of the commericals and social media clips show the "Dream"? Not a house in the background!

After they have been installed, then the pictures depict the "Nightmare". Houses packed upon among the turbines, without any thought of compensating the non-participating residents.

OPSB please require adequate "buffer" zones of 3 to 5 miles. Better yet, deny them.

Attachment IV

October 22, 2018 • Letters, Ohio

Industrial wind turbines may result in $27 million property value decline

Credit: The Advertiser-Tribune | Oct 22, 2018 | www.advertiser-tribune.com ~~

For every flawed study the Big Wind industry presents with no real loss of property value resulting from massive turbines, there are 10 more studies indicating that is definitely not the case.

Wind leases continue to be gathered in townships surrounding the rural Tiffin area. There will be over a thousand homes within two miles of the 600-652 foot, skyscraper-size turbines. Home values will decline on average 25 percent within a 2 MILE radius of the turbines in a "Wind Farm" (ref. 1, 2, 3, 7, 8, 9, 12, 13).

The median home value in Seneca county is $108, 381, and in Sandusky County it is $123,145 (ref. 10, 11).

If we take the lowest median home value of $108,381 and factor a modest 25 percent loss that would be $27,095 per home. The conservative estimated loss of property value within the Tiffin area alone could easily exceed $27 million!

It's important to note that ALL the studies sited for this article were based on industrial wind turbines that were 477 feet high or smaller. Industrial turbines proposed for the Tiffin area will be significantly bigger and louder. Also, the setbacks (how far a turbine can be from a property) were in some studies much further than the 1,125 ft. setback required by Ohio law currently.

Current Ohio setbacks (1,125 ft from the property) are the lowest in the four-state region and significantly lower than other European countries that require a 1.5- to 3-mile setback on average. Most states require a set-back distance of 3 times the turbine length for safety reasons (ref. 6, 8).

Additional costs to the community will be the increased insurance costs, burdened by leaseholders as a liability in the "Wind Farm" operation, which include effects

such as blade throws, vibration, excessive sound levels, ground water contamination, stray voltage, shadow flicker, etc.

There will also be steeper declines for home values in “Good Neighbor Agreement-Wind Leases.”

Your county commissioners absolutely have the power to limit or stop these Wind Projects. Don’t let them throw you off like Shayne Thomas and Holly Stacy did for months to the residents in Seneca County. If you’re in Seneca County, email Ms. Stacy and Mr. Thomas today. Tell them to get out of the Alternative Energy Zone (AEZ) and intervene AGAINST these wind projects, NOT FOR them!

If your county is NOT in an AEZ they can negotiate better property tax arrangements and road use agreements, which may even deter the wind companies from continuing to pursue projects there. That has been the case in Hardin and Van Wert counties (ref. 5, 15).

Today the counties of Hardin and Van Wert have rescinded their AEZ contracts and have repelled further “Wind Project” proposals for the good of all their residents.

Public information meetings are planned at Bettsville American Legion, 323 State St., on Oct 23 at 6:30 p.m. and New Riegel American Legion, 20 South St. on Oct 25 at 6:30 p.m.

Deb Hay,

Resident-Seneca County

References

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(8) https://docs.wind-watch.org/McCann-Setbacks-property-values.pdf
(9) http://edgarcountywatchdogs.com/2014/12/wind-farms-cause-property-value-to-tank-by-fifty-six-percent-in-vermilion-county-illinois/
(10) https://www.nar.realtor/research-and-statistics/housing-statistics/county-median-home-prices-and-monthly-mortgage-payment
(11) https://www.zillow.com/erie-county-oh/home-values/
(12) https://ruralgrubby.files.wordpress.com/2008/12/chris-luxemburger-presentation1.pdf
(13) http://search-prod.lis.state.oh.us/cm–pub–api/api/unwrap/chamber/132nd–ga/ready–for–publication/committee–docs/cmte–s–energy–nat–res–1/testimony/cmte–s–energy–nat–res–1–2018-06-20-0230–1476/testimonykitson.pdf
(14) http://xray.rutgers.edu/~matilsky/windmills/throw.html
(15) http://www.greenwichneighborsunited.com/lte-by-van-wert-county-commissioner-todd-wolfrum-a-must-read-2/
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Attachment V & VI

Cut the Subsidies

- It's time to follow Mexico & pull the plug on "renewables"

- Wind, solar power sectors no longer need subsidies

It's time to follow Mexico and pull the plug on "renewables"

By Ronald Stein |June 5th, 2020|Energy|Comments Offon It's time to follow Mexico and pull the plug on "renewables"

The only things 'inevitable' about the 'transition' to wind and solar are rocketing electricity prices and unstable power grids.

