

D. Ag Impacts and Property Lines

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Megan Zumbuhl

From: Denis Tracy
Sent: Tuesday, December 16, 2025 10:03 AM
To: Megan Zumbuhl
Subject: FW: Online Form Submittal: Public Works - Contact Alan Thomson

From: Alan Thomson <Alan.Thomson@whitmancounty.gov>
Sent: Wednesday, December 3, 2025 4:18 PM
To: Bill Meyers <myers@stjohncable.com>; Brian Davies <bdavies.cvs@gmail.com>; Chris Melhus <chrismelhus@aol.com>; gibney <gibney@pullman.com>; Dave McKeirnan <dmckeirnan@yahoo.com>; Dean Kinzer <kinzerdd@gmail.com>; Julian Matthews <protectingnimiipuu@gmail.com>; Tami Southern <tamisouthern1@gmail.com>; Weston Kane <weston_kane@hotmail.com>
Cc: Mark Storey <Mark.Storey@whitmancounty.gov>; Denis Tracy <DenisT@whitmancounty.gov>; Grace Di Biase <Grace.DiBiase@whitmancounty.gov>; Art Swannack <Arts@whitmancounty.gov>; Tom Handy <TomHandy@whitmancounty.gov>; Chad Whetzel <ChadWhetzel@whitmancounty.gov>
Subject: FW: Online Form Submittal: Public Works - Contact Alan Thomson

FYI all.

Alan.

From: noreply@civicplus.com <noreply@civicplus.com>
Sent: Wednesday, December 3, 2025 1:36 PM
To: Public Works - Contact Us <PW@whitmancounty.gov>; Alan Thomson <Alan.Thomson@whitmancounty.gov>
Subject: Online Form Submittal: Public Works - Contact Alan Thomson

This sender is trusted.

Public Works - Contact Alan Thomson

First Name	Todd
Last Name	Imeson
Email Address	tdimeson@hotmail.com
Subject	Planning Inquiry
Other	Wind Turbine Setbacks
Who would you like to contact?	Alan Thomson

Good afternoon:

I am writing to express my concern on setback distances from non-participating landowners. As a farmer, and partial owner of a farm corporation, my concern is with the possible increase of input expenses to my operation if a wind project were to be sited at close proximity to my family's farm. I am also concerned with possible pollution and/or contamination from normal turbine wear and lack of needed maintenance. Health and safety issues, any possible future land use modifications, and the possible loss in land value are also concerning issues that need to be addressed. The following is an expansion of the previously stated concerns:

1. Aerial applications will not occur on some of the neighboring properties due to the random sitings of these wind turbines. Safe application routes and turning distances for aerial applicators will make it unsafe to attempt to make the needed applications, thus causing neighboring operations to use alternative methods to apply the needed agricultural products at a possible greater input expense. Aerial applicators already charge a higher rate for smaller acreage plots with random boundaries. These turbines could possibly create even more small acreage plots, thus causing the neighboring operations to pay even more. Currently aerial applicators charge a higher rate if they have to fly near these projects, per Whitman County Planning Commission Board Member David McKeiman. Why is it the burden of non-participating neighbors to pay a "surcharge" or "tax" to continue to operate their agricultural business because the landowner on the other side of the fence wants to have wind turbines on their property? Private property rights are a fundamental entitlement in this country, but when it causes neighboring properties owners grief, where is the line drawn? A greater setback distance from property lines would help alleviate some of the unfair "surcharge" or "tax" if not eliminate it all together.

2. Wind turbines blades do decay over time. Numerous reports state that shards of fiberglass can be hurled great distances depending on the speed of the blades. This possible contamination of neighboring properties should be of great concern because it already is illegal to dump trash on another's property. What is the difference? Contaminating another's property should never be allowed. A greater setback distance from property lines would help eliminate this threat to unsuspecting neighbors.

3. Wind turbines also leak oil. Oil does not readily absorb into

the ground. These turbines are to be built on hilltops and we all know which direction water flows. Rainwater on the clay that will be unearthed on these ridge lines where the turbines will be built will exacerbate the threat of pollutants being spread into neighboring downhill properties because water does not readily absorb into clay. The oil and water mixture will run downhill causing property damage, once again, to unsuspecting neighbors. A greater setback distance from property lines would help alleviate some of these undesirable consequences.

4. Sound and infrasound may also cause health issues to residents in the area. The turbines proposed are significantly larger than those built in this county thirteen years ago. Different structures of different dimensions create different possible issues. The new issues, depending on how closely the turbines are sited to one another, thus amplifying the undesirable effect, may just cause a health anomaly that would affect numerous unsuspecting county residents. There are more and more studies being conducted with the results stating that sound and infrasound can adversely affect people's well-being, per Whitman County Planning Commission Board Member Dean Kinzer. To err on the side of public safety is always most prudent. Years ago, nuclear testing at Hanford was thought to be safe, but we now know this was not the case with many friends and/or relatives being classified as downwinders who suffer chronic health issues due to these tests. One way to protect the citizens of the county would be to increase the setbacks from property lines, thereby reducing the effects on the public's health, safety and well-being.

5. The setback distance should be determined from the boundary line of the property to eliminate the possible denial of a non-participating neighbor from making any form of development which would include an inhabited structure. One neighbor's actions, such as allowing wind turbines placed on their property, should in no way restrict an adjoining property owner from building a new residence, shop or any other outbuilding. Every property owner should be given equal treatment in the use of their own property.

6. In this county, there is an ordinance in place for junkyards to be fenced. Is this arbitrary and capricious ordinance to protect aesthetics or to protect neighboring property values? 700' wind turbines obviously would affect the aesthetics of Whitman county. It can be argued that property values will be affected as well. No fence is going to help the non-participating neighbor. Increasing the setbacks from property lines would help minimize this issue.

The simple and equitable remedy for one and all would be to make all setbacks from property lines. The setback distance should be measured from the tip of the blade and set at a minimum of a mile. Basing setbacks according to the height of the structure is not a fair practice since smaller turbines could be placed closer to property lines, thus nullifying all the previously stated reasons for further setbacks. All the above mentioned issues would either be eliminated or greatly reduced if the mile setback were to be implemented. If it is deemed prudent for one mile setbacks along county parks, then the same setback should be implemented for any non-participating private property owner.

Thank you for the consideration.
Todd Imeson

(Section Break)

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Source: Dean Kinzer, lifelong local farmer and Planning Commission member; 2025

Aerial Application vs Ground Application Costs Per Acre

(Cost of Crop Care Products are not included because they are the same.)

Aerial Application	\$13.50
Aerial Application around WT area	\$17.50

If a Wind Farm negates being able to have an Aerial Application Of Crop Care Products the Farmer will have to do a ground application.

Ground Application with my own 80 ft sprayer and tractor	\$10.00
Value of Wheat destroyed by two 36-inch tracks per acre	\$45.00
Total:	\$55.00

The difference of \$55.00 per acre vs. \$13.50 is \$41.40 per acre of loss to the farmer. Due to the fact that making corners and overlap cause an additional loss on an average of 15%, the actual loss could be as much as \$6.75 higher than listed.

On a 100-acre field the loss would be \$4,140 up to \$5,175.

Loss of production also affects your proven average for the USDA farm programs and the amount you can insure you crop for.

The Formula for Wheat destruction per acre is based on a 100 bushel per acre crop.

One acre = 43,560 sq. ft. ÷ 80 ft. wide sprayer = 544.5 ft. of travel to cover one acre x 6 ft. width of tractor tracks = 3,267 sq. ft. of destroyed crop per acre.

3,267 sq. ft. of destroyed crop per acre ÷ 43,560 sq. ft. per acre = 7.5% of the crop destroyed per acre which is 7.5 bushels of wheat at \$6.00 per bushel = \$45 per acre of destroyed crop

D-2

Source: 2025 - William Myers, lifelong local farmer and Planning Commission member

Industrial Wind Turbines and Non Participating Neighboring Farmland.

To avoid the negative impacts of the placement of industrial wind turbines (IWT) on or near a non-participating or non-consenting farm property line requires a substantial setback from that property line. IWT's are reaching heights unimagined just a few years ago. Recently proposed projects in Whitman County are specifying units 700 feet in height. Care should be taken to protect adjacent farms from these massive structures on large scale industrial wind generation facilities. Non-participating, non-consenting neighboring farms need protection from;

1. Loss of aerial application and Increased Cost of Production
2. Property damage
3. Untimely and Unpredictable Interruption of Field Work
4. Land use limitations
5. Detrimental effects on livestock
6. Detrimental effects on wildlife
7. Detrimental health effects on humans
8. Fire danger
9. Insurance increases or unavailability
10. Aesthetic issues and viewshed

A setback of six times the height of the IWT from adjacent non-participating property lines, including state and county rights of way has been adopted by the Whitman County Planning Commission. Many counties in the United States specify one mile to two mile setbacks from these places.

Let's take these issues one at a time.

1. Loss of Aerial Application and Increased Cost of Production. Aerial application is a must have for any farming operation. Wind turbines negatively impact aerial application by creating dangerous turbulence, posing risks of collision, and interfering with GPS and communication systems. The most significant hazards are the powerful wake turbulence

Wind Turbines – Impact on Non-participating Neighbors
William Myers

D-3

and vortex turbulence from the blades, which can affect aerial applications on farms, making safe operation difficult and restricting the ability to treat crops in a timely manner.

- **Hazardous turbulence:** The fast-spinning blades generate a dangerous type of "vortex turbulence" or "wake turbulence" that is different from typical wind-induced bumps and can be severe enough to flip an aircraft.
- **Collision hazard:** The turbines themselves present a physical risk of collision for aerial applicators, which is particularly dangerous in low-altitude crop-dusting operations. Tragically, these collisions have resulted in injury and even death.
- **Restricted operation:** The combination of turbulence and physical obstacles makes it significantly more challenging and dangerous for pilots to safely maneuver aircraft for spraying applications, especially when trying to turn
- **GPS and communication disruption:** The turbines can also interfere with the navigation, and communication systems. This interference can render GPS field tracking systems useless.

Almost every farmer has his own sprayer, but there are times when you don't want the wheel tracks in the crop or when the steep hillsides are just too wet. That's when an airplane is imperative. Putting wheel tracks in a well-developed wheat crop can cost an additional \$20 per acre as would be the case in a fungicide application. In addition, waiting for a field to dry out so you can spray it with your ground rig can let a small problem turn into a big one. Time is not your friend. Unchecked weed populations can cost half the crop in the event of an untimely application of a needed chemical. Spraying by air around IWT's is dangerous. Many pilots won't do it. Those that do will want a premium of 30 percent or more to do the work. Even at a mile away there is still a significant risk that many pilots won't take. The non participating farmer will lose the option of aerial application or at best have to pay the additional premium just because his "neighbor" wants IWT's. Very few farmers want IWT's. It is usually the absentee land owner or retiree that signs up for IWT's making them someone else's problem.

2. Property Damage. Soil erosion in Whitman County is real. The topography that gives the Palouse its singular beauty is also one of our greatest challenges. Farmers in Whitman County have employed soil conservation methods that minimize soil erosion. Unfortunately, that is of little concern to the wind developers. Placement of IWT's prioritizes the highest winds. This puts the IWT, its access roads, and infrastructure on our highest ridges that are already at risk. Water always takes the path of least resistance even

if that is through a non-participating neighbor's field. The hard surfaces of the roads, concrete, and the massive IWT's will shed the water concentrated on those surfaces and dump it on the already fragile soils while running down the steep slopes. Adequate setbacks will help alleviate this problem for the non-participating farm, but still won't address the issues of soil erosion and water quality.

3. Untimely and Unpredictable Interruption of Field Work. These problems will start as the huge equipment necessary for the IWT development assemble in the areas adjacent to non-participating farms and continue for two years or until the project is completed. This will continue throughout the 30 year lease period albeit at a lesser degree for maintenance, repairs, and overhauls. There will be damage to the roads. The developer is supposed to repair the damage, but will further inconvenience the non participating neighbor in the process.

4. Land Use Limitations. Without proper setbacks a nonparticipating farmer will lose the full use of the land near the property lines. Building sites for farm shops, out buildings, and homes will be affected. The health and safety issues related to wind power are well documented. The non participating farmer will not have full and free use of his property. Alternative uses involving agri-tourism will be diminished due to the degradation of aesthetics. Land values will be reduced. Whether real or imagined, the shrewd negotiator will always exploit the negatives involving a parcel of land being next to a large industrial wind complex in a formally rural area. These limitations are real and should be considered a taking in the legal sense.

5. Detrimental Effects on Livestock. Noise, infrasound, and shadow flicker don't just affect humans. Animals are not capable of speech so they are rarely asked how they feel about living closely to constantly rotating 700 foot tall man made machines beating the air into submission. Negative effects of wind turbines on farm animals include stress from low-frequency noise and infrasound, which can lead to altered eating patterns, slower development, and in some cases, increased mortality. Other impacts are visual disturbances like shadow flicker, potential physiological stress from electromagnetic fields, habitat avoidance, and safety concerns, particularly for horses.

- **Noise:** Low-frequency noise and infrasound from turbines can be a source of stress and may interfere with animal communication, eating habits, and reproductive cycles.
- **Physiological stress:** Wind turbine operations have been linked to increased stress in animals, which can result in higher levels of stress hormones like cortisol.
- **Mortality:** Some anecdotal reports link turbine proximity to negative health outcomes, including slow development, miscarriages, and death, although official investigations have found timeline incompatibilities with the construction
- **Shadow flicker:** The moving shadows cast by turbine blades can be a visual disturbance for livestock.
- **Habitat avoidance:** Some ground-dwelling animals, such as ground-nesting birds, may avoid areas near wind turbines, believing they could be used as perches by predators.
- **Safety:** The movement of the turbine blades can be particularly risky for horses, especially if they are ridden near the turbines.
- **Construction:** The construction phase itself, with heavy machinery and human activity, can temporarily disrupt animal habitats.
- **Power lines:** Power lines associated with wind farms can also affect how animals use their habitat.

