

March 5, 2025

Whitman County Planning Commission

"The Whitman Planning Commission provides citizen review and recommendations on planning-related matters to Planning Staff and the Board of County Commissioners".

Chapter 19.61 – Commercial Wind Energy Facilities

Please consider the following information and recommendations while reviewing and modifying the current commercial wind energy code, **Chapter 19.61 – Commercial Wind Energy Facilities**.

I trust the Whitman Planning Commission will use your "**due diligence**" when gathering and analyzing current and relevant information before making final decisions to the current wind energy code, Chapter 19.61.

- Don't be compelled to be rushed or act hastily in reviewing and making critical changes to the wind energy code, after all, a well drafted wind energy code will permanently affect all the citizens of Whitman County.
- Also, recognize, the temporary moratorium (Ordinance 88670) can be extended two more times, 6-months each, (RCW 36.70A.390) allowing sufficient time to draft a well written, thorough, and responsible wind energy code.
- Remember, it is incumbent upon the Whitman Planning Commission to use "**due diligence**" to identify risks associated with a comprehensive wind energy code.

The focus of my recommendations to the current wind energy code, centers primarily on the "health and safety" of the inhabitants of the county.

I will address four areas in the current wind energy code found in Chapter 19.61:

1. Review procedure - 19.61.020 F
2. Setbacks - 19.61.060 A.
3. Noise - 19.61.060 D
4. Potential danger and harmful effects associated with wind turbine blades

It would be **reckless**, **irresponsible**, and **negligent** by Whitman County Officials to approve future commercial wind facilities using the current wind energy code, presently found in Chapter 19.61 for the following reasons:

- The current commercial wind energy ordinance is significantly outdated (16 years old). The current wind energy code was written 16+ years ago and since that time there is increasingly more information and evidence showing the potential harmful effects on humans and animals living in close proximity to commercial wind turbines. It would be both **irresponsible and negligent** to ignore this information and not conducting a full review of the current wind energy code, Chapter 19.61,
- Several sections in Chapter 19.61 are both **arbitrary** and **capricious**, and cannot be explained or justified in a well-researched and rational bases, thus, opening up Whitman County to **inevitable litigation** by neighboring landowners and other interested parties with legal standing,

- One of the most compelling arguments against the outdated code, Chapter 19.61, is the **failure to protect** “the health, safety, general welfare and convenience of the inhabitants of the county” as defined in Chapter 19.61 – **Purpose**.
- Currently there are inadequate protections for those landowners and families living and working near commercial wind facilities based on ill-advised and poorly written “**setback**” standards.
- The current wind energy code, Chapter 19.61, is **hastily written** and is **incomplete**.

Current language:

19.61.020 F. Review Procedure.

Upon receipt of the application and plans, the County Planner shall distribute for review and comment the plans to the following: the County Engineer, the Director of Public Works, the County Environmental Health Officer, the County Building Inspector and the affected utilities. Those personnel shall review the application and submit written comments to the County Planner within **20 days** of the date of distribution of the application.

Suggested changes:

Expand the recipients listed in Chapter 19.61.020 F - “**Review Procedure**” and to extend the review period.

- A 20-day review of an application is both **arbitrary and capricious**.
- An application for a “Commercial Wind Energy Facility” can contain over 1,000 pages of detailed and sometimes confusing and technical information and cannot be reasonably reviewed and examined in 20-days.
- The words, “**Citizens of Whitman County and Interested parties**”, should be added to Chapter 19.61.020 F, to identify others who should receive a copy of the application and plan. **Citizens of Whitman County and “Interested parties”**, should have the right to examine the application in its entirety during the “Review Procedure”.
 - Interested party: An interested party is an individual, group, or organization affected by the outcome of this project.
- In reference to the pending wind energy project, Harvest Hills Wind, has had over 3-years to prepare their commercial wind application. To restrict a review period of **20-days**, especially a project that will have such a profound and lasting consequence on the residents of the county, is absolutely **negligent** on the part of Whitman County Officials and is not being done in “**Good Faith**”.

Suggested changes:

19.61.020 F. Review Procedure. Upon receipt of the application and plans, the County Planner shall distribute for review and comment the plans to the following: the County Engineer, the Director of Public Works, the County Environmental Health Officer, the County Building Inspector, the affected utilities and **(NEW) “citizens of Whitman County” and “Interested parties”**.