The only things 'inevitable' about the 'transition' to wind and solar are rocketing electricity prices and unstable power grids. Recognizing that industrial wind and solar electricity bring little to no value to electrical grids, Mexico is moving to avoid the higher electrical prices experienced by Germany, Denmark, Great Britain, South Australia, California, Wisconsin, Minnesota, and other governments that have heavily subsidized their supply of intermittent electricity. Time for California to follow the lead of our Southern neighbor and pull the plug on renewable subsidies.

To stop continuous increases in the cost of electricity, Mexico stepped up to the plate and pulled the plug on subsidy dependent intermittent power from wind and solar that has been driving up the cost of electricity for its financially challenged population. The Mexican government has taken a stand that has sent renewable energy rent seekers into a tailspin.

Does California have the leadership mettle to reverse decades of price increases for electricity?

Based on what Newsom did in San Francisco, maybe not. Governor Newsom was the San Francisco Mayor for eight years. In 2003, Newsom was elected the 42nd Mayor of San Francisco, becoming the city's youngest mayor in a century. Newsom was re-elected in 2007. In the event our leadership does nothing to curtail continuous increases in the cost of electricity, this California Political Review article America's Havana – Thousands Say Ciao to San Francisco may be a preview of the outlook for the entire state under current leadership.

Hopefully, Newsom could deliver such a message. I, as a Toastmaster graduate, focus on the number of "ahs" from public speakers. Governor Newsom starts almost every sentence with an "ah", so much so that it's so distracting that I have stopped listening to his COVID-19 updates and wait for a condensed summary from the news broadcasters. When you listen to his next pandemic update, focus on all those "ahs" and you'll understand!

For decades, California's bizarre laws and regulations and subsides for "green" renewables have driven up the cost of electricity for its 40 million residents. It's time for California to reverse that upward trend that gotten prices for electricity in California are already fifty percent higher than the national average for residents, and double the national average for commercial, and are projected to go even higher.

With the shuttering of Pacific Gas & Electric's Diablo Canyon's Nuclear 2,160 megawatts in 2024 and Los Angeles' Mayor Garcetti's desire for the forthcoming closures of three natural gas-powered plants that have been generating continuously uninterruptible electricity. Our elected officials seem to be oblivious to the fact that the State has no plans for electricity

generating capacity to replace what's going to be lost. Further, that "green" electricity from wind and solar is only intermittent, as neither generates when the wind is not blowing, and when the sun's not shining.

Since California is currently unable to generate sufficient electricity in-state to meet demand, the state is forced by its own policies to import more electricity than any other state, an outcome that is not in the financial interest of any California resident. Without any known state-fostered plans to rebuild with more in-state power generation, California continues to shut down its safely functioning nuclear and natural gas electricity generation plants!

With this path forward, in the event other states cannot generate enough electricity to export to California to replace what's being lost by shutting down the last nuclear plant and three natural gas plants in California, it's lights out for California's future. Who knows how high they will go as the state continues its importing appetite for expensive electricity?

Never mentioned by the green leadership is the worldwide ecological destruction from the mining of precious minerals to support renewables that leave lands uninhabitable and worthless for plants and trees. Renewable taxpayer handouts have stripped landscapes worldwide. Left in the wake of intermittent electricity farms and subsidized biomass-fueled power plants is cynical at best, and mercenary in their ability to destroy nature's ability to alleviate the coronavirus via cleaner air.

During this global pandemic, dependence on China for rare earth minerals, which solar panels and wind turbines are useless without, renewable electricity a costly as well as dirty proposition.

Renewables make no sense when the entire world is sick. Only using Warren Buffet's logic does chaotic wind power bring financial wealth when Mr. Buffett said: "We get a tax credit if we build a lot of wind farms. That is the only reasons to build them. They don't make sense without the tax credit."