As stated by Dr. Ollson and Dr. McCunney in their presentation to the Planning Commission, the irresponsible placement of IWT's has caused unnecessary problems and should be avoided.

6. Negative effects on wildlife. Our area farmers enjoy and respect wildlife. Negative effects of wind turbines on wildlife include direct mortality from collision with blades, habitat disruption and loss from construction and operation, and indirect impacts such as behavioral changes, altered migration patterns, and noise pollution. Birds and bats are particularly vulnerable to collisions and to barotrauma, a lung injury caused by pressure changes around the blades.

- **Collision mortality:** Birds and bats can be struck and killed by the rotating turbine blades.
- **Barotrauma:** Bats can suffer fatal lung damage from the rapid drop in air pressure near the spinning blades, even if they do not collide with them.
- **Habitat loss and fragmentation:** Building wind farms and associated infrastructure, like roads, can destroy or fragment wildlife habitats, displacing animals.

- **Behavioral changes:** Animals may avoid areas with turbines due to noise, visual presence, or habitat changes, which can disrupt nesting, foraging, and other behaviors.
- **Migration pattern alteration:** The presence of wind farms can alter the migratory paths of birds and bats.
- **Noise pollution:** The noise from turbines can have negative effects on wildlife, especially for animals that rely on sound for communication or navigation.

7. Detrimental Effects on Humans. Infrasound Low Frequency Noise (ILFN) is the most common causes of Adverse Health Effects (AHE) caused by IWT. ILFN contains both audible and inaudible noise generated by IWTs. ILFN is generally not audible, but can be at times and is more akin to a vibration which pulses through the air caused when the blade passes by the vertical shaft of the IWT. ILFN usually is felt as a sensation or vibration felt in one's body

- **Annoyance:** The most consistent finding across studies is that some resident's experience annoyance, which can trigger things like sleep disturbance, motion sickness, depression, memory deficits, inability to concentrate and other symptoms. Annoyance has been deemed an Adverse Health Effect by the EPA in 1972, the WHO in 1999, and by Health Canada.
- **Sleep Disturbance:** Noise annoyance can lead to difficulty falling asleep or frequent awakenings. Chronic sleep disturbance is recognized as a adverse health effect and can lead to stress-related symptoms.
- **Stress-Related Symptoms:** Linked to chronic annoyance and sleep disruption, some people report symptoms such as headaches, anxiety, depression, irritability, fatigue, and difficulty concentrating. These are generally considered stress effects related to noise exposure, similar to those caused by other environmental noise sources like road traffic.
- **Shadow Flicker:** When the rotating blades cast moving shadows over nearby homes, the flickering effect can be a nuisance. While modern regulations often mitigate this effect to prevent a risk of photo-induced epilepsy (which requires a higher flicker frequency), it remains a potential source of annoyance.

8. Fire Danger. IWT's pose fire risks due to electrical and mechanical failures (like overheating components and hydraulic fluid leaks) and can ignite nearby vegetation, potentially leading to wildfires. Fighting these fires is difficult due to the turbine's height, and debris from a burning turbine can spread the fire.

- Faulty or overheating electrical components, such as those in converter and capacitor cabinets or transformers, can ignite a fire.
- Issues like a bearing overheating or a gearbox malfunction can generate enough heat to cause ignition.
- Oil leaks from hydraulic systems can come into contact with hot surfaces and ignite.
- Lightning strikes can damage the turbine's electrical systems, and dry, windy conditions can increase the risk of a fire starting in the surrounding area and spreading to the structure.

Challenges in fighting turbine fires

- **Height and access:** The height of the turbines makes it very difficult for firefighters to access and control a fire.
- **Debris and spread:** Burning parts can detach and fall, spreading the fire to the ground and potentially starting wildfires.
- **Firefighting strategy:** Due to the difficulty of extinguishing a turbine fire, the typical strategy is to isolate the area and allow the structure to burn.
- **Fire Spread:** While a fire in one turbine is unlikely to spread to another due to their distance apart, there is a significant risk that a fire could spread to the surrounding environment and ignite wildfires in nearby communities, especially in dry and windy conditions.

9. Insurance implications

- **Increased Premiums:** The presence of wind turbines can increase the perceived risk for nearby properties, potentially leading to higher insurance premiums and deductibles.
- **Higher Liability:** Neighbors could be exposed to increased liability claims if an incident, however rare, involves their property or if they are seen as not taking reasonable precautions.
- **Difficulty in Obtaining Coverage:** Some insurers may be hesitant to provide coverage in areas with a high concentration of wind turbines, leading to difficulty obtaining insurance.

10. Aesthetics and Viewshed. Whitman County's Comprehensive Plan advocates the protection of aesthetics and the viewshed on the Palouse. The only way to address IWT's

and aesthetics is to not build them. It is the rare person who will defend the aesthetic qualities of an IWT complex spanning thousands of acres. These facilities exist on a scale hard to imagine. A non-participating farmer will find no joy in being dwarfed by his neighbor's lack of regard and respect. No setback can help this. A man once stood before this Planning Commission and said that he and his significant other loved to sit under their Industrial Wind Turbines and sip wine.

As a result of his own decisions, he no longer owns that land. His non participating neighbors and most everyone else in that viewshed do not share his perspective. Land changes hands. Our viewshed does not.

Proposed Findings of Fact. While wind companies have money for peer reviewed studies and lawyers, individual farmers do not. Many studies and articles have already been presented to the Planning Commission. Many hours were spent reading and listening to expert testimony. It is up to the Board of County Commissioners to represent and protect the residents of the County. A wind code has been presented to the BOCC by the Planning Commission. The statements above have been demonstrated by practical experience, common sense, and expert testimony. The mere fact that there are non-consenting, non-participating neighbors adjacent to any proposed IWT complex should be enough to afford them some protection. To make them prove that the placement of a forest of "Space Needle" sized IWT's next to their property lines, buildings, and homes requires a modest setback is at best an insult. The Planning Commission has proposed a 6 times the height of an IWT setback from non-participating property lines. An honest mile would be better. In light of the liabilities inherent with IWT's, a mile setback is quite generous and reasonable. In light of the duties and responsibilities of the BOCC, that is the least that should be considered. There are far more county residents that will be impacted negatively than those who will directly benefit from these Industrial Wind Developments. Those are the facts. They are self evident.

Sincerely,

William J Myers

Life long resident and farmer in Whitman County

Ag - Aerial Applicator
Request
10/11

April 30, 2024

Whitman County Planner: Alan Thompson

Whitman County Commissioners: Art Swannack, Tom Handy, Michael Largent

Whitman County Clerk: Corey Mitzimbert, coreym@whitmancounty.net

As you consider the harmful impacts and mitigations needed for having wind turbines in Whitman County, **consider the impacts on aerial applicator safety.**

In the Palouse, aerial application is needed to fight emergent insect populations, manage weed infestations, and protect new plant growth from disease pathogens (repeated applications). Aerial application is also used to prepare for harvest using products that dry down late-maturing crops. In addition, fertilizer applications in spring and fall are managed by aerial applications.

The National Agricultural Aviation Association (NAAA) has been addressing concerns related to applicator safety regarding the placement of wind turbines. Local utilities have asked the Association to address the necessary set-backs to protect applicators who make applications in fields with or near wind turbines. They have posted and shared their policy to establish a minimum of 1 mile – or more – set back. <https://www.agaviation.org/policy/wind-turbines/>

NAAA documents that a minimum of one mile or more is needed to safely turn around at the end of a treated field. Their calculations based on an AT-802 (Air Tractor) demonstrated that 1.82 miles are needed. <http://news.agaviation.org/naaa/issues/2020-07-23/index.html>

Interestingly, in Illinois, wind farm operators are required to compensate nonparticipating growers for increased aerial application costs if neighbors host wind turbines. <http://news.agaviation.org/naaa/issues/2023-03-02/index.html>

To inquire further on needed setbacks and protections for the aerial application community, please contact (or have your consultants contact) Dr. Scott Bretthauer, Director of Policy, Education and Safety, National Agricultural Aviation Association, (202) 546-5722, sbretthauer@agaviation.org. You can mention that I had contacted you with these concerns.

If you would like to speak directly to the leaders in the industry in Washington State, please contact one of the following applicators:

Fred Meise, 112 Astro Lane, NE, Moses Lake, WA 98837, 509-750-2309, meise@vib.tv

Mark Brown, PO Box 55, Quincy, WA 98848, 509-760-6424, quincyflying@gmail.com

Colin Lowry, PO Box 55, Quincy, WA 98848, 509-289-9153, lowrycol8@gmail.com

I have copied Dr. Bretthauer, Mr. Meise, Mr. Brown, and Mr. Colin on this correspondence.

Respectfully,

D-4

Denis Tracy

From: Shantyl Mc <sjmcguire1234@gmail.com>
Sent: Wednesday, November 26, 2025 1:38 PM
To: Denis Tracy
Subject: Required Aviation Safety Setbacks for Proposed Whitman County Wind Turbines and impact

Follow Up Flag: Follow up
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Dear Mr. Tracy,

We are the owners of McGuire Air Service, Inc., an agricultural aviation business serving Whitman County and the greater Palouse region. Our aircraft play an essential role in protecting crops from rust, insects, and disease—especially in short weather windows when ground rigs cannot access fields.

We are deeply concerned about the significant operational and financial harm that would occur if more industrial wind turbines are permitted within our current operating area.

Below is a clear outline of the direct impacts, financial losses, safety hazards, and service disruptions that turbines would create for our business and the agricultural community we serve.

We estimated **Loss of Revenue** (\$100,000–\$200,000 Annually). Based on our flight history, acreage serviced, and typical seasonal disease pressure—particularly during rust outbreaks—we estimate that wind turbine installations near Kamiak Butte would cause annual losses between **\$100,000 and \$200,000**. Fields around turbines routinely require 10% more flight time due to necessary detours. **Fields would become unserviceable**, reducing our ability to treat rust, insects, and other crop threats.

We are concerned that the proposed wind turbine setbacks in the **county's draft code do not reflect the real-world operational distances** required for safe agricultural air operations. The National Agricultural Aviation Association (NAAA) has documented that **agricultural aircraft require at least one mile—and up to 1.75 miles**—of lateral space to make safe turnarounds when working near obstructions such as wind turbines.

NAAA's research demonstrates:

- An AT-802A requires 9,585 feet (1.82 miles) to complete a standard agricultural turn based on a 145 mph working speed and a 45 second turn time.
- GPS-based turn mapping shows turn penetrations ranging from 0.43 miles (light non agricultural aircraft) to 1.73 miles (fully loaded aircraft).

These distances directly contradict the **current proposed setback of 4,200 feet**, which is **insufficient and unsafe**. Anything less than one mile does not allow adequate time or space for pilots to line up, stabilize, and execute precise application passes, our pilots confirmed this.

Mechanical turbulence Extending 1-2 Miles

Turbulence generated by turbines can extend up to 2 miles downwind and The Palouse rolling terrain amplifies turbulence intensity and unpredictability. The turbulence is powerful enough to destabilize aircraft operating at spraying altitudes, as a result, each turbine effectively creates a no-fly area with a diameter of 6,000 feet or more, depending on the wind and terrain.

Additional hazards:

Wind turbine projects routinely include **unlit** meteorological (**MET**) **towers** and new power lines. MET towers can be erected in a single day, are **nearly invisible** using guy-wires the size of a pencil lead, and are **one of the DEADLIEST hazards to agricultural pilots**. Turbines also bring new **power lines** and support structures that create further obstacles. The introduction of multiple vertical structures increases the overall obstruction density, making safe navigation very dangerous to the affected fields. Each turbine creates a circular no-fly zone with a diameter of 6,000 feet or more when factoring in turbulence, turning space, and obstruction avoidance. When multiple turbines are placed together, **these no-fly zones overlap and eliminate entire regions from service**. This is not a theoretical risk—**our company already avoids flying near existing turbines for these reasons.**

There is a large impact on growers and Whitman County Agriculture

Turbine placement significantly affects grower when aerial treatment is limited or prevented:

- Rust, insect pressure, and disease **cannot** be treated in time.
- Ground rigs are often **unable** to access Palouse soils during these critical periods.
- Yield **loss** and reduced bushels per acre become unavoidable.
- The economic impact extends across Whitman County's entire agricultural sector.
- During a Rust run aerial application is not an option, but is critical to prevent massive loss of crop.

We Strongly recommend increasing the **required setbacks to reflect NAAA safety standards**, as well as including **compensation mechanisms from turbine developers to protect agricultural businesses and growers affected by turbine placement.**

As written, the proposed turbine setbacks present **significant danger to pilots, material harm to our business, and substantial economic loss to Whitman County growers.**

Sincerely,

Rob & Shantyl McGuire

Owners of McGuire Air Service, Inc.

*Aerial Spraying
- The need for 1 mile turn around space*

[LOGIN/MY ACCOUNT](#)

Policy Initiatives

NAAA represents the interests of agricultural aviation pilots, operators and allied industry in affecting positive change through education and political action on the national level. The key issues listed here are itemized generally by the Federal Agencies charged with regulating them.

Environmental Issues

NAAA works to educate policymakers and affect congressional and federal agency and judicial decisions to ensure their policies for pest control, plant health, environmental protection, and vector control pertaining to the use of pesticides and fertilizers use the best available science, professional techniques, and modern application technologies used by the aerial application industry; as well as the benefits aerial application provides agriculture and the environment.

[SPECIAL ISSUE BREIF - NPDES PGP](#)

[SPECIAL ISSUE BRIEF - PREEMPTION](#)

[FACT SHEET - USDA ARS AATRU](#)

[LINK: BULLETINS LIVE! TWO](#)

[\(Re-\)Registration of Pesticide Products](#)

[The Clean Water Act's Effects on Aerial Application](#)

D-6

Low-Altitude Obstructions: Wind Turbines

Overview

Learn Before You Lease – Ad Slicks & Radio Scripts

Offsets – Proof of Distance Needed to Safely Turn an Ag Aircraft

Operator Example: MN Aerial Applicator Explains Adverse Effects of Proposed Wind Project

Note: This is a reproduction of an article which appeared in the NAAA eNewsletter on June 2, 2022.