(NEW) “Interested parties” should include but not be limited to, citizens of the county, neighboring landowners, groups, or organizations affected by the outcome of the project.

The purpose of including “Interested parties”, during the “**Review Procedure**” is to allow for full transparency and permit local citizens and interested parties the opportunity to conduct a comprehensive review and comment on the proposed wind energy application and plan.

(NEW) The application should be made available on the official Whitman County website and notice of the receipt of the application and plan should be published in the official (legal) newspaper.

Those personnel **(NEW)** and “Interested parties” shall review the application and submit written comments to the County Planner within **(NEW) 180-days (6-months)** of the date of distribution of the application.

Chapter 19.61.060 A. Setbacks.

In establishing reasonable and judicious setback standards, it is compulsory to pay close attention to Chapter 19.61 A. Purpose.

Chapter 19.61 – Commercial Wind Energy Facilities, clearly defines the “Purpose” of Chapter 19.61 as follows:

- A. **Purpose.** “The following standards and regulations are necessary for the health, safety, general welfare and convenience of the inhabitants of the County.”

One of the most **compelling arguments against the outdated code**, Chapter 19.61, is the failure to protect the “inhabitants of the county” from the potential and inevitable harm regarding health, safety, and general welfare of individuals and families living near commercial wind facilities.

At the heart of these issues are the outdated and reckless “Setbacks” standards of the existing code, **Chapter 19.61.060 A. Setbacks.**

The defined setbacks in Chapter 19.61, contain arbitrary language that needs to be addressed in part to avoid future litigation. There is no logic or rational data supporting the arbitrary setbacks first drafted in 2009 as being relevant in 2025.

The current setback standards found in Chapter 19.61, were adopted in part for the 2009 Palouse Wind Project for turbines reaching 395 in height. The proposed Harvest Hills Wind turbines are projected to reach 700 feet. That additional height will generate greater noise, flicker, infrasound, and visual pollution (aesthetics) and place local residents at much greater risk of serious harm (health issues).

After reviewing the setback standards found in Chapter 19.61.060. A., it should be obvious that the current setbacks standards are seriously flawed, biased, and discriminatory, favoring the commercial wind energy companies over the health, safety, and general welfare of the residents of the county as the current wind energy code is written.

It is hereby recommend that **setbacks be established no closer than 2-miles of an occupied residents** to minimize the harmful effects on those living and working in an area near commercial wind facilities.

Chapter 19.61.060. A. Setbacks.

(2). Occupied building visual, shadow flicker, and aesthetic setbacks. **(NEW) For all non-consenting, non-participating landowners, commercial wind energy turbine towers shall be setback a minimum distance of 2-miles from a wind turbine measured at the height of the turbine.**

Justifications for a **2-mile minimum setback** is in part supported in the following articles and studies listed below.

Before passing over or ignoring “setback” standards, the **Whitman County Planning Commission should be compelled to review** some of the relevant studies and litigation relating to setbacks and the connection to the health, safety and welfare of the citizens of Whitman County.

Although not a complete list of current research, these articles and studies gives the Planning Commission an overview of recent information not available in 2009.

There is a considerable amount of recent studies (2024) and **litigation** demonstrating the adverse health effects of placing commercial wind turbines in close proximity to homes.

There is an international consensus industrial wind turbines (IWTs) can harm human health if sited too close to residents. Harm can be avoided if IWTs are situated at an appropriate distance from humans. The documented symptoms are usually stress disorder–type diseases acting via indirect pathways and can represent serious harm to human health.

People who live or work in close proximity to IWTs have experienced symptoms that include decreased quality of life, annoyance, stress, sleep disturbance, headache, anxiety, depression, and cognitive dysfunction. Some have also felt anger, grief, or a sense of injustice. Suggested causes of symptoms include a combination of **wind turbine noise, infrasound, dirty electricity, ground current, and shadow flicker.**¹

In the technical letter “Wind energy turbines and sound exposure in the audible and IFLN range: high evidence for severe health disturbances according to current studies” (Sept. 2022) published on PubMed’s National Library of Medicine and in Thieme Journal, it refers to the **current peer-reviewed** analysis by Dumbrille et al. “Wind turbines and adverse health effects: Applying Bradford Hill’s criteria for causation”.

