

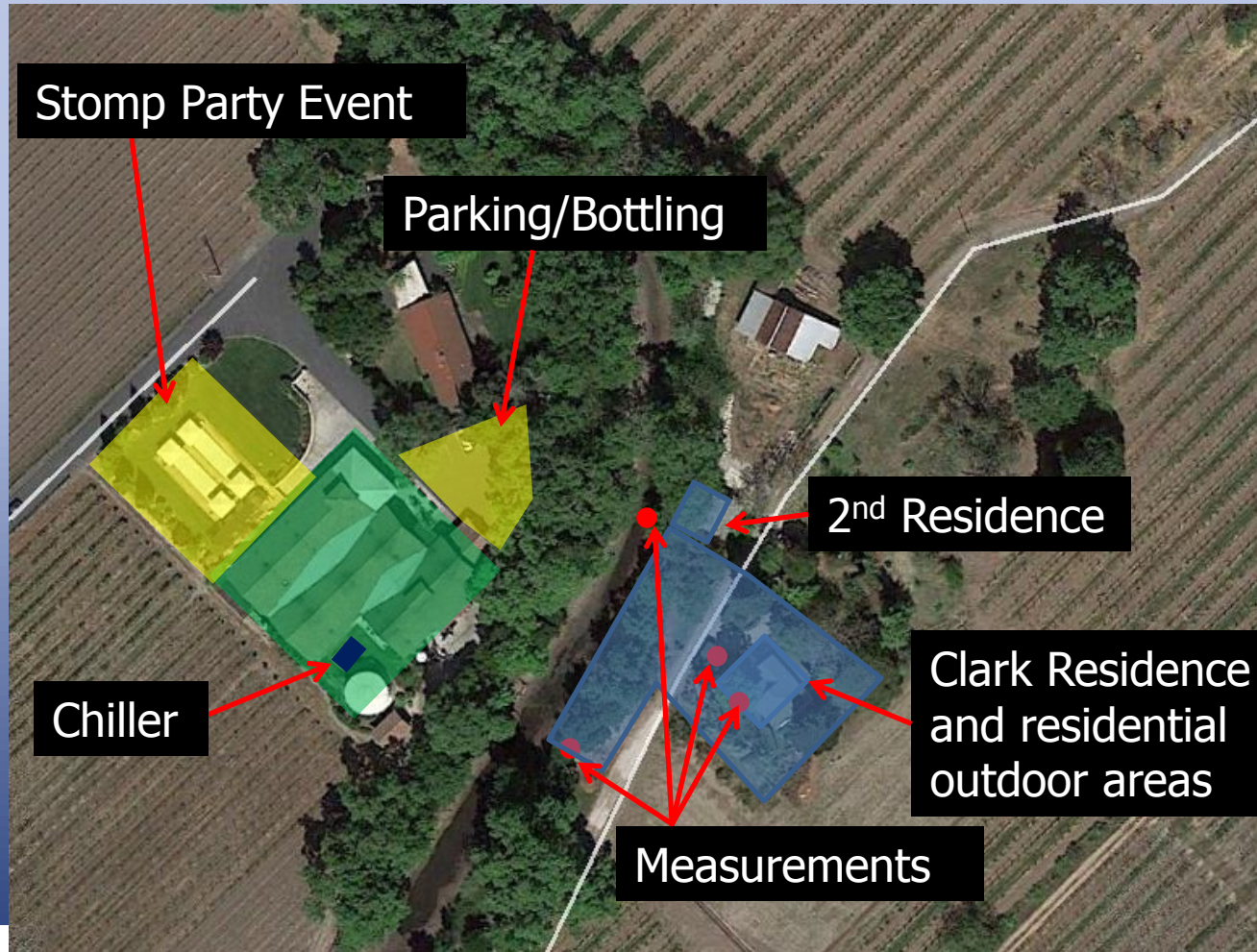
Environmental Noise Assessment

Bell Cellars Winery on 6160 Washington

Purpose:

- To quantify the noise generated by Bell Cellars
- Compare current noise with applicable standards and guidelines
- Quantify future increased noise levels from an expanded winery
- Compare future noise with applicable standards and guidelines

Overview:



Sources of Noise:

1. Mechanical Equipment
2. Parking Lot and Increased Visitation
3. Bottling
4. Parties and Events

Standards and Guidelines

Napa County Quantitative Standard

50 dBA without tones at residential property
45 dBA with tones at residential property

Standards and Guidelines

Napa County Qualitative Standard

Any noise that “causes any discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.”

Standards and Guidelines

8.16.040 - General noise restrictions designated.

1. The sound level of the **objectionable noise**;
2. The sound level of the **ambient** noise;
3. The proximity and **timing of the noise** in relation to residential sleeping facilities and **normal sleeping hours**;
4. The nature and zoning of the area within which the noise emanates;
5. The number of persons affected by the noise source;
6. The time of day or night the noise occurs;
7. The duration of the noise and its **tonal** or musical content;
8. Whether the noise is continuous, **recurrent** or intermittent;
9. Whether the noise is produced by a commercial or noncommercial activity.