A Minnesota aerial applicator did such a thorough job explaining the adverse effects a proposed wind energy project would have on aerial applicators and the farmers they serve in the affected area that his comments to a state official conducting an environmental review serve as an outstanding model for any aerial applicators grappling with infrastructure projects that could affect their ability to serve area farmers.

Ryan Lubben owns West Central Ag-Air Inc. in Fergus Falls, Minnesota, but has frequently spent time applying fungicides and insecticides on farms a few hours south of Fergus Falls in Dodge County, Minnesota. His comments to an environmental review manager at the Minnesota Department of Commerce systematically explain why the NextEra Energy Resources Dodge County Wind Project, as currently planned, would be incompatible with aerial applicators' ability to safely provide services to farmers located within the wind project's widespread footprint.

As an opening salvo, Lubben provided facts about the aerial application industry and his company's operations, but then he went several steps further to highlight the importance of aerial application to farmers and clearly illustrate the unacceptable safety risks the densely clustered wind

turbine project would present to aerial applicators. The comments came together rather quickly once he gathered a few Surety maps and overlaid his GPS logs onto them.

Before getting into the hazards of the proposed wind farm, Lubben gave examples of three reasons why growers need to retain the ability to use ag aircraft. The three reasons he cited were efficiency, economics and environmental benefits. For his economics example, Lubben wrote:

Growers in the area typically get an average of a 17 bushel increase in corn yield by applying a fungicide during the tassel stage of development. (Per conversation with a local grower) Using today's cash corn price of \$7.63/bushel, this equates to an increase of \$129 per acre. My company would charge roughly \$21/acre for this application including chemical. That translates to \$108 per acre of profit for the farmer, or a 500% return on investment!

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Aerial Map

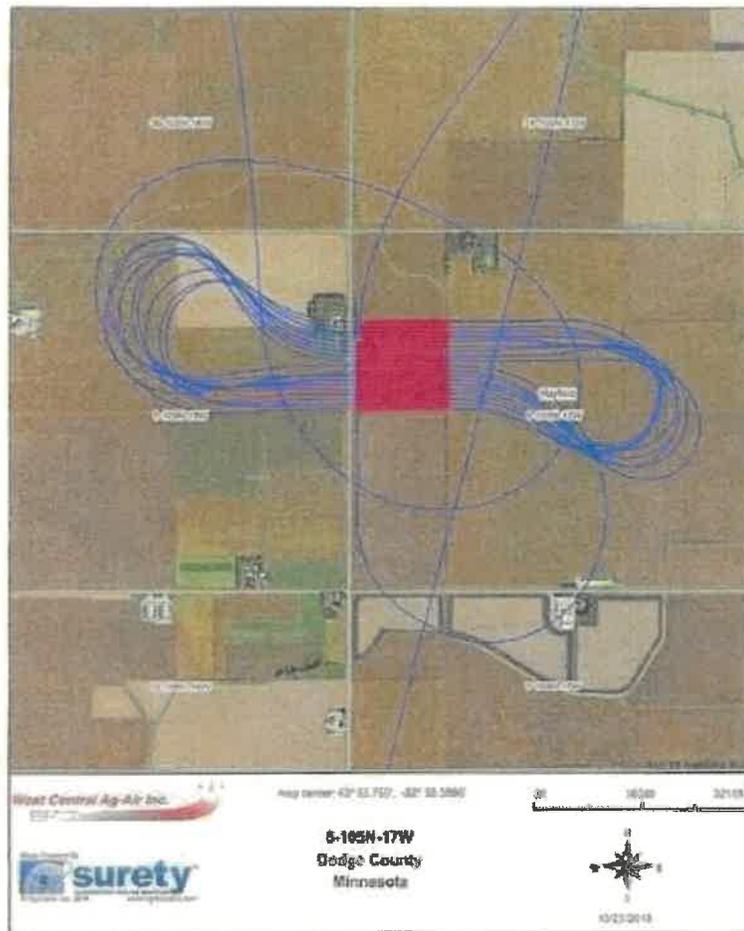


Figure 2

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Finally, Lubben included a map showing the proposed locations of the Dodge Center wind turbines in the western portion of the project area. (See Figure 3)

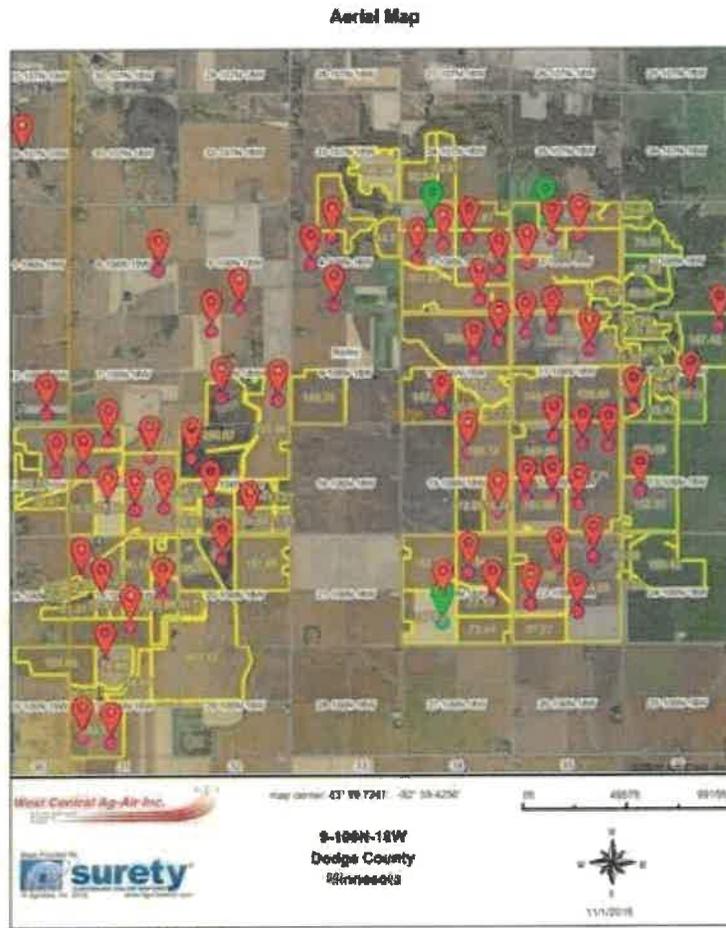


Figure 3

Each red dot indicates a turbine location. I have highlighted the fields in yellow which would not meet the criteria of having a one mile turn around obstacle free zone on the end of the field. I estimate this map to be a conservative representation of what fields cannot be serviced by ag aircraft. ... this is just a portion of the wind farm area. There will be many more fields affected.

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growers in the area to even entice an applicator to come in and do any work in the larger area.

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NAAA commends Ryan for his sophisticated yet simplified explanation of the ramifications that ill-planned wind energy projects can inflict on aerial applicators and their farming customers.

Meteorological Towers (METs)

NAAA Newsletters on this Issues

Low Altitude Obstructions: Wires

NTSB Accident Report on the Ag Aviation Industry

FMCSA Jet Fuel Transportation

Part 137 Letters of Authorization (LOA)

Uncrewed Aircraft Systems (UAS)

UAS, also known as Unmanned Aerial Vehicles (UAVs), unmanned aircraft (UA) or drones may pose a potential a safety threat to low-altitude crewed or manned aviators, especially ag aviators, if operated carelessly. They also could complement an aerial application operation; purpose-built aerial application UAS may be employed to treat areas that might pose a safety risk to manned agricultural aircraft. NAAA believes FAA needs to take a measured, incremental approach to safely integrate UAS into the National Airspace (NAS). This means that the Agency needs to fully assess the risk of UAS to crewed aircraft as they incrementally open the airspace to UAS, preserve the rule of UAS always providing the right-of-way to manned aircraft and ensure their equipage of a tested, effective detect and avoid system be equipped on UAS.

SPECIAL ISSUE BRIEF – UAS

UAS ENCOUNTER CHECKLIST

Federal Policy Background

UAS as Obstacles

Uncrewed Aerial Application Systems (UAAS)

**National Agricultural
Aviation Association**
1440 Duke Street
Alexandria, VA 22314

(202) 546-5722
information@agaviation.org

About NAAA
Membership
Ag Aviation Expo

Dear Mr. Tracy,

We are the owners of Palouse Ag Aviation, an agricultural aviation business serving Whitman County and the greater Palouse region. Our aircraft play an essential role in protecting crops from rust, insects, and disease—especially in short weather windows when ground rigs cannot access fields.

We are deeply concerned about the significant operational and financial harm that would occur if more industrial wind turbines are permitted within our current operating area.

Below is a clear outline of the direct impacts, financial losses, safety hazards, and service disruptions that turbines would create for our business and the agricultural community we serve.

We estimated **Loss of Revenue** (\$75,000–\$125,000 Annually). Based on our flight history, acreage serviced, and typical seasonal disease pressure—particularly during rust outbreaks—we estimate that wind turbine installations near Kamiak Butte would cause annual losses between \$100,000 and \$200,000. Fields around turbines routinely require 10% more flight time due to necessary detours. **Fields would become unserviceable**, reducing our ability to treat rust, insects, and other crop threats.

We are concerned for the farmer as this will result in us being forced to charge the farmers a \$2-\$3 per acre sure charge for any field adjacent to the wind turbines. So it will penalize the Neighbor farmers. My data for this comes from my experience from the Dayton Waitsburg wind farms. I was flying the farms in that area when that wind project went in. and we saw the real world negative effects to Agriculture.

Additional hazards:

Wind turbine projects routinely include **unlit meteorological (MET) towers** and new power lines. MET towers can be erected in a single day, are **nearly invisible** using guy-wires the size of a pencil lead, and are one of the DEADLIEST hazards to agricultural pilots. Turbines also bring new **power lines** and support structures that create further obstacles. The introduction of multiple vertical structures increases the overall obstruction density, making safe navigation very dangerous to the affected fields. Each turbine creates a circular no-fly zone with a diameter of 6,000 feet or more when factoring in turbulence, turning space, and obstruction avoidance. When multiple turbines are placed together, these no-fly zones overlap and eliminate entire regions from service. This is not a theoretical risk—our company already avoids flying near existing turbines for these reasons.

(2013–2022) reports **15 tower-accidents**, including **8 pilot fatalities**.

There is a large impact on growers and Whitman County Agriculture

Turbine placement significantly affects grower when aerial treatment is limited or prevented:

D-7

- Rust, insect pressure, and disease **cannot** be treated in time.
- Ground rigs are often **unable** to access Palouse soils during these critical periods.
- Yield **loss** and reduced bushels per acre become unavoidable.
- The economic impact extends across Whitman County's entire agricultural sector.
- During a Rust run aerial application is not an option, but is critical to prevent massive loss of crop.

We Strongly recommend increasing the **required setbacks to reflect NAAA safety standards**, as well as including compensation mechanisms from turbine developers to protect agricultural businesses and growers affected by turbine placement.

As written, the proposed turbine setbacks present **significant danger to pilots, material harm to our business, and substantial economic loss to Whitman County growers.**

Sincerely,
Jared & Sara Segebartt

Palouse AG Aviation

National Agricultural Aviation Association

Operator Example: MN Aerial Applicator Explains Advers
<https://www.agaviation.org/policy/#wind-turbines>

ject

Ag Impact
Aerial

1 of 2
NAAA

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Operator Example: MN Aerial Applicator Explains Adverse Effects t

Note: This is a reproduction of an article which appeared in the NAAA eNewsletter on June 2, 2022.

A Minnesota aerial applicator did such a thorough job explaining the adverse effects a proposed wind energy project would have on aerial applicators and the farmers they serve in the affected area that his comments to a state official conducting an environmental review serve as an outstanding model for any aerial applicators grappling with infrastructure projects that could affect their ability to serve area farmers.

Ryan Lubben owns West Central Ag-Air Inc. in Fergus Falls, Minnesota, but has frequently spent time applying fungicides and insecticides on farms a few hours south of Fergus Falls in Dodge County, Minnesota. His comments to an environmental review manager at the Minnesota Department of Commerce systematically explain why the NextEra Energy Resources Dodge County Wind Project, as currently planned, would be incompatible with aerial applicators' ability to safely provide services to farmers located within the wind project's widespread footprint.

As an opening salvo, Lubben provided facts about the aerial application industry and his company's operations, but then he went several steps further to highlight the importance of aerial application to farmers and clearly illustrate the unacceptable safety risks the densely clustered wind turbine project would present to aerial applicators. The comments came together rather quickly once he gathered a few Surety maps and overlaid his GPS logs onto them.

