



Noise & Low Frequency Vibrations

Data centers produce a persistent “humming” noise described as an industrial scale “drone” continuously 24/7 and the noise thresholds that have been set by the EPA are at and beyond the limit. Noise pollution on the sound and infrasound levels can have a profound impact on human and animal health. Noise pollution regulation needs to be a critical component of data centers since even with the current measures deployed, it is having a tremendous impact on the surrounding communities.

KEY FACTS

1. Federal noise protections are extremely limited.

Although the **Environmental Protection Agency** retains authority to **study** noise pollution and its effects on public health, **the responsibility of regulation and enforcement** has largely been shifted to state and local governments. This has left communities with inconsistent protections.

2. Most noise ordinances were not designed for data centers.

Existing noise ordinance standards focus on **loud, short term noise** rather than the **continuous humming, droning, and low-frequency vibrations** produced by data centers and their equipment.

3. Constant noise affects both physical and mental health.

Short-term exposure to noise pollution can cause sleep disturbances, fatigue, stress, irritations, and difficulty concentrating. **Prolonged exposure** is associated with **more serious health risks** like hypertension, cardiovascular disease, tinnitus, permanent hearing loss, endocrine disruption, cognitive effects, and other chronic stress-related health problems.

4. Noise pollution can be especially harmful to children.

Chronic environmental noise has been linked to **reduced concentration, impaired learning, diminished memory and cognition, and lower reading comprehension**. Repeated exposure during critical developmental years may carry longer-term **cognitive** and **developmental consequences**.

5. Noise pollution also affects wild life, plant life, and livestock.

Research shows that **persistent human-made noise can interfere** with **wildlife** communication, feeding, reproduction, migration, and predator detection. It may also alter pollination and seed dispersal, disrupting the animals and ecological relationships in which **plant communities** depend. In **livestock**, excessive noise has been linked to stress, behavioral and physiological changes, including reduced feed intake, lower milk production, and fertility challenges.



QUESTIONS FOR LOCAL OFFICIALS

- What zoning ordinances are establishing maximum noise and low frequency vibration levels for both new and existing data centers?
- What civil penalties will be given for failure to comply with noise restriction ordinances?
- What health monitoring is being done to ensure that the noise pollution from data centers is not harming the local population?
- What vibration meter recordings and sound modeling studies are being made pre and post data center construction to monitor the low frequency and infrasound levels?

Cautionary Example

In Vineland, New Jersey, residents are reporting that a newly built data center has brought a relentless and disruptive low-frequency hum into nearby homes and farmland. After months of complaints, a class-action lawsuit was proposed in May 2026, alleging that the facility's around-the-clock noise has created an ongoing nuisance for the surrounding community.



Community Win

A humongous data center project in **Prince William, Virginia** has finally been halted after years of opposition and public pressure. On July 3, 2026, Quality Technology Services terminated its portion of the Prince William Digital Gateway project. The project would have covered more than 2,100 acres and included 37 buildings. Residents fought the project for years through public meetings, lawsuits, and grassroots organizing, making this one of the most hard-fought data center battles in the country.

Recommended Call To Action

Demand a moratorium and halt on data centers in order to create noise zoning ordinances and do an environmental impact study to take into account the environmental effects of sound in data center architecture moving forward.