The Bradford Hill (BH) criteria are the internationally recognized standard for assessing a causality between an environmental medical stressor and health disorders. They are made up of the following 9 criteria: strength of association, consistency, specificity, temporal profile, biological gradient (dose-response), plausibility, coherence, experimental evidence and analogous evidence. The main conclusions of the study are:

- Across all continents, the same pattern of complaints [of wind turbines] could be shown in chronically exposed persons.
- Reports of negative effects on animals, which are known not to show any nocebo effect and which live close to wind turbines, resulted not only in stress reactions, but also in negative effects on fertility, development and reproduction. Reports from the USA, Canada, Denmark, Japan, Portugal, France, Taiwan and Great Britain indicated teratogenic and mutagenic effects (see Appendix Dumbrille et al.).

- With regard to the “dose-response” criterion, analyzes showed a demonstrable deterioration in the mental performance of residents living within 1.4 km of the wind turbine(s) and *those outside Radius*.
- From the conclusions, important questions arise about the determination of a cumulative dose of sound, including infrasound and low-frequency sound (ILFN) for adults, the elderly and especially fetuses and small children.

Applying the BH criteria to the IWT (industrial wind turbines)-related clinical, biological, and experimental data, demonstrates that the exposure to IWTs is associated with an increased risk of AHEs (**adverse health effects**). This analysis concludes that living or working near IWTs can result in AHEs in both people and animals.

An exhaustive investigation and report by cardiologist, Dr. Ben Johnson, notes that the term “**annoyance**” is utilized in several studies, including a Health Canada report. Health Canada admits that, “Excessive exposure to noise, even for short durations, can have potential health effects. Significant, adverse, irreversible effects usually occur gradually in response to excessive exposure to noise.” Dr. Johnson notes that the **World Health Organization (WHO) defines “health” as a state of complete physical, mental and social wellbeing. “Adverse health consequences of environmental noise can be the asymptomatic (unrecognized) development of hypertension or vascular atherosclerosis or insulin resistance or can be much simply defined as the “the loss of wellbeing”,**” states Dr. Johnson, adding: “IWTs cause adverse health effects with that definition being *consistent with WHO definitions and currently practiced health care... all 9 of The Bradford Hill criteria have been identified in the scientific literature as pertinent to the relationship between IWT noise and AHEs.*”

“Wind Turbine Syndrome”.

Dr. Nina Pierpont, a leading New York pediatrician who trained at Johns Hopkins University School of Medicine and earned her Ph.D. in Population Biology from Princeton University, **found the disruption or abnormal stimulation of the inner ear’s vestibular system by turbine infrasound and low-frequency noise or visceral vibratory vestibular disturbance (“VVVD”). Problems range from internal pulsation, quivering, nervousness, fear, a compulsion to flee, chest tightness and tachycardia – increased heart rate. Turbine noise can also trigger nightmares and other disorders in children as well as harm cognitive development in the young,** she claimed. However, Dr. Pierpont also made it clear that not all people living close to turbines are susceptible. Nonetheless, the syndrome has been widely panned at best as psychosomatic — or worse, some kind of group hysteria. This does not surprise Pierpont:

There is no doubt that my clinical research shows that the infrasonic to ultrasonic noise and vibrations emitted by wind turbines cause the symptoms which I am calling “Wind Turbine Syndrome”.

The wind industry will try to discredit me and disparage me, but I can cope with that ... The wind industry, however, is not composed of clinicians, nor is it made up of people suffering from wind turbines.

A recent judgment of a French court of appeal of July 8th, 2021, based on an expert report, determined a change in the state of health of residents close to wind turbines and concluded:

"The "Cour d'appel de Toulouse", a French Court of Appeal, made a higher court decision with a now published judgment of July 8, 2021 and overturned a judgment of the "Tribunal de Grande Instance". It proved that the clerks who live in the vicinity of 6 wind turbines were right and determined that the operation of the turbines at a distance of **700m to 1300m led to health problems**. The court found the typical symptoms: headache, painful pressure on the ears, dizziness, weakness, tachycardia, tinnitus, nausea, nosebleeds and insomnia. After a corresponding examination, the Court of Appeal stated in its judgment that the Kleigers suffered from the so-called "**wind turbine syndrome**", which can be traced back to low-frequency noise and infrasound. It awarded them a claim for damages of €128,000.