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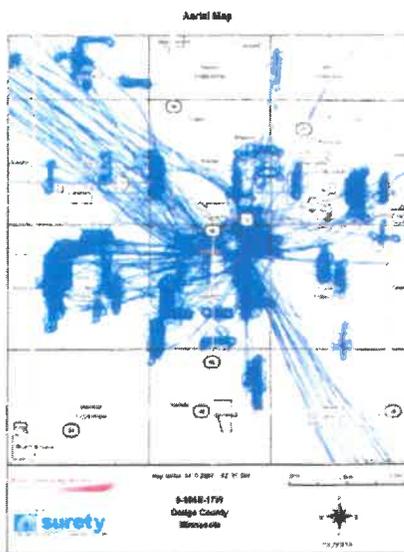


Figure 1



Figure 2

D-8

Zof2
NAAA

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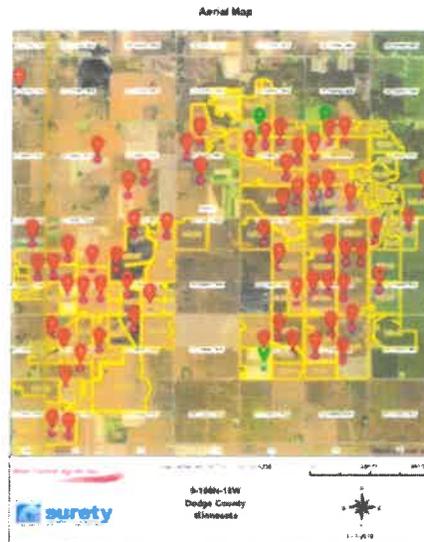


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Ag Impacts Aerial

Flat Ground

National Agricultural Aviation Association
Low-Altitude Obstructions: Wind Turbines
<https://www.agaviation.org/policy/#wind-turbines>

Offsets - Proof of Distance Needed to Safely Turn an Ag Aircraft

NAAA has developed useful information to refute proposed set back distances from wind turbines and other tower-like obstructions. The information may be used by operators and state associations when dealing with wind farm and tower companies making claims that their obstructions do not hamper aerial application activities to crops. The basis for needing the information was a request from a public utilities commission to provide proof that agricultural aircraft need 1 mile or more to turn around safely at the end of a treated field. A wind farm sponsor in South Dakota had proposed a setback of a mere 500 feet, which is far too short a distance for making safe aerial applications in a field adjacent to a wind turbine or tower location site with a fixed-wing aircraft. NAAA provided the information using two different methods.

Method 1: Using aircraft speed and average turn time to estimate the total distance required to make a turn.

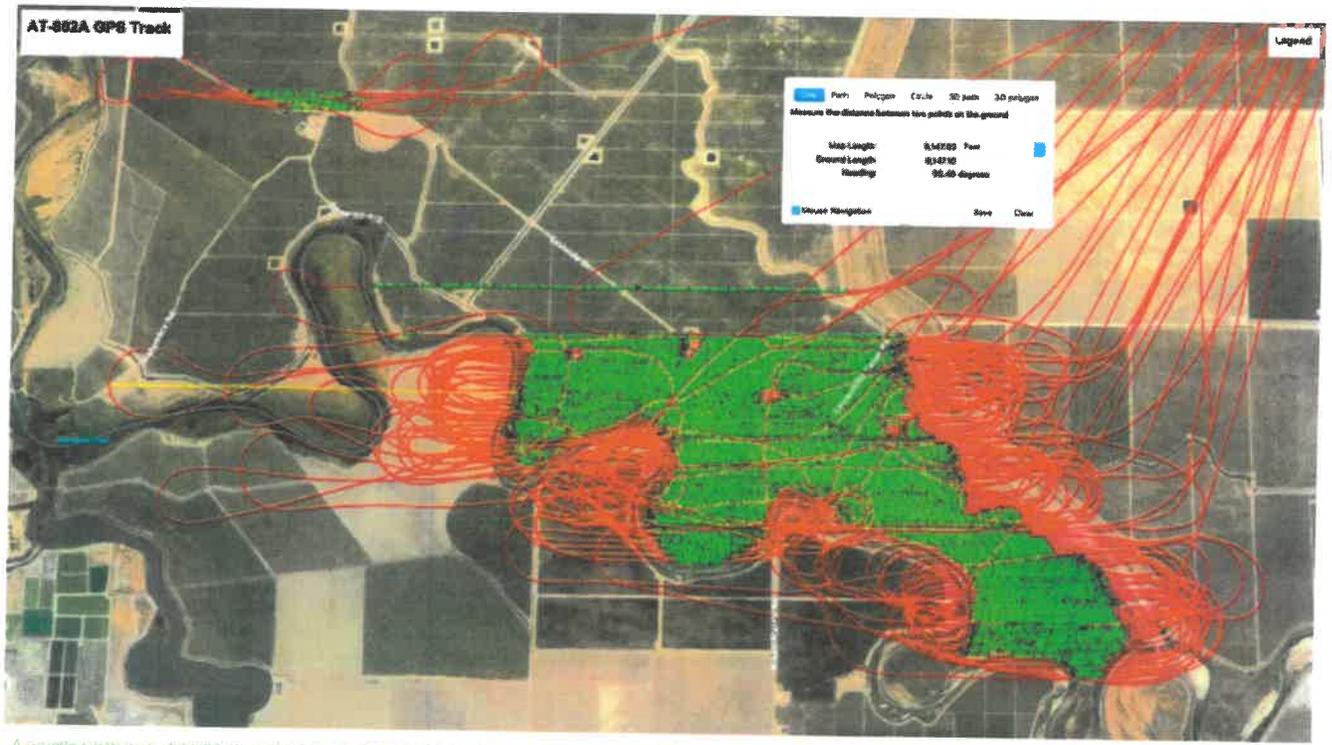
Method 2: GPS as-applied aerial application maps and Google Earth

An AT-802A with a working speed of 145 mph was used as the example aircraft. The working speed was taken from the midpoint between 130 and 160 mph as denoted on Air Tractor's [specifications page for the AT-802A](#). An agricultural turn time of 45 seconds was used; this information was gleaned from operators' experience and used in comments made to EPA on several pesticide re-registrations. A speed of 145 mph is equal to 213 feet per second; 45 seconds to turn multiplied by 213 feet per second means that 9,585 feet is needed for the turn, or...

Google Earth was used to measure the distance into the field that two turns required. The first was one of the shorter turns from the application from when the aircraft was lighter. This turn pushed 2,273 feet or 0.43 miles into the adjacent field. The second was from a longer turn made when the aircraft was fully loaded. This turn penetrated 9,147 feet into the adjacent field, or...

1.82 Miles

1.73 Miles



A Google earth map showing an application made by an AT-802A. Green represents the flight path spray on, while red represent the flight path with spray off. The yellow line is the ruler tool used to measure the total length into the field a longer turn required: 9,147 feet (1.73 miles).

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NAAA eNewsletter

Illinois Wind Farm Required to Compensate Nonparticipating Growers for Increased Aerial Application Costs if Neighbor Hosts Wind Turbine

An aviation consultant who was an agricultural aviator for 14 years successfully got his county to require a wind farm company to compensate growers impacted by wind turbines in neighboring fields if aerial application services are compromised. Jerry Lay with Jerry Lay Aviation LLC was on the Woodford County, Illinois, zoning board when Panther Grove Wind LLC petitioned to locate and operate a wind farm in the county in late 2020. Being a current pilot, instructor and former ag aviator, Jerry understood the impact wind farms have on the ability of growers to utilize aerial application to treat their crops.

The presence of a wind farm is a serious safety concern for ag aviation. Aerial applicators frequently turn down job requests or charge a higher price when making applications within or adjacent to a wind farm. Even if a grower does not have a wind turbine in the field he wants sprayed by air, a wind turbine in a neighboring field can still impact his application because the pilot has to navigate around the wind turbine while turning. This can increase the cost of aerial application for a grower who did not choose to have a turbine on their property.

With that in mind, during the process of approving the wind farm for Woodford County, Mr. Lay was successful in getting the following special consideration added to the final ordinance approving the wind farm:

Panther Grove Wind Energy, LLC or any subsequent owner shall reimburse non-participating farmers/land owners for the difference between the standard aerial application fee for that area charged by the aerial applicator, and any increased application fee or for any additional charge incurred due to the proximity of the wind turbines that are within the navigable aerial application airspace of any field(s) being sprayed belonging to the non-participant.

Panther Creek had already agreed to compensate any grower who decided to have a wind turbine on their land for the increase in aerial application costs and did not object to this additional requirement.

This is an example of the importance of being involved at the local level—and in this case at the local zoning authority—to represent the significance of aerial applications and how wind farms can negatively impact aerial applicators' safety and ability to provide timely and effective pest control. It may be useful information for aerial applicators across the country as they deal with ever-increasing proposals to build wind farms.

Dig Deeper

The complete approved recommendations and ordinance for the Panther Grove Wind Farm can be found [here](#). The transcripts of the meeting where the special conditions were discussed can be read [here](#); see pg. 900 for the part on the special conditions. There is also an interesting discussion starting on pg. 877 about the impact the wind farm will have on local airstrips and how wind turbines should be illuminated.

Burt Rutan, Aerospace Legend, to Speak at 2023 Ag Aviation Expo Kickoff Breakfast

Burt Rutan, Aerospace entrepreneur and Virgin Galactic spacecraft designer, will speak at the 2023 Ag Aviation Expo Kickoff Breakfast on Monday, Dec. 4, in Palm Springs, California. Burt Rutan was described by *Newsweek* as "the man responsible for more innovations in modern aviation than any living engineer." A bold visionary with a passion for the advancement of technology, he founded the aerospace research firm Scaled Composites and was named one of "The World's 100 Most Influential People" by *TIME*.

In business, Rutan believes that the best ideas come from the collaborative efforts of small, closely-knit project teams and an environment not limited by adversity to risk. He inspires audiences with his vision on creativity, innovation, and managers' tasks to motivate a creative team.

Rutan designed the legendary Voyager, the first aircraft to circle the world nonstop without refueling. He also created SpaceShipOne, the world's first privately funded spacecraft, which won the \$10 million Ansari X Prize, offered in an effort to spur the development of affordable space tourism.

In a joint venture with Virgin's Richard Branson, Rutan formed The Spaceship Company to manufacture and market spaceships for the new commercial space-flight industry.

Rutan is currently working on two projects: the Stratolaunch—part airplane, part spaceship—with Microsoft co-founder Paul Allen, and the [SkiGull](#), an amphibious aircraft that runs on the same gas we use for cars and boats.

In 2004, The Spaceship Company launched Virgin Galactic, the world's first commercial spaceline. So far, Virgin Galactic has contracted five SpaceShipTwo tourist spacecrafts and two White Knight Two motherships to the paying public, along with suborbital to provide sub-

WELLS COUNTY ZONING ORDINANCE (WCZO)
ARTICLE 12 – WIND ENERGY FACILITIES
UPDATED 2025

*Setback
Home
1 mile
pg 7, 8*

12 ARTICLE 12 WIND ENERGY FACILITIES

A wind turbine facility may be permitted in an Agricultural District upon approval as a special use, provided the criteria and submittal requirements are met.

12.1 WIND ENERGY FACILITIES

12.1.1 Purpose

The purpose of the ordinance is to provide a regulatory framework for the siting, construction and operation of wind energy facilities in the County, subject to reasonable restrictions, which will preserve the safety and well-being of the residents, while allowing equitable and orderly development of wind energy facilities.

12.1.2 Definitions

- 12.1.2.1 “Decibel” means a unit of sound measurement, abbreviated dB. dB(A) – a frequency weighting that relates to the response of the human ear. The weighted sound pressure level by the use of the A metering characteristic and weighting specified in American National Standards Institute (ANSI) Specification of Sound Level Meters.
- 12.1.2.2 “Height (of turbine)” means the vertical distance from the construction grade of the property to the highest point of a turbine rotor blade when in the upright position.
- 12.1.2.3 “Non-Participating Dwelling” means a dwelling on a non-participating parcel.
- 12.1.2.4 “Non-Participating Parcel” means a parcel of real estate that is not a participating parcel.
- 12.1.2.5 “Occupied Structure” means a building in which people live, work or frequent.
- 12.1.2.6 “Participating Dwelling” means a dwelling on a participating parcel.
- 12.1.2.7 “Participating Parcel” means a parcel of real estate on which any turbine of the wind turbine facility will be constructed, or for which a participation agreement has been executed.
- 12.1.2.8 “Sound Pressure Level (SPL)” means the physical intensity of sound.
- 12.1.2.9 “Wind Turbine Facility” means one or more wind turbines, including appurtenant structures and facilities, rated at an individual or combined nameplate capacity of 150 kilowatts or greater.

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- 12.1.2.10 “Primary Residence” means the address listed on the individual’s driver’s license or state id.

12.1.3 Criteria

12.1.3.1 Appearance

Wind turbines shall be painted with a non-reflective coating and in a uniform, off-white color. Turbines shall not display any advertising except for reasonable identification of the manufacturer or operator of the wind energy facility. The design of the buildings and related structures at the wind energy facility sites shall use materials, textures and location that will blend the wind energy facility to the natural setting and existing environment. Turbines shall be installed on tubular, monopole-type towers.

12.1.3.2 Performance History

All turbines shall be commercially available, utility scale, with an operational history of at least one year. Prototype turbines are not allowed.

12.1.3.3 Lighting

Wind turbines shall not be artificially lighted, except to the extent required by the Federal Aviation Administration (FAA) or other applicable governmental regulatory authority.

12.1.3.4 Minimum Ground Clearance

The blade tip of any wind turbine shall, at its lowest point, have a ground clearance of not less than seventy-five (75) feet.

12.1.3.5 Turbine Access Roads and Protection of Agricultural Operations

The location and construction of access roads and other infrastructure shall, to the extent reasonably possible, not disrupt farming, agricultural operations, or the landscape within Wells County. In order to preserve the integrity of fields and capacity of efficient tilling, planting, and harvesting, the applicant shall work with the landowner to determine the most appropriate routing of access road locations.

- 12.1.3.5a Access roads shall be low profile roads with in-slopes and back-slopes of 10:1 or flatter so that farming equipment can cross them and roadway surfacing shall be Class 5 gravel or similar material, unless otherwise negotiated with the landowner.

- 12.1.3.5b A plan outlining the location and design of all access roads shall be provided to the County Planner for determination as to whether the plan conforms to the other terms of this section.

- 12.1.3.5c If the applicant wishes to build an access road on a section line, in accordance with North Dakota Century Code (NDCC) Section 24-07-05, the applicant shall first petition the township board or the Board of County Commissioners (in unorganized townships.) If the petition is

granted, the applicant must build the road to township or county standards under the supervision of the township district roadway overseer.

12.1.3.5d The applicant must protect and segregate topsoil from subsoil on all lands unless otherwise negotiated with the affected landowners. The applicant must minimize soil compaction of all agricultural lands during all phases and confine soil compaction to as small of an area as possible.

