







Loveland Ready-Mix

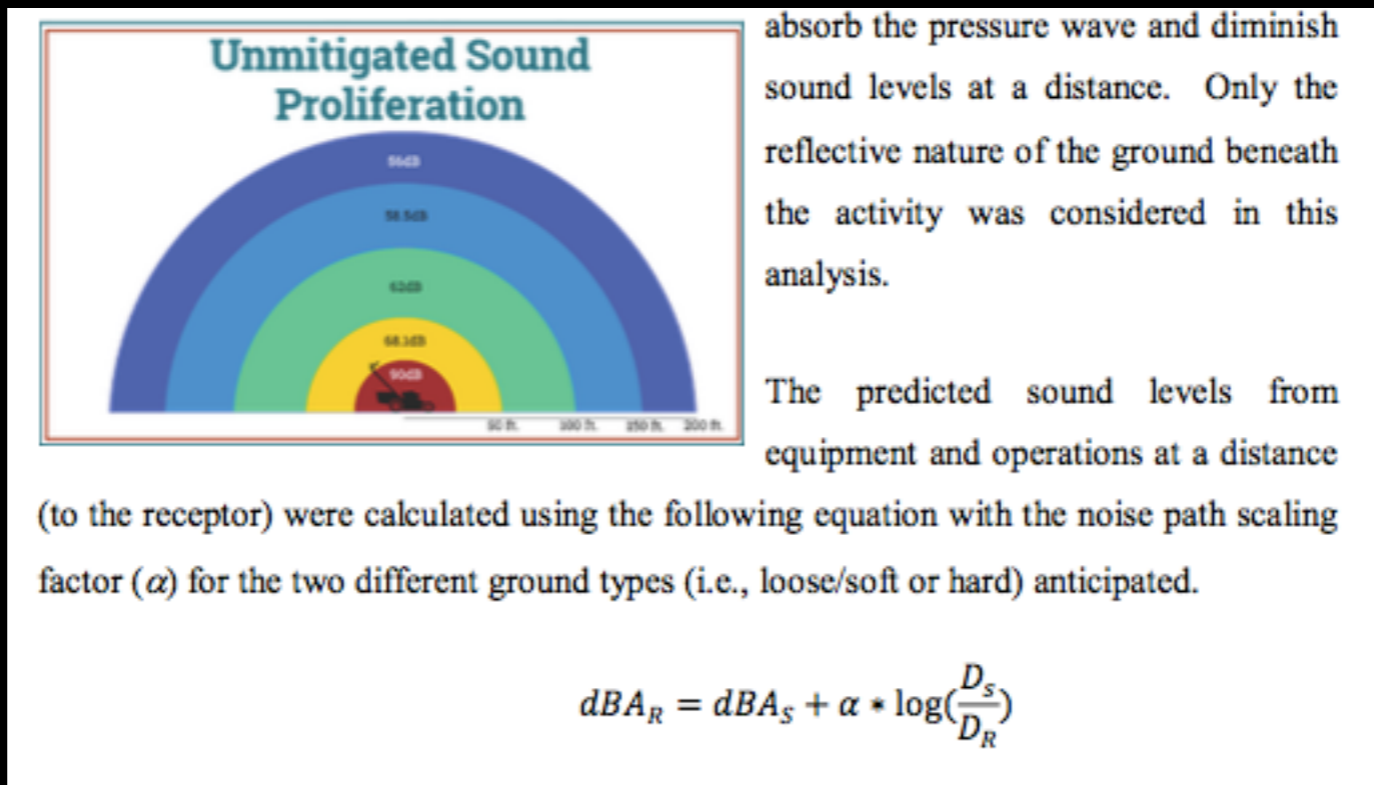
Noise Evaluation

Two Steps:

Background and equipment Noise levels

Predict sound levels at boundary

“Predicted Impacts at the nearest residential receptor”



absorb the pressure wave and diminish sound levels at a distance. Only the reflective nature of the ground beneath the activity was considered in this analysis.

The predicted sound levels from equipment and operations at a distance (to the receptor) were calculated using the following equation with the noise path scaling factor (α) for the two different ground types (i.e., loose/soft or hard) anticipated.

$$dBA_R = dBA_S + \alpha * \log\left(\frac{D_S}{D_R}\right)$$

Larimer County Noise Ordinance

“measured at or within the property boundary”

55Db general activities

80 Db construction activities

Construction Activities

“activity incidental to the erection, demolition, assembling, alteration, installation or equipping of buildings, structures, roads or appurtenances thereof, including land clearing, grading, excavating, and filling”

LRM Construction activities:

- 1) plant-site construction
- 2) overburden removal

Background Noise levels



Equipment and Operational Noise Levels

Equipment sound measurement used with scaling factors
General operational noise levels from previous studies
at Johnstown and Loveland plants

“Residential Receptors”



Noise Evaluation Questions

Accuracy and Relevance of current Laporte noise conditions?

Source noise data from previous studies- monitoring locations and conditions?

Adjustment for depth/ work starts at surface?

Prediction locations are off-property?

Why not measure actual noise level and use standard equations for distance?

Health Issues

Heart Disease/ Hypertension
Autism Spectrum/ Attention Disorders
Migraine
Tinnitus, Vertigo, Inner Ear Injuries
PTSD and Post-Combat Syndrome
Mental Health Conditions
Seizure Conditions

Substantial documentation of negative effects of 55Db exposure

Civil Rights Issues

Noise pollution similar to second-hand smoke

Marginalizes communities and schools

Rights to:

Peaceful Enjoyment

Free from nuisance or obnoxious disturbance

Free encroachment

Fair economy

Ordinance: protection from
“unreasonable interference with
enjoyment of life, quiet, comfort or outdoor recreation”

Larimer County Noise Ordinance Favors the Public

“excess noise often has an adverse physiological and psychological effect on human beings, thus contributing to an economic loss to the community.”





Noise Ordinance cont'd

“environmental pollution
which represents a threat
to the serenity and quality
of life
in Larimer County”