The subsidies for "green" electricity has driven up California's cost of electricity to be among the most expensive in America, and with decades of bizarre laws and regulations that have contributed to California being a complex regulatory state, Joel Kotlin from NewGeogrpahy summarized the future in the state in his article: The Coronavirus means millennials are more screwed than ever.

As America recovers from the COVID-19 shelter-in-place mandates, California cannot rid itself from the continuing and state-prescribed high costs of energy that other states are not shackled by, and those elected California officials are doing nothing to effectively and forever resolve the causes of the high energy costs that severely limit the state's economic base and its potential for improvement.

It's time for California to align Mexico's leadership bold move and pull the plug on intermittent renewables as the state needs is continuous uninterruptable electricity that's reliable and affordable, more than ever.

Author

-  Ronald Stein

Ron Stein is an engineer who, drawing upon 25 years of project management and business development experience, launched PTS Advance in 1995. He is an author, engineer, and energy expert who writes frequently on issues of energy and economic

filed: August 15, 2020 • Nebraska, Opinions

Wind, solar power sectors no longer need subsidies

Credit: Midlands Voices: Wind, solar power sectors no longer need subsidies | By Barry Butterfield | Omaha World-Herald | omaha.com ~~

Thanks to generous tax breaks for wind and solar power, renewable energy producers are reaping huge profits. But the subsidies come at the expense of taxpayers, and they're pushing conventional power plants into premature retirement, which is threatening the reliability of the electric system.

To a large extent, the amount of coal, natural gas and nuclear generating capacity that might shut down in the next few years depends on whether Congress recognizes – and addresses – the serious stresses undermining the U.S. electricity industry.

And the extent to which Congress addresses these issues depends, in large part, on its willingness to end tax credits for wind and solar power.

This would have been unthinkable ten years ago when renewables were struggling for market share, but today wind and solar power are mature technologies that no longer require subsidies.

Currently, wind supplies about 20% of the electricity in Nebraska and as much if not more electricity in Texas, Iowa, Kansas, Oklahoma and some other states.

Due to advances in wind technology and improved manufacturing processes for turbines, the cost of wind power has fallen dramatically since 2010.

According to the financial firm Lazard, wind power's levelized cost at the lower end in 2019 was $28 per megawatt-hour. By contrast, the cost of combined-cycle natural gas was $44 per megawatt-hour; coal, $66; and nuclear, $118.

Subsidies definitely reduce wind and solar costs. The Energy Policy Act of 1992 created what is known as the Production Tax Credit, which gives 2.1 cents for every kilowatt-hour of electricity produced by a wind turbine during the first ten years of operation. The cost of the Production Tax Credit is expected to reach more than $65 billion before its scheduled phase out in 2029.

Thanks to such subsidies, the situation in Texas has deteriorated so far that on some days the price of wind power falls so low that generators have an incentive to offer their power at any price above zero. Hence, generators sometimes respond by offering negative prices – effectively offering to pay customers to take their power for next to nothing.

Like wind, utility-scale solar power benefits from a generous tax break. The Investment Tax Credit for solar power reduces tax revenue by billions of dollars each year. Solar's low cost has caused a number of coal, gas and nuclear plants to close before it is economic for them to do so.

Wind and solar power increase the costs of conventional generation. This is because electric power systems need conventional generating technologies to back up and fill in for intermittent renewables, which aren't of much use when the wind isn't blowing and the sun isn't shining.

A combination of energy sources – coal, natural gas, nuclear, and renewables – is the core strength of the electric power system. It serves as a hedge against price volatility and supply disruptions. But this fuel and technological diversity is at risk. Left unaddressed, it could produce power shortages. The best way to deal with it is for Congress to end subsidies for wind and solar power.

Barry Butterfield, of Omaha, is a retired engineer and member emeritus of the American Nuclear Society.

Source: Midlands Voices: Wind, solar power sectors no longer need subsidies | By Barry Butterfield | Omaha World-Herald | omaha.com

Attachment VII

Energy Poor

Nigel Farage on Wind Energy - The greatest transfer of wealth from the poor to the rich in modern times.