12.1.3.6 Fence and Gate Repair

The applicant shall promptly repair or replace all fences and gates removed or damaged during all phases of the wind energy facility's life and provide continuity of electric fence circuits unless otherwise negotiated with the affected landowner.

12.1.3.7 Drainage Tile Repair

The applicant shall take into account to avoid, promptly repair or replace all drainage tiles broken or damaged during all phases of project life unless otherwise negotiated with the affected landowner.

12.1.3.8 Road Repair (Private Roads)

The applicant shall promptly repair any damaged private roads, driveways or lanes to a condition at least equal to the condition prior to construction of the wind energy facility, unless otherwise negotiated with the affected landowner.

12.1.3.9 Hazardous Waste

The applicant shall be responsible for compliance with all federal, state and local laws applicable to the generation, storage, transportation, clean up and disposal of hazardous wastes generated during any phase of the project's life.

12.1.3.10 Chemicals

The use of chemicals is limited to those herbicides and methods approved by the North Dakota Department of Agriculture and the North Dakota Department of Health. The applicant must contact the affected landowners prior to application.

12.1.3.11 Temporary Staging Areas

The applicant shall negotiate with landowners to locate sites for temporary equipment staging areas.

12.1.3.12 Tree Removal

The applicant shall minimize the removal of trees and shall not remove groves of trees or shelter belts without the written approval of the affected landowners. Trimming or removal of trees within the public right-of-way to allow for safe construction of power lines shall be allowed.

12.1.3.13 Waste Removal

The applicant shall remove all waste and scrap that is the product of construction, operation, restoration and maintenance from the site and properly dispose of it upon completion of each task. Personal litter, bottles, and paper deposited by site personnel shall be removed on a daily basis.

12.1.3.14 Land Restoration

The applicant shall, as soon as practical following construction of each turbine, considering the weather and preferences of the affected landowner, restore the area affected by any construction activities to the condition that existed immediately before construction began. The time period may be no longer than eight (8) months after completion of construction of the turbine. Restoration shall be compatible with the safe operation, maintenance, and inspection of the wind turbine facility.

12.1.3.15 Complaints

Prior to the start of construction, the applicant shall submit to the County Planner the company's procedures to be used to receive and respond to complaints.

12.1.3.16 Public Safety Plan

The applicant is encouraged to provide educational materials to landowners within the site boundaries and, upon request, to interested persons, about the project and any restrictions or dangers associated with the project. The applicant is encouraged to also provide any necessary safety measures, such as warning signs and gates for traffic control or to restrict public access to turbine access roads, substations and wind turbines. The applicant shall comply with provisions outlined in the public safety plan.

12.1.3.17 Fire Protection and Medical Emergency Plans

Prior to construction, the applicant shall prepare fire protection and medical emergency plans in consultation with the rural fire district, sheriff's department, Emergency Management, and local emergency medical service providers having jurisdiction over the area. The applicant shall submit the project to the Wells County 911 coordinator.

12.1.3.18 Road Use Arrangements

Prior to construction, the applicant shall make satisfactory arrangements (including obtaining permits) for road use, access road intersections, maintenance and repair of damages with governmental jurisdiction with authority over each road. The applicant shall notify the County Planner of such arrangements upon request.

12.1.3.19 Overweight Load Permits

The applicant is responsible for abiding by the state and local overweight load permitting processes in accordance with NDCC Chapter 39-12. A special use permit issued under this ordinance to erect a wind turbine facility does not negate a hauler's obligation to obtain overweight load permits prior to hauling.

12.1.3.20 Approach Permits

The applicant is responsible for obtaining an approach permit from the County Road foreman or the affected township for any new or reconstructed approach.

12.1.3.21 Road Repair (Public Roads)

Any road damage caused by the applicant, its independent contractor, employee, agent, contractor, or subcontractor shall be promptly repaired at the applicant's expense to current standards set out in the North Dakota Department of Transportation's (NDDOT) Standard Specifications for Road and Bridge Construction.

If it is reasonably foreseeable that continued trips will make prompt repair to this standard unreasonable, intermediary measures must be taken by the applicant, if approved by the political subdivision in charge of the road, to ensure the public road remains passable and useable as has been the tradition in the community. Final repairs to these standards must be made promptly after the completion of the construction of the wind turbine facility.

12.1.3.22 Collector Lines

The applicant shall place electrical lines, known as collectors, and communication cables underground. Collectors and cables shall also be placed within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner.

12.1.3.23 Feeder Lines

The applicant shall place overhead or underground electric lines, known as feeder lines, on private land immediately adjacent to public rights-of-way (whether improved or not) except as necessary to avoid or minimize human, agricultural, or environmental impacts.

12.1.3.23a Feeder lines may be placed on public rights-of-way only if approval or the required permits have been obtained from the governmental unit responsible for the affected right-of-way.

12.1.3.23b In all cases, the applicant shall avoid placement of feeder lines in locations that may interfere with agricultural operations.

12.1.3.23c Any guy wires on the structures for feeder lines shall be marked with safety shields.

12.1.3.23d When feeder lines are placed on private property, the applicant shall place the feeder lines in accordance with the easement negotiated with the affected landowner(s).

12.1.3.23e All underground feeder lines must be placed at a depth of at least four (4) feet.

12.1.3.24 Electromagnetic Interference Assessment.

The applicant shall submit an assessment of microwave signal patterns in the project area prior to commencement of construction of the project.

- 12.1.3.24a The assessment shall be designed to provide data that can be used in the future to determine whether the turbines and associated facilities are the cause of disruption or interference of microwave patterns in the event residents complain about such disruption or interference after the turbines are placed in operation. The assessment shall be completed prior to operation of the turbines.
- 12.1.3.24b The applicant shall be responsible for alleviating any disruption or interference caused by the turbines or any associated facilities of residents' cell phone, television, radio, computer, satellite, or other electronic transmissions, receptions, or services.
- 12.1.3.24c The applicant shall not operate the wind turbine facility so as to cause microwave, television, radio, telecommunications or navigation interference contrary to Federal Communications Commission (FCC) regulations or federal, state or local laws.
- 12.1.3.24d In the event the wind turbine facility or its operations cause such interference as described in items b and c above, the applicant shall take measures necessary to correct the problem within thirty (30) calendar days.

12.1.3.25 Archeological Resource Survey and Consultation

Unless the project is under the purview of the North Dakota Public Service Commission (PSC), and an Archeological Resource Survey is being prepared as part of that process, the applicant shall work with the State Historic Preservation Office (SHPO) at the State Historical Society of North Dakota at the beginning of the planning process for the wind energy facility to determine whether an archeological survey is recommended for any part of the proposed project. If recommended, the applicant shall contract with a qualified archaeologist to complete such surveys, and shall submit the results to the County Planner and the SHPO. The SHPO will make recommendations for the treatment of any significant archaeological sites which are identified. Any issues in the implementation of these recommendations will be resolved by Board of County Commissioners in consultation with the SHPO. All information provided/submitted under this provision is subject to North Dakota Century Code Section 55-02-07.1.

- 12.1.3.25a In addition, if any archaeological sites or human remains are found during construction, the applicant shall follow standard operating procedures as established by the SHPO and in accordance with NDCC Section 23-06-27 and associated North Dakota Administrative Code 40-02-03.

12.1.3.26 Biological Resources Survey

The applicant, in consultation with the US Fish & Wildlife Service – Ecological Services Office (USFW) and the North Dakota Department of Game and Fish (NDGF) shall, for the project site, conduct a pre-construction inventory of existing wildlife management areas, scientific and natural areas, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas and wildlife resources, particularly birds and bats, within the site and assess the presence of state or federally-listed or threatened species, and other protected species. Such as migratory birds. The results of the survey shall be submitted to the County Planner, USFWS and NDGF.

12.1.3.27 Extraordinary Events

Within twenty-four (24) hours of an occurrence, the applicant shall notify the County Tax Director/Zoning Administrator of any extraordinary event. Extraordinary events include, but shall not be limited to, fires, tower collapse, thrown blade, collector or feeder line failure, or injured wind turbine facility worker or private person. The applicant shall, within thirty (30) calendar days of the occurrence, submit a report to the County Tax Director/Zoning Administrator describing the cause of the occurrence and the steps taken to avoid future occurrences.

12.1.3.28 Wildlife Incidents

Any fatality or injury to any state-or federally – listed species or migratory bird or bat shall immediately be reported to the U.S. Fish and Wildlife Service (USFWS) – North Dakota Field Office and the USFWS Office of Law Enforcement. Also, if a dead or injured whooping crane or sandhill crane is found, operation of all turbines shall be immediately curtailed until it has been determined by the USFWS that there is no longer a threat to other birds in the area. If a whooping crane or sandhill crane is sighted by a wildlife biologist within two (2) miles of any wind turbine, that turbine or turbines should be immediately shut down, and the USFWS should be contacted for further coordination. Cranes usually move on within a few days, at which time, in consultation with the USFWS, the turbine(s) may be restarted.

12.1.3.29 Sound

A sound study which includes modeling of sound levels of wind turbines within 100-feet of every occupied residence within 1-mile of a wind turbine shall be submitted with the application. Sound levels of wind turbines within 100-feet of any nonparticipating residence shall not exceed 45dBA (Leq). Construction noise or reasonable and necessary maintenance activities are allowed to exceed this sound limit except between the hours of 11 p.m. and 7 a.m. This sound standard does not apply to participating dwellings.

12.1.3.30 Setbacks from Primary Residences

Minimum setbacks from Primary Residences are necessary to mitigate noise impacts.

Wind turbines shall be setback at least 5280 feet (1 mile) from participating primary residences and non-participating primary residences (measured from the center of the turbine monopole), and further as necessary to meet the sound level requirement in Subsection 29 above. The option for a variance is available.

The horizontal distance between the center of a turbine monopole and any park, boat ramp, swimming beach, or other public recreation area shall not be less than 5280 feet (1 mile). The option for a variance is available.

12.1.3.31 Reverse Setback

Building permits will not be issued to construct any proposed habitable structure within 5280 feet (1 mile) of any existing turbine (the center of a turbine monopole) or approved turbine location. The option for a variance is available.

12.1.3.32 Setbacks from Non-Participating Properties

Each wind turbine shall be set back not less than 1.1 times the height of the turbine from any non-participating parcel.

12.1.3.33 Setbacks from Public Road Ways

Each wind turbine shall be set back not less than 1.1 times the height of the turbine from state road right-of-ways.

Each wind turbine shall be set back not less than 1.1 times the height of the turbine plus 75 feet from the centerline of any county or township roadway (whether improved or not).

Each wind turbine shall be set back not less than 1.1 times the height of the turbine from any railroad right-of-way or from any overhead utility.

12.1.3.34 Shadow Flicker

A shadow flicker analysis, assuming typical meteorological conditions, shall be submitted for all occupied residences of non-participants within one-mile of a wind turbine. The maximum acceptable level of shadow-flicker exposure for homes in the study shall be 30 hours per year. The applicant shall provide commercially reasonable efforts to remedy shadow-flicker complaints from any non-participating owners of an occupied residence with a window view of a wind turbine on a case-by-case basis by undertaking measures such as trees or vegetation plantings, awning installations, or providing light-blocking curtains or shades.

12.1.3.35 Pre-construction meeting

Prior to the start of any construction, the applicant shall conduct a preconstruction meeting with the County Building Official to coordinate field monitoring of construction activities. The pre-construction meeting shall be open to all interested parties and shall address staging, complaints, emergency plans, and other pertinent issues.

12.1.3.36 As-Built Plans and Specifications.

Within one hundred eighty (180) calendar days after completion of construction, the applicant shall submit to the County Building Official, a copy of the as-built plans and specifications in both hard copy and in electronic digital format as specified by the County Planner.

12.1.3.37 Decommissioning Plan and Bonding Requirements

The wind project shall develop a Wind Turbine Decommissioning Plan in accordance with NDCC 49-02-27 and NDAC 69-09-09 and this Plan and Bond shall be submitted as part of the Building Permit Application.

12.1.3.38 Insurance Requirement

The owner/operator of a wind turbine facility must provide proof of liability insurance at the time of application. Wells County shall be listed as a certificate holder. Certificates shall provide not less than thirty (30) calendar days' notification to the certificate holder prior to cancellation or material change in coverage.

Throughout the duration of this special use permit, the owner/operator of a wind turbine facility agrees to provide evidence of insurance coverages no less than the types and amounts specified below:

- | | |
|--|-------------|
| a. Worker's Compensation: | Statutory |
| b. Employer's Liability | |
| Each Accident: | \$1,000,000 |
| Disease, Policy Limit: | \$1,000,000 |
| Disease, Each Employee: | \$1,000,000 |
| c. General Liability | |
| General Aggregate: | \$2,000,000 |
| Each Occurrence
(Bodily Injury and
Property Damage) | \$1,000,000 |
| d. Excess Umbrella Liability | |
| Each Occurrence | \$5,000,000 |
| General Aggregate: | \$5,000,000 |
| e. Automobile Liability | |
| Combined Single Limit
(Bodily Injury and
Property Damage) | |
| Each Accident | \$1,000,000 |
| f. Other Conditions (Specify): | |
| 1. Commercial General Liability policy shall be endorsed to add Wells County, its employees, officers, agents and contractors as additionally insured. | |
| 2. Certificates evidencing required insurance shall be provided to Wells County upon approval of the special use permit and prior to commencement of construction. | |

12.1.3.39 Contact Information

The applicant must provide a local contact authorized by the applicant to receive service and respond to all notices, demands, complaints, concerns or other requests. Local contact information must include the name of the local representation, local phone number and physical address. Said contact information must be filed with the County Tax Director/Planning & Zoning Administrator prior to commencement of construction of the wind energy facility.