November 8, 2021; theconexxion.com; cf. September 7th, 2022; windaction.org

A judge in Ireland sided with local landowners and ruled that the **noise pollution** generated by a wind project in County Wexford built near their properties amounted to a "**nuisance to the plaintiffs.**" The judge also wrote, "I find that the plaintiffs' complaints are objectively justified in that the noise interferes with the ordinary comfort and enjoyment of their homes. When it occurs, this interference is a substantial interference." Damages in the case have yet to be determined.

Reference:

- Journal of Bioscience and Medicines>Vol.11 No.6. June 2023
- CFP-MFC Adverse health effects of industrial wind turbines
- Infrasound: A Huge Threat to the Entire Biodiversity" – by Maurice Forgeng March 23, 2024

Another overlooked but major health and safety concern is the placement of commercial wind turbines close to home (setbacks**) and the hazardous Bisphenol A. (BPA) material coming from turbine blades.**

According to a 2017 study published in the scientific journal *Waste Management*, the world's wind industry will be producing 43 million tons of blade waste annually by 2050 — most of it ending up in landfills. "If you really hate nature," stated journalist James Delingpole, "you'll love wind farms.

Moreover, Bisphenol A. (BPA) is one of the main constituents of turbine blades, which "**shed**" **this material into the soil and waterways** as protective resins break down. As early as 2012, the **World Health Organization (WHO)** warned the world about the possible carcinogenic properties of endocrine disruptors, such as BPA, concluding that these **substances pose a global threat to public health.**

To build a wind farm near homes and on productive agricultural land, is hazardous. Small concentrations of BPA damages the fertility of humans and all organisms. With turbine blades that reach speeds at the far end of the blade up to 300 km/h and above, wear increases significantly when they come in contact with rain, dust, salt particles, snow, heat and hail. **One gram, which can make 10 million liters of water toxic, makes wind turbine blades a serious environmental hazard that few are talking about:** each wind turbine blade releases from 0.5 to 2.5 grams of pure Bisphenol A per year. "Bisphenols are not covalently

bound to the polymeric structure, from which with time, or due to physical and/or chemical factors such as heat and acidity, can be gradually released into the external environment, contaminating water, soil and sediments, and later the rest of the agro-food chain.”

Another concern would be what is called “the downstream effect” of the BPA entering seasonal streams and runoff carry BPA to the nearby Palouse River. There is also a predictable contamination of local wells on neighboring homes.

It is therefore recommended, a thorough discussion and examination of proper and responsible setback distances should take place between the Whitman County Planning Commission and the citizens of Whitman County.

Lack of defined “Noise” standards.

Chapter 19.61 should address and define a county noise ordinance relating to commercial wind facilities and establish reasonable remedies. All state and municipalities have well defined noise codes and ordinances that addresses noise violations to protect the health, safety, and welfare of its citizens.

Current language:

“Chapter 19.61.060 D. Noise. State noise standard compliance: During construction and operations, the project shall comply with applicable state noise standards”.

The **“Noise standards”** as defined in Chapter 19.61.060 D. is **lacking in reasonable clarity and fails to adequately protects the “health, safety, general welfare and convenience of the inhabitants of the county”** as defined in Chapter 19.61.020 A. Purpose.

- A poorly written and defined “Noise standards” in Chapter 19.61.060.D, would contribute to and place the residents of the county at serious health and safety risk and subject Whitman County to potential litigation.
- Whitman County would be culpable by failing to identify noise as a significant health hazard to local residents and failing to establish a well-defined “Noise standards”.
- A well written Noise ordinance should acknowledge the health effects of noise on neighboring residents and address a clearly defined procedure to monitor and correct noise complaints.
- Defined “Setbacks” also have a major bearing on the effects of “noise” on the residents living in the shadows of commercial wind turbines.

The following information is being provided to share some of the recent literature on the physiological and psychological effects from noise and its relationship with quality of life.

Noise is defined as an unwanted sound or a combination of sounds that has adverse effects on health.