- In yet another effort to climb aboard the latest politically correct narrative the renewables industry has lately been making the case that climate change disproportionately affects the poor. This time they are correct but, no surprise, in the exact opposite way that they portray. Instead of directly helping the poor with solutions and training they instead want to give trillions of dollars to billionaire corporations on the promise of having better weather 100 years from now. Ask the poor what they really think about such a scheme. Leave it to organizations like the Sierra club, AWEA, and the entire renewables industry to abuse the poor while pretending to help them.

CALIFORNIA DREAMIN'

Michael Shellenberger's latest column for Forbes may foreshadow Ohio's future if HB 6 is repealed and the state's nuclear plants are shut down.

"And yesterday, California had to impose rolling blackouts because it had failed to maintain sufficient reliable power from natural gas and nuclear plants, or pay in advance for enough guaranteed electricity imports from other states. It may be that California's utilities and their regulator, the California Public Utilities Commission, which is also controlled by Gov. Newsom, didn't want to spend the extra money to guarantee the additional electricity out of fears of raising California's electricity prices even more than they had already raised them. California saw its electricity prices rise six times more than the rest of the United States from 2011 to 2019, due to its huge expansion of renewables. Republicans in the U.S. Congress have pointed to that massive increase to challenge justifications by Democrats to spend $2 trillion on renewables in the name of climate change. Even though the cost of solar panels declined dramatically between 2011 and 2019, their unreliable and weather-dependent nature meant that they imposed large new costs in the form of storage and transmission to keep electricity as reliable. California's solar panels and farms were all turning off as the blackouts began, with no help available from the states to the East already in nightfall." **This article is another "must read". We also recommend a "must watch" by Michael as he asks whether we have to destroy the earth to save it? Apparently the Icebreaker advocates think we do.**