12.1.3.40 Transfer of Ownership of a Wind Turbine Facility

Prior to any change in ownership or assignment of a controlling interest of any entity owning a wind energy facility permitted in Wells County, including any assignment or transfer of a controlling interest to any corporation, partnership, or other entity controlled by or a subsidiary or affiliate of the wind energy facility permitted in Wells County, application shall be made to Wells County Planning Commission, requesting transfer of the wind energy facility special use permit. Approval of such transfer shall be conditioned upon explicit agreement by the new applicant to comply with the requirements and conditions of this ordinance, as amended, and the special use permit. The application shall also include the new applicant's agent and contact information. A change of ownership that results in inability, unwillingness, or failure to abide by the conditions of this ordinance can be a basis for revocation of the special use permit. [This limitation shall apply to all transfers by operation of law and any transfers by trustee in bankruptcy, receivers, administrators, executors, and legatees.]

12.1.3.41 Changes

Any minor changes in the location or character of wind turbine facilities and structures may be authorized in writing by the County Planner. All other changes shall require approval of an amended special use permit under these same ordinance requirements.

12.1.4 Special Use Permit Application Submittal Items

The following items shall accompany the special use permit application:

12.1.4.1 Two (2) copies of a site plan submitted on high quality paper on sheets thirty (30) inches by thirty-six (36) inches, provided that when more than one sheet is required, there shall also be submitted an index sheet on high quality paper and of the same dimensions, showing the entire wind turbine facility project on one sheet and giving section, township and range numbers. The applicant must also submit this data in electronic digital format as specified.

12.1.4.2 The site plan shall be drawn to a scale of one (1) inch equals 1000 feet or less with scale to be shown graphically.

12.1.4.3 To Provide adequate coverage, the site plan shall show an area up to a minimum of three-quarters (3/4) mile (3,960 feet) beyond the outermost wind

turbine towers, meteorological towers, all wind turbine facility access roads and appurtenant project structures.

12.1.4.4 Site plans shall contain the following elements:

- 12.1.4.4a Name of the wind turbine facility
- 12.1.4.4b Name and address of the wind turbine facility owner
- 12.1.4.4c Name, address, and registration number of professional surveyor involved in preparing the site plan
- 12.1.4.4d Date the site plan was prepared
- 12.1.4.4e North point indication
- 12.1.4.4f Section, township and range numbers
- 12.1.4.4g Topographic contours with a minimum contour interval of ten (10) feet, with indication of datum used
- 12.1.4.4h A location map inset showing the township(s) in which the project is located and the boundary of the proposed project
- 12.1.4.4i Location of all existing public roadways and right-of-way within five hundred (500) feet of proposed turbine locations
- 12.1.4.4j General location and railroad rights-of-way, as available from public documents, within five hundred (500) feet of proposed turbine locations
- 12.1.4.4k Name, dimensions and location of any utility easements, as available from public documents, within five hundred (500) feet of proposed turbine locations
- 12.1.4.4l Name, dimensions and location of any parks, public land, historic resources, multi-use trails, or areas of recreational significance, as available from public documents, within three thousand (3000) feet of proposed turbine locations
- 12.1.4.4m Name, dimensions and location of habitable structures
- 12.1.4.4n Location of any corporate or township boundaries

- 12.1.4.4o General location and identification of section lines, as available from public documents
- 12.1.4.4 p General property ownership boundary lines, as available from public documents, for properties within five hundred (500) feet of proposed turbine locations.
- 12.1.4.4q Names of property owners, identified as participating or non-participating, within five hundred (500) feet of proposed turbine locations
- 12.1.4.4r Streams, rivers, watercourses, lakes, and any marshy or swamp areas
- 12.1.4.4s Federally designated wetland areas
- 12.1.4.4t All affected public or private airstrips with the FAA identification number
- 12.1.4.4u Proposed turbines locations
- 12.1.4.4v Names of property owners, as available from public documents, within five hundred (500) feet of proposed turbine locations
- 12.1.4.4w Participating residences within five hundred (500) feet of proposed turbine locations, non-participating residences within two thousand (2000) feet of proposed turbine locations, and parks, boat ramps, swimming beaches or other public recreation areas within three thousand (3000) feet of proposed turbine locations, as available from public documents

12.1.4.5 Other Submittal Items

- 12.1.4.5a Statement of assurance that the project will not alter any existing surface water drainage patterns.
- 12.1.4.5b Plan for Restoration of the Site Due to Construction
- 12.1.4.5c Plan for Receiving and Responding to Complaints
- 12.1.4.5d Public Safety Plan
- 12.1.4.5e Fire Protection and Medical emergency Plan
- 12.1.4.5f Biological Preservation Study
- 12.1.4.5g Shadow Flicker Study
- 12.1.4.5h Decommissioning Plan and Bond the facility or turbine owner or operator shall file with the Special use application the estimated

decommissioning cost per turbine, in current dollars at the time of filing, for the proposed facility or turbine and a comprehensive decommissioning plan that describes any expected effects on present and future natural resource development and how the facility or turbine owner or operator plans to pay for decommissioning of the facility or turbine as required. The commission may at the time require the owner operator of a commercial wind energy conversion facility or wind turbine to file a report with the Planning and Zoning Commission describing how the facility or turbine owner or operator is fulfilling this obligation. The owner or operator shall secure a performance bond, surety bond, letter of credit, corporate guarantee, or other form of financial assurance that is acceptable to the Planning and Zoning Commission to cover the anticipated costs of decommissioning the commercial wind energy conversion facility or turbine.

12.1.4.5i Copies of letters of application from the applicant to the following agencies requesting review of the proposed wind turbine facility:

- a. United States Fish & Wildlife Service (USFW)
- b. North Dakota Game & Fish Department (NDGF)
- c. The State Historic Preservation Office (SHPO) at the State Historical Society of North Dakota
- d. Federal Aviation Administration (FAA)

12.1.4.6 Fees

The special use permit fee is .001 (1/10th of 1%) of the value of each wind turbine. An application fee of \$1000 shall be payable at the time of application for a special use permit, with the remainder of the special use permit remitted by the applicant prior to building permit applications.

12.1.5 Building Permit Submittal Items:

An application for a building permit for the construction of a wind turbine facility must include:

12.1.5.1 A copy of the special use permit, with the site plan, as approved by the Wells County Board of Commissioners and, if applicable, a copy of the permit as approved by the North Dakota Public Service Commission (PSC)

12.1.5.2 Additional site plan items not included with special use permit site plan submittal, including:

12.1.5.2a Name, location and width of all existing public roadways and right-of-way within five hundred (500) feet of proposed turbine locations, including the type and width of surfacing

12.1.5.2b Existing and proposed access points along public rights-of-way

12.1.5.2c All existing wind turbine facility fixtures, regardless of ownership, accessory structures or buildings, including substations,

meteorological towers, electrical infrastructure, and collector or transmission lines

12.1.5.2.d Proposed turbine locations showing turbine heights, roads, electrical equipment, collector and feeder lines and all other associated facilities

12.1.5.2e Location and dimensions of proposed utility easements, including easements for storm water management facilities and proposed locations of culverts and retention/detention areas, if applicable

12.1.5.2f Boundaries of any filed lease, easement, or option for wind energy facilities, whether they benefit the applicant, the applicant's property operator, or an unrelated party

12.1.5.3 Documentation certifying structural loading requirements

12.1.5.4 The applicant shall identify, by map, each public road in Wells County that the applicant may or will travel on with a gross weight in excess of 80,000 lbs.

12.1.5.5 Reclamation Performance Bonding

12.1.5.6 Electromagnetic Interference Assessment

12.1.5.7 Proof of Insurance

12.1.5.8 National Pollution Discharge Elimination System (NPDES) construction permit.

12.1.5.9 A building permit fee of \$500 per wind turbine.

12.1.5.10 Copies of letters of acceptance regarding the proposed wind turbine facility from the following agencies:

- a. United States Fish & Wildlife Service (USFW)
- b. North Dakota Game & Fish Department (NDGF)
- c. The State Historic Preservation Office (SHPO) at the State Historical Society of North Dakota
- d. Federal Aviation Administration (FAA)

Gage County Nebraska

Homes

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- a. Small wind system specifications including manufacturer and model; rotor diameter; tower height and tower type (freestanding or guyed);
 - b. Documentation to establish that the tower has sufficient structural integrity for the proposed use at the proposed location;
 - c. Certification that the small wind energy system complies with all applicable state construction and electrical codes and the National Electrical Code.
3. Compliance with FAA Regulations, including any documentation required by the FAA certifying approval of proposed location when located within the three(3) mile Planning Jurisdiction of any airport.
 4. Signed letter of Notification by the property owner submitted to the Electrical Supplier/Purchaser, the Gage County Assessor's Office and the Gage County Zoning Administrator signifying that the utility service is approved.
 5. Required proof of insurance on application.
 6. Require proof of no anticipated interference with local electromagnetic providers such as internet, radio, telephone in the SWECS project area.

6.65 COMMERCIAL WIND ENERGY CONVERSION SYSTEM (CWECS): A WECS under common or aggregated ownership or operating control that includes substations, MET towers, cables/wires and other building accessories, whose main purpose is to supply electricity to off-site customers. CWECSs may be included as an aggregated project, such as those projects that are developed and operated in a coordinated fashion, but which have multiple entities separately owning one or more of the CWECS within a larger project. Associated infrastructure such as power lines and transformers that service the facility may be owned by a separate entity, but are also part of the aggregated project. All individual wind turbine towers of an aggregated project shall comply with Section 6.65 (A) items (1) through (17).

A. General Site and Design Standards

1. Located on a lot or parcel of at least ten (10) acres in size.
2. The entire aggregated project shall be permitted by a Special Use Permit in aAG-1; AG-2; AG-3 or AG-4 District.

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3. If an aggregated project, setbacks from multiple entities (turbines) shall be one and one-tenth (1.1) times the height of the total system.
4. Each CWECS location must have a 911 address.
5. CWECS shall be designed and placed in such a manner as to minimize to the greatest extent feasible, adverse visual and noise impacts on adjacent areas. The design shall include documentation according to the Application Requirements found in Section 6.66 (E) - (F).
6. CWECS shall maintain a minimum setback distance from any property line of two (2) times the total system height of the windmill for non-participating property owners. Adjoining property owners participating in the same Aggregated Project shall have no setback requirements between adjoining properties.
7. CWECS shall maintain a minimum setback distance from any public road or highway of at least one point one (1.1) times the total system height of the ~~windmill~~ turbine from the public road or highway right-of-way or the turbine manufacturing recommendation or whichever is greater.
8. In no case shall a CWECS be located within any required setback or in any front yard area; except that a non-participating landowner can waive a setback requirement by written agreement which shall be submitted at the time of the application. Such an agreement must be filed with the Register of Deeds and proof of that filing shall be provided to the Gage County Planning & Zoning Administrator prior to approval of the permit.
9. Structures for wind turbines shall be self-supporting tubular towers, if painted or coated shall be of a non-reflective neutral color such as white or pale gray. No lattice structure shall be used. No logos or advertisements are allowed on these structures. Each turbine shall be marked with a visible identification number located no higher than fifteen (15) feet above ground level.
10. Colors and surface treatment of the CWECS and supporting structures shall, to the greatest extent possible, minimize disruption of the natural characteristics of the site.
11. Reasonable measures shall be taken to mitigate specific adverse visual impacts such as reflections, shadow flicker and blade glint affecting residences within or immediately adjacent to the project area. [Shadow](#)

flicker shall not occur more than 30 minutes per day and not more than 30 hours per year from an occupied residence.

12. ~~CWECS shall be equipped with air traffic warning lights or other marking lights only if so required by the Federal Aviation Administration and in which event, such light should be positioned or shielded to avoid visual impact on neighboring properties and shall be a white flashing light from daylight until twilight and a steady red light at night time. Light system must be maintained and working at all times.~~ All CWECS projects requiring notice to the Federal Aviation Administration (FAA) via 14 CFR, Part 77 and the Obstruction Evaluation Process will be required by Gage County Zoning to submit to the FAA a request for the Aircraft Detection Lighting System (ADLS). Upon completion of the FAA Marking and ADLS Lighting Study, if FAA has determined that an ADLS system is available, Gage County Planning Commission and the Gage County Board of Supervisors requests that the ADLS system be required. Lighting should be positioned or shielded to avoid visual impact to neighboring properties to the extent possible conforming to FAA rules.
13. The applicant shall design and locate the CWECS to ~~minimize or~~ mitigate any interference with electromagnetic communications, such as internet, microwave, radio, telephone, ~~and~~ television signals or Gage County 911 Communication System. A beam study shall be conducted at the expense of the CWECS Applicant and a site plan must be provided to communication providers during the planning process ~~caused by any wind energy facility.~~
14. A Meteorological Tower is permitted by a Conditional Use Permit for the purposes of the Aggregated Project. Meteorological Towers shall meet the same setback requirements of those established for an Aggregated Project. If the tower is non-functional, it shall be removed after a period of two (2) years.
15. CWECS shall have a minimum setback of one (1) mile (5,280 feet) from the turbine to any residence on a Non-participating Property. However, no setback is required between an adjacent residence of a property participating in the same Aggregated Project.
16. ~~Current platted subdivisions approved prior to September 1, 2015 shall have a minimum setback of one-half (1/2) mile (2,640 ft) from the turbine to the property line. Platted subdivisions approved after September 1,~~

~~2015 shall have a minimum setback of three eighths (3/8 mile (1,980 ft), OR three times the total height of the tower, whichever is greater, from the turbine to the property line.~~ Platted Subdivisions approved prior to 2004 and Platted Subdivisions approved through a Special Use Permit shall have a minimum of one (1) mile (5,280 feet) setback measured from the turbine to property line of the Platted Subdivision map on record with the Gage County Register of Deeds.

17. Platted subdivisions ~~for~~ of Towns and Villages within Gage County, including those that do not have applicable zoning regulations shall have a minimum setback of ~~one half (1/2) mile, (2,640 ft), or four times the total height of the tower, whichever is greater, from the turbine to the property line~~ one (1) mile (5,280 feet) measured from turbine to property line of the Platted Town or Village map on record with the Gage County Register of Deeds.
18. CW ECS shall have a minimum setback of one (1) mile (5,280 feet) measured from the turbine to a public school property line.
19. CW ECS shall have a minimum setback of one (1) mile (5,280 feet) measured from the turbine to a federal, state or local park property line.