Noise can manifest in the form of physiologic damage or psychological harm. The mechanism of physiological damage from noise has yet to be fully understood, but research has demonstrated

a multitude of factors, to name a few. Psychological harm from noise exposure may manifest as increased physiological stress response, adverse social consequences, sleep disturbance, and detrimental economic effects. **The psychological effects of noise are usually not well characterized and often ignored.**

“Noise induced hearing loss” (NIHL) is generally defined as hearing loss that develops over a long period of time as the result of exposure to continuous or intermittent loud noise. Continuous exposure to sounds greater than 85 decibels for 8 hours has been shown to cause “noise induced hearing loss” (NIHL). When the exposure is constant, there is increased damage compared to intermittent noise exposure of similar intensity.

Noise can have a more global effect on human physiology and act upon multiple non-auditory systems such as cardiovascular, neuroendocrine, and psychological.

Sleep disturbance and cognitive impairment:

Noise can cause disturbance in sleep and subsequent deleterious health effects and perceived decrease in quality of life. Noise can cause immediate or secondary extra-auditory effects. The number and duration of nighttime awakenings can qualify the immediate effects of noise on sleep. Nocturnal awakening usually occur with noise levels greater than 55 decibels. The time that it takes to fall asleep can increase up to 20 minutes with peak noise levels of 45 decibels. The secondary effects of noise on sleep are a subjective feeling of decreased quality of sleep, tachycardia, increase in stress hormones, and increased cognitive impairment.

The perceived quality of sleep can be quantified by using any number of objective questionnaires, including the Nottingham Health Profile or the Functional Outcome of Sleep Questionnaire.

Noise may cause cognitive impairment from a variety of mechanism. **Earlier studies have demonstrated that children** in noisy environments have decreased attention on tasks and have lower performance on cognitive assignments compared to children in quiet environments.

What dB is too loud for sleep?

In the conclusion of their study, the **World Health Organization (WHO)** suggest the following guidelines for a good night's sleep interrupted by noise: For optimal sleep, the level inside your house at night should not exceed 30dB. For the prevention of adverse health effects, you should not be exposed to outside noise pollution of **40 dB**.

Chapter 19.61.060 D. Noise

Consideration for an expanded and reasonable noise ordinance

As there are consequences of violating residential noise restrictions, there should also be consequences for violating local commercial wind turbine noise restrictions.

The citizens of Whitman County living and working in close proximity to commercial wind turbines, thus being exposed to unhealthy noise generated from commercial wind turbines must have a remedy to the abatement and even elimination or removal of the source of the noise.

Without adequate noise standards, anyone living near a commercial wind turbine and subsequently exposed to unhealthy noise, would be limited in their legal recourse or actions against a wind company who produced, intentionally or unintentionally nuisance noise.

A noise ordinance should include the following as a minimal standard:

- A defined decibel level of acceptable noise (safe),
- A procedure to monitor decibel levels,
- A clearly identified process for neighboring landowners and residents to file a noise complaint,
- An abatement procedure when decibel levels exceed established levels
- Redress,
- Noise defined,

Suggested changes to **Chapter 19.61.060 D. Noise**

Permitted sound performance standards:

- At no time shall an individual wind turbine operate at a decibel level exceeding 40 dB during daytime hours (decibel levels approaching 45 should be considered criminal).
- At no time shall an individual wind turbine operate at a decibel level exceeding 20 dB after 9pm
- If two or more complaints from different occupied buildings are received within a two-week period regarding a particular commercial wind energy facility, located within one mile of the complainant's properties, a sound measurement will be conducted by a qualified consultant approved by Whitman County.
- If an evaluation shows that the commercial wind energy facility is operating outside of its permitted sound performance standards, the operator will have 30 days to adjust the system(s) or terminate operations.
- Each identified commercial wind energy facility shall maintain sound levels at project boundaries that are under the maximum levels for the adjacent receiving properties based on the receiving properties' environmental designation for noise abatement in accordance with Whitman County regulations.

In summary, I want to thank the Whitman County Planning Commission for considering the information and recommendation I have provided you tonight.

There is no doubt that each of you serve on the planning commission because you are committed to being good "Stuarts of the Land" and wanting to preserve the agricultural integrity of Whitman County - the Palouse.

It is the consensus of many citizens of Whitman County, a thorough and comprehensive examination and update to the wind energy code, Chapter 19.61, will inevitably be one of the most difficult yet impactful responsibility of the Whitman County Planning Commission.

Jack and Barbara Lien - P.O. Box 246, Colfax, WA 99111