https://www.prageru.com/video/do-we-have-to-destroy-the-earth-to-save-it/

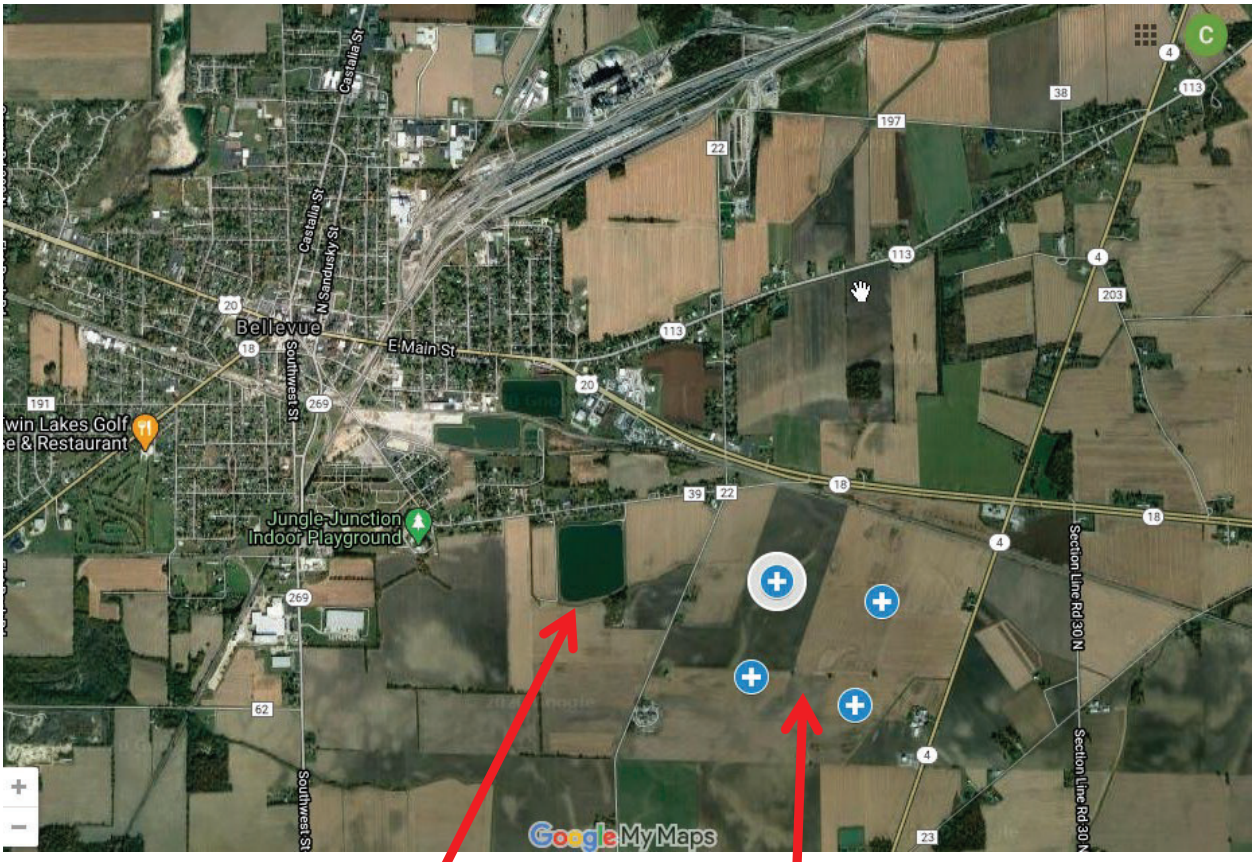
Attachment VIII

Emerson Creek Wind Farm

Turbines Around Bellevue, Ohio

Turbine 24: 2,608 Feet from Bellevue Reservoir #4

Please Reference the Maps Mailed to OPSB that identify the 1-mile and 2-mile Radius Around Bellevue, Ohio