6.66 APPLICATION REQUIREMENTS

The applicant for a conditional use permit for construction of a CW ECS shall file an application with the Gage County Zoning Administrator. The application shall include the name(s) of the project applicant(s); the name of the project owner(s); the legal description and address for the project. The application shall also include the following documents:

- A. A survey map illustrating the following:
 1. Property lines, dimension, acreage and contours with appropriate intervals for site evaluation;
 2. Location and elevation of all components of the proposed CW ECS;
 3. Location and dimensions of all existing structures and uses on property within three hundred (300) feet of the total height of the system;
 4. Height of any structures over thirty-five (35) feet within a five hundred (500) foot radius on site or off-site of the proposed CW ECS;

5. Location of any overhead utility lines on the property;
 6. Location of all known communications towers within two (2) miles of the proposed CWECs;
 7. Access roads;
- B. Adjacent ownership, land uses, existing residences, schools, churches, hospitals, public libraries, federal, state, county or local parks, recognized historic or heritage sites, identified wildlife preserves or habitat areas to a distance of ~~2,640 feet (one half mile)~~ 10,560 feet (two miles).
 - C. Provide a copy of the Easement Deed or similar recorded document from the Gage County Register of Deeds Office for each Participating Property.
 - D. Provide a map illustrating all Transmission Lines connecting to the Substation.
 - E. Compliance with FAA regulations, including any documentation required by the FAA, which shall include Form 7460, certifying approval of each proposed location.
 - F. ~~Copy of the Agreement or Notification of Compliance Letter between the Beatrice Airport Authority and Applicant.~~ Provide minutes from meeting (s) with the Beatrice Airport Authority Board to discuss and review the proposed CWECs site plan.
 - G. Results of Consultation with the National Oceanic and Atmospheric Administration (NOAA), National Weather Service, or any other relevant weather monitoring in the CWES project areas.
 - H. Results of consultation regarding potential interference with existing communication facilities within the CWECs project area, with proof that Applicant has designed and mitigated any possible interference and met with communication providers for proper site planning within the CWECs project area.
 - I. Applicant shall identify potential effects in terms of constraints or benefits the wind energy facility may place on current or future use of the land within the project site and the surrounding area. The extent of any limitations due to public health and safety risks shall be specifically addressed and the effects on the following activities shall also be addressed:

1. Existing or proposed tourist or recreation activities;
 2. Residential activities;
 3. Industrial activities;
 4. Agricultural activities;
 5. Commercial activities.
- J. Soil erosion, sediment control and storm water runoff plan shall address what types of erosion control measures will be used during each phase of the project. It shall identify plans for:
1. Grading;
 2. Construction and drainage of access roads and turbine pads;
 3. Design features to control dust;
 4. Design features to maintain downstream water quality;
 5. Re-vegetation to ensure slope stability;
 6. Restoring the site after temporary project activities;
 7. Disposal or storage of excavated materials;
 8. Protecting exposed soil;
 9. Stabilizing restored material and removal of silt fences or barriers when the area is stabilized; and
 10. Maintenance of erosion controls throughout the life of the project.
- K. Applicant shall provide information regarding flora and fauna of the proposed project area including:
1. Officially listed threatened or endangered species;
 2. Critical habitat and habitat conditions;
 3. An avian study based on the U.S. Fish and Wildlife Services, "Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines".
- L. [Provide minutes and reports from meeting \(s\) with Nebraska Game and Parks, Lower Big Blue NRD and/or Nemaha NRD to review the proposed CW ECS site plan including mitigation action taken to protect flora and fauna of the proposed project area.](#)
- M. A pre-construction noise modeling study shall be conducted in accordance with procedures approved by Standard 61400-11 of the International Electrotechnical Commission (IEC)*; and shall include all property with a dwelling within one mile of a tower support base. The protocol, methodology and noise modeling shall be included in the study. The complete results and full study report shall be submitted to the Gage County Planning Commission for review at the time of the application.

- N. Projections of the “shadow flicker” on any existing structures located off the property on which the CWECS will be constructed and shall include the extent and duration of the shadow flicker on these existing structures.
- O. Standard drawings of the structural components of the CWECS, including structures, tower, base and footings.
- P. Certification by a registered engineer that shows:
 - 1. There is a substantial need for the proposed use of CWECS, one hundred (100) kW or greater;
 - 2. All applicable local, state and federal building, structural and electrical codes have been followed;
 - 3. The site is feasible for a CWECS; the CWECS can be successfully operated in the climate conditions found in Gage County;
 - 4. The rotor and over speed control have been designed for the proposed use on the proposed site;
 - 5. The design and safety of the proposed tower to withstand winds of ninety (90) miles per hour; and
 - 6. If the wind turbine were to fall, no building or structure, existing or potential, would be damaged.
- Q Applicant shall submit a view shed study from the Homestead National Monument of America Park property to the Aggregate Project. Study shall include from a view point of five feet five inches (5.5) above natural ground level anywhere on the Homestead National Monument Park. No more than one third (1/3) of the turbine blade at maximum height may be seen. Allowance for foliage may be considered.

6.67 CONSTRUCTION AND OPERATIONS

- A. All public roads to be used for the purpose of transporting CWECS substation materials, cement or equipment for construction, operation or maintenance of the CWECS shall be identified and applicable weight and size permits from the impacted road authority(ies) shall obtained prior to construction. A pre-construction survey must be conducted with the appropriate jurisdictions to

determine existing road conditions. Those included are Applicant(s); Land Owner(s); Township Representative(s); Highway Superintendent(s) and/or Zoning Administrator(s). The survey shall include photographs and a written agreement to document the conditions of the public roads and facilities. All expenses of the survey shall be the Applicant's responsibility.

- B. The CWECS owner shall be responsible for immediate repair of damage to public roads and drainage systems stemming from construction, operation or maintenance of the CWECS.
- C. Solid and hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as used oils and lubricants shall be removed from the site promptly and disposed of in accordance with all applicable local, state and federal regulations.

6.68 SAFETY MEASURES

- A. Each CWECS shall be equipped with both manual and automatic controls to limit the rotational speed of the rotor blade so it does not exceed the design limits of the rotor.
- B. The Planning Commission shall determine the height, color and type of fencing, if needed, for the CWECS installation. CWECS shall include no sign or advertising of any kind, except for one sign not to exceed two (2) square feet posted at the base of the tower, electrical equipment and entrances. The sign shall contain the following information:
 - 1. Warning – high voltage;
 - 2. Manufacturer's name;
 - 3. Operator's name;
 - 4. Emergency phone number;
 - 5. Emergency shutdown procedures.
- C. Each CWECS shall be properly grounded to safely sustain natural lightning strikes in conformance with the National Electric Code.
- D. Any CWECS facility shall be equipped with anti-climbing devices. Tower climbing apparatus shall not be located within fifteen (15) feet of the ground. Where the tower is capable of being climbed, a locked protective fence at least six (6) feet high shall enclose the tower.
- E. The CWECS operator shall maintain a current insurance policy ~~which will cover~~ which will cover liability, installation, operation and any possible damage or injury that might result from the failure of a tower or towers or any

other part or parts of the generation and transmission facility. The amount of said policy shall be established as a condition of approval. The CWECS shall be warranted against any system failures reasonably expected in severe weather operation conditions.

- F. An Emergency Operations Plan (EOP) must be placed on file and kept current with Gage County Zoning Administrator, Gage County Emergency Management and Fire and Rescue Department (s) within the project jurisdiction. The plan shall demonstrate an all-hazards planning approach, based on an emergency incident or disaster of any magnitude or geographic size that may cause disruption to the function of the CWECS and include contacts for notification.
- G. Upon completion of the CWECS project, the CWECS Applicant shall meet with local Fire and Rescue jurisdictions to review the Emergency Operations Plan (EOP).

6.69 DISCONTINUATION AND DECOMMISSIONING

- A. CWECS shall be considered a discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the Gage County Zoning Administrator outlining the steps and schedule for returning the CWECS to service. All CWECS and accessory facilities shall be removed four (4) feet below ground level within ninety (90) days of the discontinuation of use. This period may be extended by the Zoning Administrator following a written request by an agent of the owner of the CWECS.
- B. Each CWECS shall have a decommissioning plan outlining the anticipated means and costs of removing CWECS at the end of the serviceable life or upon becoming a discontinued use. The cost estimates shall be made by a competent party, such as a professional engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning.
- C. At the end of the aggregated project's useful life, the entire site shall be restored in accordance with the requirements of this condition within eighteen (18) months.
- D. A bond or equivalent enforceable security instrument shall be determined by the Gage County Board of Supervisors and is required before construction begins ~~shall be based upon salvage value and is required by the end of operational, service in year # 10,~~ to guarantee removal and restoration upon discontinuation, decommissioning or abandonment. Upon transfer of any CWECS permit, the permit holder shall submit proof that the bond has been

reassigned, or that a new bond or other security instrument has been obtained for decommissioning. The transfer of a CW ECS permit and any assignment of bond and all other or new bonds must be filed with the Register of Deeds and evidence of that filing shall be presented to the Gage County Planning and Zoning Administrator and Gage County Board of Supervisors.

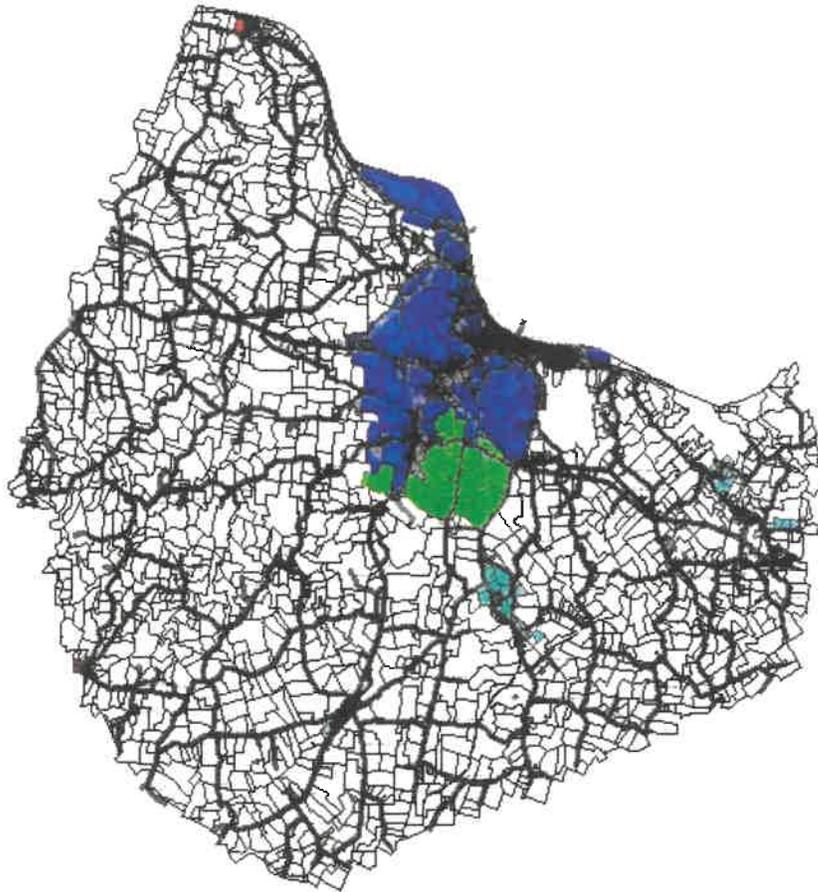
6.70 NOISE

- A. No CW ECS shall exceed ~~60~~ 55 dBA 10 minute leq at the nearest structure occupied by humans. In the event of periods of severe weather, as defined by the United States Weather Service, a CW ECS may exceed ~~60~~ 55 dBA. Except that a participating landowner may waive a noise limitation by written agreement, which shall be submitted at the time of the application.
1. No CW ECS shall exceed 45 dBA during day time and 40 dBA at night (night hours are 10:00 p.m. to 7:00 a.m.) at the nearest residence of a nonparticipating property; or
 - a. Five (5) dBA maximum 10 minute leq allowed above ambient noise level.
 - b. In the event of periods of severe weather, as defined by the United States Weather Service, a CW ECS may exceed ~~60~~ 55 dBA.
 2. A non-participating landowner can waive a noise requirement by written agreement. A written waiver shall be submitted at the time of the application. Such an agreement must be filed with the Register of Deeds and proof of that filing shall be provided to the Gage County Planning & Zoning Administrator prior to approval of the permit.
- B. All noise complaints regarding the operation of any CW ECS shall be referred, in writing, to the Gage County Planning and Zoning Administrator and the Gage County Board of Supervisors.
- C. ~~At the discretion of~~ The Gage County Planning and Zoning Administrator and the Gage County Board of Supervisors shall request post-construction noise level measurements ~~may be required to be performed~~ at the expense of the CW ECS operator. The testing ~~should be~~ shall be completed by a licensed, independent acoustical engineer, and the results shall be forwarded to the Gage County Board of Supervisors.
- D. The ~~County Board~~ Gage County Board of Supervisors shall determine whether a violation has occurred.

6.71 NONCONFORMITIES

The CWECS that was approved by Special Use Permit #2013-1 (also known as the Steele Flats Wind Project) shall be subject only to the zoning regulations applicable at the time that the Special Use Permit #2013-1 was approved and shall not be subject to any subsequently adopted regulations. This section shall not be construed to allow the addition of any structures that were not previously authorized by Special Use Permit #2013-1.

LAND USE MANAGEMENT ORDINANCE



CITY OF MAYSVILLE & MASON COUNTY, KENTUCKY

December, 2020

Industrial scale WECS are not specifically limited by this ordinance but are subject to those height limitations promulgated by Federal Aviation Administration.

