

# Low Frequency Hum

Eaton Town Board Meeting

August 13, 2024

# Outline

- Play the Sound
- What's Happening
- The Hum Defined – A low frequency tone
- LFN causes
  - What creates noise on a farm
  - Resonance Frequency – Why it's worse inside my home
  - The Impact
  - The Effects on Human Health
  - Town Ordinances
  - The is Not Hard
  - If Nothing is Done
  - Supporting Articles
- Questions

# Play sound of low frequency hum

- Play 40 hz on phone, walk around

## What's Happening – Why I'm here

- I've been having a very serious problem in my home and on my property since March of this year.
- I and others are hearing a low frequency tone that is hurting my ears and vibrating my ear drums. It's gotten so bad it's vibrating my bones.
- It's hurting my hearing
- For quite some time, I thought the sound was my neighbors tractors until it go so bad that it was waking me up at night and severely hurting my ears.
- I only hear it here, I hear it when I shut off all electricity in my home. Other people hear it. I've been to a doctor and my hearing was perfect.

# What is Resonance Frequency?

- **Resonance explains why it's worse inside my home.**
- **Something is creating a low frequency tone that can travel a long distance. When it hits an object, e.g. my home it causes my home to vibrate.**
- **And I'm sure you remember from high school physics that when a sound or vibration hits an object, it vibrates at a high amplitude then where it originated.**
- This vibration increases in amplitude in my home because it matches the frequency of the original sound.
- Why others may not be hearing it:  
The amplitude is dependent on the structure and the vibration allowed by that structure.  
Resonance frequency will only occur if the vibration of the target matches the original frequency

# Town of Eaton

## Noise ordinance Chapter 140 -6

- The provisions and restrictions of this chapter shall not apply to the conduct of **sound agricultural practices** as defined and construed under s 308 of the Agricultural ad Markets Law Exception for Agricultural Activities
- **Destroying the quality of your neighbor's life, is not a sound agricultural practice.**
- **They have tractors, animals sounds, no one is complaining about that.**
- **No one is trying to stop them from farming.**

## **If Farmers Say it's not their new equipment....**

- If your equipment is fine, would you object to having an inspector come in to see if they can find any problems?

# The Solution is not hard

- Farmer ask the manufacturer of their new milking system to fix the equipment that's causing the hum
- Insulate the building housing said equipment
- Be sure loud equipment is inside the milk house and not outside it
- Create a 10 foot wall of dirt between them and their neighbors
- and...

Plant pine trees that stop the sound from traveling

**I can't do this alone. I have had to get DEC and Madison Soil and Water involved in the past to fix other issues.**



## If nothing is done....

- My Dad built this house with his friend in 1964
- Our family has lived here since then
- No problems until these farmers arrived and began greatly expanding their operation.
- I'll lose my family home.
- I cannot tolerate this much longer
- I'll lose my lifetime investment
- It's already affecting my health and well-being
- Other residents are hearing it and
- **It's Getting worse!**

## What I'm asking.....

- A town ordinance is being violated
- NYSEG commissioned a Sound Report which is right now with NYSEG Regulatory and Legal Departments
- Town of Eaton Codes Officer has been notified. He is waiting for the official results of the Sound Report
- NYSEG stated they may be able to give their conclusions to the Codes Officer
- Village lawyer should be notified so they can help with a cease-and-desist order and to protect the town from this hazard.

## Supporting Articles – Discuss the science of low frequency noise and impacts on health

- Low Frequency Noise Is Prevalent. Does that Matter: (Popular Science)
- Low level CONSTANT humming noise from dairy farm neighbor. ( Ask About Money Blog)
- Killing Us Softly With Low Frequency Noise (Russell Barth's Blog)
- The Importance of Noise Hygiene in Dairy Cattle Farming – A Review (Acoustics website)

THE END