Bellevue Reservoir #4

Turbines

T24	T75
T25	T26

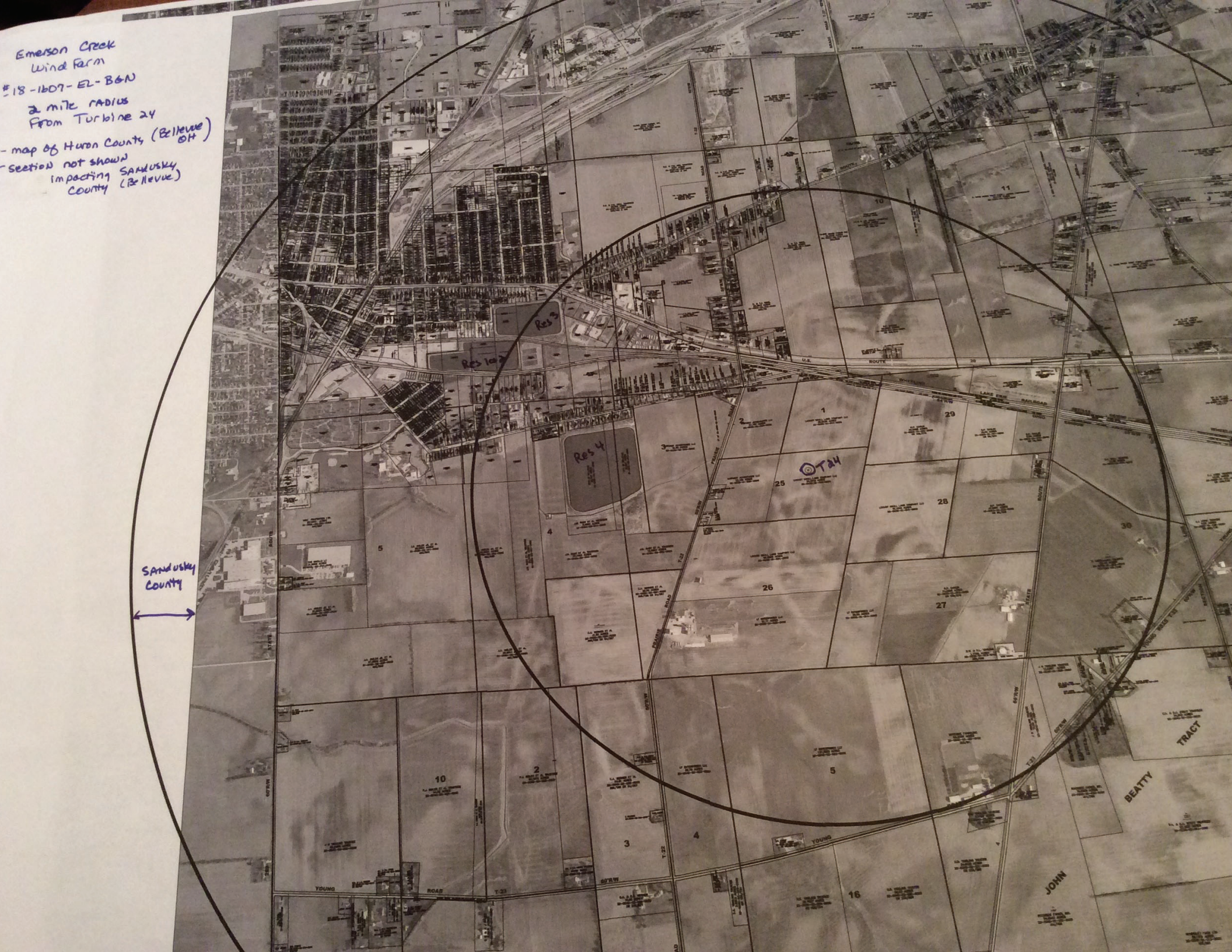
Attachment IX & X

- Huron County Map: T24 – one mile radius

- Huron County Map: T24 – two mile radius

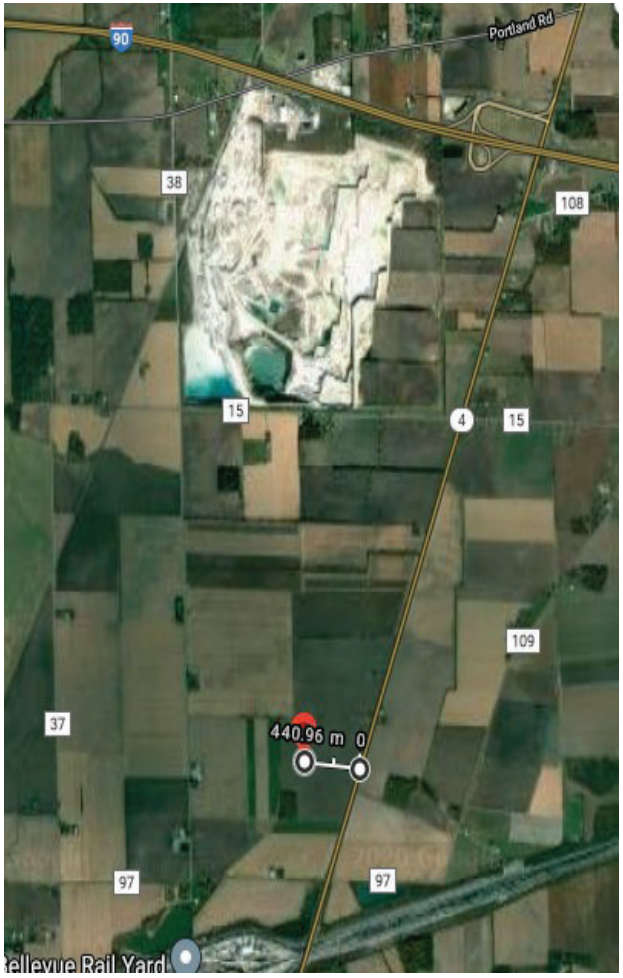
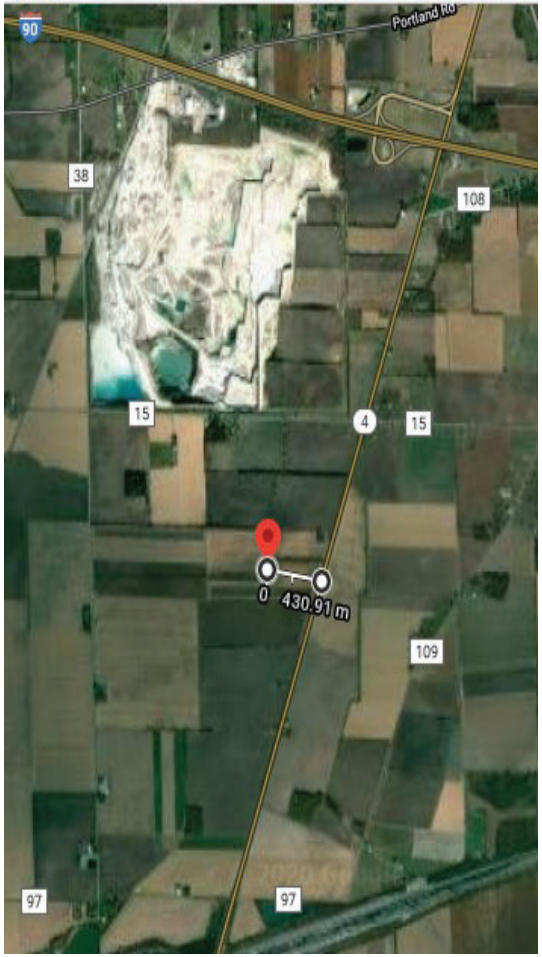
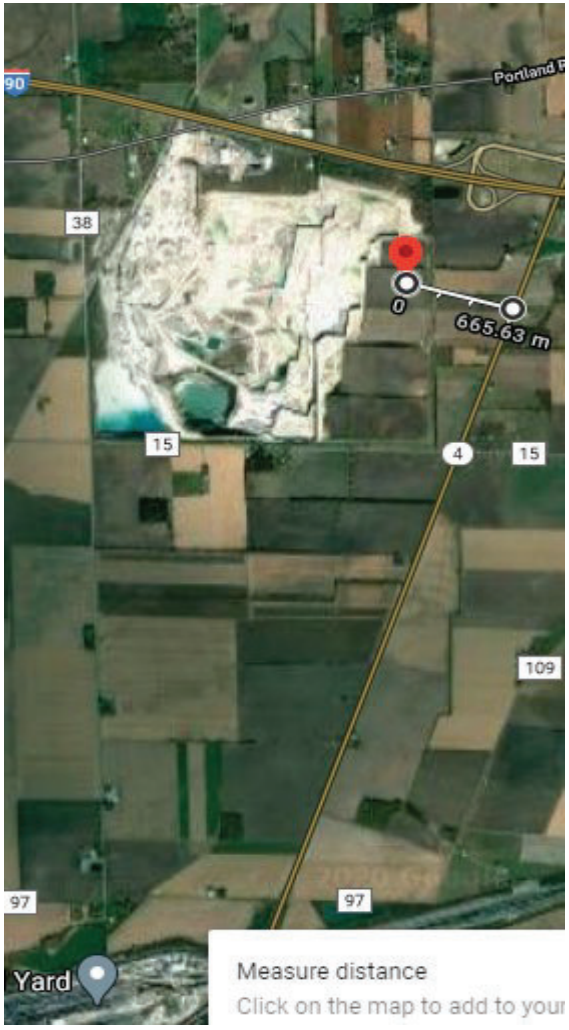

Emerson Creek Wind Farm
18-1607-EL-BGN
1 mile radius from Turbine 24
ellevue, OH
ron County
ROUTE 20
U.S.
WHEELING
LAKE ERIE
RAILROAD
ORIG
EDISON
64 R/W
60' R/W
PRAIRIE ROAD
STATE ROUTE
50' R/W
66' R/W
T-22
T24
Res #3
Res #2
Res #4
1
2
3
4
25
26
27
28
29

Emerson Creek
Wind Farm
#18-1607-EL-BGN
2 mile RADIUS
From Turbine 24
- map of Huron County (Bellevue OH)
- section not shown
impacting SANDUSKY
County (Bellevue)



Emerson Creek Wind Farm

Three (3) Turbines Too Close to Route 4

T13 is 1,447 feet from Rt.4	T8 is 1,414 feet from Rt.4	T2 is 2,184 feet from Rt. 4
		

Attachment XII

Emerson Creek Wind Farm

Turbines Around Wagner Quarry, Portland Road

This is an Active Quarry with 2 Turbines on Quarry Rim

This foregoing document was electronically filed with the Public Utilities

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Case No(s). 18-1607-EL-BGN

Summary: Public Comment electronically filed by Mr. Matt Butler on behalf of Ms. Cheryl Mira