414.07 **SETBACK REQUIREMENTS**

A. Minimum Setback Distances for **INDUSTRIAL SCALE WECS TOWERS**

Distance from a...	Minimum Setback Distance
Property line, measured from the center of the WECS Tower to the property line	One Mile (5,280 feet).
Residential dwellings, regularly occupied industrial or institutional buildings, public or semi-public institutions such as schools and churches and historical landmarks measured from the center of the WECS Tower to the nearest corner of the	One Mile (5,280 feet).
Public road right-of-way, measured from the center of the WECS Tower to the edge of the right-of-way	One Mile (5,280 feet). SEE FN 1.
Other rights-of-way, such as railroads and public utility easements, measured from the center of the WECS Tower to the edge of the right-of-way	One Mile (5,280 feet).
Public conservation lands, measured from the center of the WECS Tower to the nearest point of the public conservation land in question	One Mile (5,280 feet).
Community or Rural Residential Districts measured from the WECS Tower to the Rural District line	One Mile (5,280 feet).
Incorporated limits of a municipality and County boundary, as measured from the center of the WECS Tower to the corporate limits or County boundary.	One Mile (5,280 feet).
Wetlands, as defined by the U.S. Army Corps of Engineers, measured from the center of the WECS Tower to the nearest point of the Wetland in question.	One Mile (5,280 feet).
Above-ground electric transmission or distribution line, measured from the nearest horizontal extension	One Mile (5,280 feet).

Cell towers, radio and television towers	One Mile (5,280 feet).
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‡ The setback shall be measured from future public rights-of-way width if a planned public road improvement or expansion is known at the time of application.

B. Industrial Scale WECS Ancillary Structure Setback

1. Industrial scale WECS and ancillary structures such as substations and maintenance and operation facilities are considered principal structures and subject to principal structure setbacks unless otherwise specified herein or if specifically identified as an accessory structure in Code of Ordinances Section 320.408.2.

2. For all poles carrying overhead wiring connecting Industrial scale WECS Towers to a Substation for connection to a utility's electric transmission line, there are no setback requirements from property lines as long as the poles are located within a recorded easement for such purpose.

414.08 SAFETY DESIGN AND INSTALLATION STANDARDS

A. Equipment Type

1. All turbines shall be constructed of commercially available equipment.
2. Experimental or proto-type equipment still in testing which does not fully comply with industry standards, may be approved by the Board of Adjustment per the variance process established by this Ordinance.
3. Industrial scale WECS towers shall be of tubular construction or appearance, not guyed or with exposed girders.

B. Industry Standards and Other Regulations

All industrial scale WECS shall conform to applicable industry standards, as well as all local, state and federal regulations. An applicant shall submit certificate(s) of design compliance that wind turbine manufacturers have obtained from Underwriters Laboratories, DNV-GL, or an equivalent third party.

C. Controls and Brakes

1. **Braking System.** All industrial scale WECS Towers shall be equipped with a redundant braking system. This includes both aerodynamic over speed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Stall regulation shall not be considered a sufficient braking system for over speed protection.

Property line
6.5x
or 3,960 ft

Kosciusko County Zoning Ordinance Ord. #: 75-1

Last Revised January 18, 2022
Effective January 18, 2022

Established and effective March 1, 1975 Misc. Record 53 Page 130
Recodified August 29, 2000 effective January 1, 2001

Pierceton Joined 1/6/76
Claypool joined 1/21/75
Milford joined 6/1/75
Silver Lake joined in 6/1/03
North Webster Joined in 7/20/83
Town of Syracuse & TC Joined 8/77
Town of Etna Green Joined 7/11/07
Town of Burket Joined 11/13/14
Town of Leesburg Joined 2/8/21

B. Setbacks.

1. Micro towers and any associated features shall be set back from any adjoining property lot line, road right-of-way, railroad right-of-way or overhead electrical transmission or distribution lines a minimum distance equal to the total height of the structure.
2. Each proposed large wind turbine generator or meteorological testing tower shall meet the following applicable setback requirements:
 - a. Each wind turbine generator or meteorological testing towers (MET) and any associated features shall be set back from any adjoining property lot line, road right-of-way, railroad right-of-way or overhead electrical transmission or distribution lines a minimum distance of 3,960 feet or 6.5 times the height of the tower from the base to the tip of the blade in vertical position, whichever is greater.
 - b. Wind Farms and WECS' occupying multiple parcels may have internal property line setbacks waived by execution of a written document signed by all land owners sharing such a property line. All such documents shall be recorded in the office of the Kosciusko County Recorder within 45 days of the signing of *each* wind lease agreement and said document shall be cross referenced to the current recorded deed. The wind developer *may not* submit a memorandum of lease containing multiple lease contracts to the Kosciusko County Recorder. Signed wind lease contracts not submitted to the Kosciusko County Recorder's office within 45 days of signing are null and void in Kosciusko County.
 - c. The setback distance for the WECS shall be one mile from any platted community of a municipality. Distance shall be measured from the center of the foundation at the base of the WECS to the closest Corporate Limit boundary line.

C. Minimum Rotor Wind Vane or Blade Clearance. The lowest point of the arc created by rotating wind vanes or blades on a wind turbine generator shall be no less than 50 feet or 1/3 of the tower height whichever is greater.

D. Maximum Noise Levels. Any proposed wind turbine generator shall produce sound levels that are no more than 32 decibels as measured on the dB(A) scale at the property lines of the site in question. For all towers other than micro wind systems the following shall be provided:

1. A noise study by a licensed acoustician chosen by the Kosciusko County Plan Commission and paid for by the wind developer shall be submitted with any application for a wind turbine generator tower. Said study shall be prepared by a qualified professional acoustician with no less than three years of experience conducting WECS and community noise sound studies and shall include the



Property
lines

Brown County, Nebraska Zoning Regulations.

Prepared by:

HANNA:KEELAN ASSOCIATES, P.C.
COMMUNITY PLANNING & RESEARCH

D-15

Two copies of a site plan submitted for a wind energy unit are required, submitted on a minimum size of 8½" X 14" sheets for units proposed on an industrial / commercial use. The site plan must include the delineation, location, and dimension of the lengths and widths of the following:

- (1.) The Site Plan should be drawn so that "north" is to the top of the Site Plan, with the scale used under the north arrow provided.
- (2.) Provide the legal description, including tax identification/parcel number, and address of the project site.
- (3.) Adjacent existing land uses and zoning designations.
- (4.) The locations of all easements, rights-of-way (names included), building, front, side, and rear zoning lot setback lines, and overhead utility lines on the property.
- (5.) The location of all underground structures including septic tanks and wells.
- (6.) Indicate the dimensions of, and distances between, all existing structures and the nearest existing or proposed property line.
- (7.) Indicate the location, height, and the distance of the Wind Energy Unit to all existing structures as well as the distance to the property lines.
- (8.) Show the direction of the prevailing winds.
- (9.) The type of development on all adjacent properties, including across any streets. Show distance of structure(s) on adjacent properties from the project property lines.
- (10.) The location of water bodies, waterways, wetlands, drainage channels, creeks, and rivers within 10,560 feet (2 miles) of the proposed wind energy unit location onsite.
- (11.) One-line diagram for the electrical interconnection.

6.56 SETBACKS AND DESIGN REQUIREMENTS

- (1.) All towers shall adhere to the setbacks as measured from centerline of turbine established in the following table:

	Wind turbine-Non Commercial	WECS Wind Turbine Commercial/Utility WECS and Meteorological Towers
Property Lines (other than right angle corners)	Diameter plus applicable building setback	1 mile
Right angle corner property lines	Diameter plus applicable building set back from both property lines	1 mile plus behind a line on the property lines drawn between two points from the property line intersection. Generator blades must not exceed the building setback lines on the non-road side, and shall not encroach on the right-of-way on the road side. Can be closer if waiver from neighbor.
Road Right-of-Way*	Diameter plus applicable building setback	1 mile plus applicable building setback
Other Right-of-Way	Diameter plus applicable	1 mile plus applicable building setback

6.5 WIND ENERGY CONVERSION SYSTEMS

6.51 DEFINITIONS.

1. "Abandon" means failure to have a power purchase agreement in place for 90 days and decommissioning has not commenced, or a turbine has not been actively generating and selling power for 365 days.
2. "Aggregate Project" means a single project undertaken by a group of two or more wind energy producers.
3. "Collateral bond" means an indemnity agreement for a fixed amount, payable to the Brown County, executed by the owner and supported by the deposit with Brown County of cash, negotiable bonds of the United States (not treasury certificates), state or municipalities, negotiable certificates of deposit or an irrevocable letter of credit of any bank organized or authorized to transact business in the United States or other surety acceptable to the Commission.
4. "Commenced commercial operation" means the signed date on the turbine completion certification for the turbine whose capacity first brings the wind generation facility's cumulative generating capacity to 25 megawatts or more.
5. "Decommission" or "decommissioning" means:
 - a) the removal of aboveground wind turbine tower(s) after the end of a wind generation facility's useful life or abandonment;
 - b) except as provided in rule, the removal of all buildings, cabling, electrical components, roads, or any other associated facilities; and
 - c) except as provided in rule, reclamation of all surface lands to the previous grade and to comparable productivity in order to prevent adverse hydrological effects.
6. "Commission" means the "Brown County Planning Commission"
7. "Expansion" means the act of a wind generation facility adding one or more additional wind turbines to its operation after commencing commercial operation.
8. "Facility" means any place, amenity or piece of equipment provided for a particular purpose in support of the wind energy development.
9. "Infrastructure" means the physical structures and facilities (e.g. buildings, roads, towers, power supplies, transformers, etc.) needed for the operation

- (g) Decommissioning plans prepared in conformance with Section 110.326.90(b), Removal of Wind Machines, below.
- (h) Provide location of all public and private airports within ten (10) miles of the nearest proposed wind turbine.
- (i) A current determination letter resulting from a Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration, for each proposed wind machine or tower.
- (j) A summary of the status of all FAA determinations with details on how any unresolved problems with aircraft safety are being addressed as well as a detailed description of any obstruction marking and lighting that will be required by the FAA.

Section 110.326.15 Setbacks and Height.

- (a) Setbacks from Adjacent Parcels – Private Wind Machines. Notwithstanding Section 110.402.10, Heights: Special Exceptions, of the Development Code, minimum setback for a private wind machine shall be:

- (1) All private wind machines shall be erected in accordance with the setback requirements of the regulatory zone in which they are located (see Table 110.406.05.1, Standards). Additionally, all private wind machines shall maintain a minimum setback of one (1) times the overall machine height including the uppermost extension of any blades, from any public roads and highways, railroads, trail easements, aboveground utility lines, and any existing residence on an adjoining property.

- (2) Private wind machines shall be allowed closer to a property line within any land use designation if the abutting property owner(s) grants written approval of the proposed setback. The written consent shall be signed and notarized by the owner of record of the adjoining property and shall detail the setback distance and the size and height of the proposed private wind machine. The written consent shall be recorded with the Washoe County Recorder, a conformed copy of which shall be submitted with the building permit application to construct the wind machine.

- (3) Guy wire anchors may not extend closer than five (5) feet from any property line and shall be made clearly visible to a minimum height of six (6) feet.

- (4) Private wind machines shall not be located within the front yard setback of any parcel of land nor within the front yard setback facing a street on a corner parcel of land.

- (b) Setbacks from Adjacent Parcels – Commercial Wind Machines. A minimum setback for each commercial wind machine is identified below. These setbacks may be reduced with the written consent of the owner(s) of the adjoining property(s):

- (1) Three (3) times the overall machine height, including the uppermost extension of any blades, from the property line of any nonparticipating

Setback
1 mile
occupied
structure

residentially zoned property including any property within the General Rural Agricultural (GRA) Regulatory Zone.

- (2) One (1) times the overall machine height, including the uppermost extension of any blades, from railroads; trail easements; aboveground utility lines; and public roads which are maintained by the county, state or a local GID.
 - (3) One (1) times the overall machine height, including the uppermost extension of any blades, from the property line of any privately owned non-residentially zoned properties.
 - (4) Thirty (30) feet from any undeveloped federally owned property unless greater setbacks are requested by that affected federal agency.
 - (5) One (1) mile from any existing off-site dwelling(s) or other occupied buildings within Washoe County.
- (c) Height Restrictions – Commercial Wind Machines. The overall height of Commercial wind machines, including the uppermost extension of any blades, shall not exceed six-hundred (600) feet.

[This Article amended in its entirety by Ord. 1443, provisions eff. 7/26/10 Amended by Ord. 1475, provisions eff. 1/12/12.]

Section 110.326.20 Tower and Facility Access. All wind machine towers must comply with the following provisions:

- (a) The tower shall be designed and installed so that there shall be no exterior step, bolts, or a ladder on the tower readily accessible to the public for a minimum height of twelve (12) feet above the ground. For lattice or guyed towers, sheets of metal or wood or other barrier shall be fastened to the bottom tower section such that it cannot readily be climbed. Any guy wires shall be made clearly visible to a minimum height of six (6) feet; and
- (b) All ground-mounted electrical and control equipment shall be labeled and secured to prevent unauthorized access.

Section 110.326.25 Rotor Safety. Each wind machine shall be equipped with both manual and automatic controls to limit the rotational speed of the blade within the design limits of the rotor. The minimum distance between the ground and any protruding blades utilized on a private wind machine shall be fifteen (15) feet as measured at the lowest point of the arc of the blades.

Section 110.326.30 Electromagnetic Interference. To avoid interference, the owner(s) of any radar facility, television, radio, licensed Ham radio station, cellular telephone or microwave reception facility within a radius of five (5) miles from any commercial wind machine shall be notified in writing no less than forty-five (45) days prior to any public hearing, of a proposed project and shall be provided an opportunity to assess and determine any detrimental impact(s) on the operation of their facility. If degradation of television, radio, cellular telephone, radar microwave or licensed Ham radio reception occurs as the result of the wind machine and confirmation that the wind machine is the source of the interference, the owner/developer of the wind machine shall pay all reasonable costs to correct the television, radio, cellular telephone or microwave reception within thirty (30) days of notification by Washoe County that a problem exists.