(Ord. 777 § 1 (part), 1984: prior code § 5813)

Standards and Guidelines



World Health Organization (2009)

Average 40 dBA outdoors.

At levels over 40dB, “Adverse health effects are observed,” and “many people have to adapt their lives to cope with the noise at night.”

Mechanical Noise Levels: Measured Outside near Clark Residence

Without Chiller

Daytime noise levels: 38 dBA to 42 dBA

Nighttime noise levels: 33 dBA to 40 dBA

With Chiller

Daytime noise levels: 44 dBA to **46 dBA**

Nighttime noise level: **42 dBA to 44 dBA**

Mechanical Noise Levels: Measured Inside Clark Master Bedroom

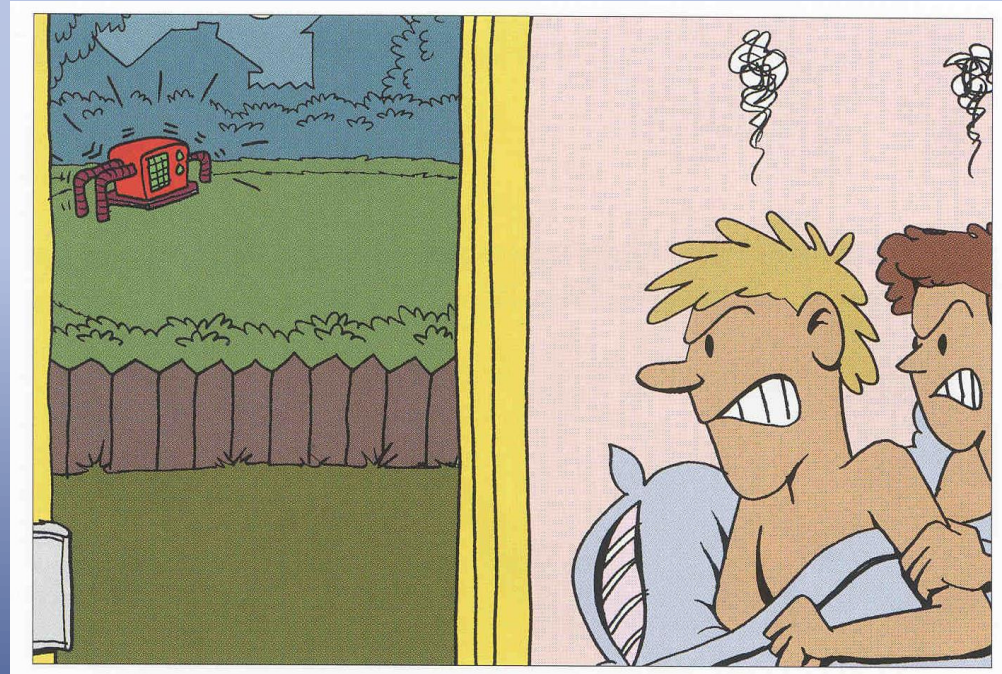
Without Chiller

Daytime noise levels:
36 dBA to 38 dBA

With Chiller

Daytime noise levels:
40 dBA to **42 dBA***

*up to 6 decibels louder than the background noise and with distinct tonal characteristics



Mechanical Noise Levels: Measured Along Creek

Without Chiller

Daytime noise levels:

Approximately 40 dBA with slight variation

With Chiller

Daytime noise levels:

46 to 52 dBA* depending on receiver location

*up to 12 decibels louder than the background noise and with tonal characteristics, up to 7 decibels over rural residential land use

County Standard along Creek:

Rural residential standards applied instead of Agriculture for the following reason:

Agriculture is land designated for the raising of crops or live stock. No planting may occur within 50 feet of the creek set back.

The creek set back is an extension of Mr. Clark's private land for residential outdoor enjoyment, not agricultural land.

Quantitative vs. Qualitative

- The chiller noise exceeds the Napa County allowable limit by 1 to 7 decibels.
- Exceeds the WHO guideline of 40 dBA by 2 to 6 decibels

But what does it sound like?

- The chiller has tonal characteristics up to 6 decibels above ambient.

Parking Lot and Increased Visitation

Quantitative – Objective Change

- Calculated at least 3 decibel overall increase
- More car starts, alarms, door slams,

Qualitative – Subjective Change

- More guests speaking loudly, belligerence, carousing
- Inappropriate language

Bottling

Quantitative – Objective Change

- Calculated existing noise levels exceed standards by 3 decibels
- Future noise levels not likely to increase unless louder equipment is used.
- The overall bottling duration will increase to accommodate additional volume of wine

Private Parties and Large Events

Quantitative – Objective Change

- Existing party noise levels comply with standards
- Future noise levels exceed standard by 4 decibels.

Caveat: Assumes parties will ALWAYS be contained on the far side of the winery building and NEVER be located elsewhere on the property