

MEMORANDUM

To: Josh Hillinger, Camp Ramah
Rabbi Joe Menashe, Camp Ramah
Randy Michaels, Camp Ramah
From: Jonathan V. Leech, Dudek
Subject: President's Day Weekend Noise Survey
Date: March 6, 2020
cc: Steve Welton, SEPPS

1 Background

1.1 Approach and Participating Property Addresses

President's Day Weekend is traditionally the schedule for hosting one of the larger events at Camp Ramah, the Israeli Scouts gathering. Camp Ramah approached several residential neighbors of the Camp Ramah property with an offer to voluntarily measure sound levels at such properties, for the duration of the President's Day Weekend 2020 functions at Camp Ramah. The participating properties included:

- 1447 Foothill Road (Measure Point 1 or "MP1")
- 406 Fairview Road (Measure point 2 or "MP2")
- 312 Fairview Road (Measure Point 3 or "MP3")

Exhibit 1 illustrates the locations of the above measurement points, relative to the Camp Ramah property.

1.2 Methodology

Measurements were performed using three SoftdB brand Piccolo 2 integrating sound level meters, which are classified as an ANSI Class II instrument (which has suitable accuracy for environmental noise measurements). The sound level meters were configured to measure and record sound level data on an hourly basis, for a duration of approximately 96 hours.

Measurements began at approximately 2 PM on Friday, February 14 (before arrival of participants) and extended until approximately 2 PM on Tuesday, February 18 (a full day after the departure of camp attendees). This sound level measurement duration and recorded results allows comparison of noise levels during the Camp Ramah session against ambient noise levels without the camp in operation.

2 Results

Tables on the following pages provide the recorded average sound level (L_{eq}) for each hour, with one table per each of the three measurement points.

2.1 Interpretation

The County Ordinance allows an hourly average noise level of up to 55 dBA during the day (7 AM to 7 PM), up to 50 dBA in the evening (7 PM to 10 PM), and up to 45 dBA overnight (10 PM to 7 AM). When an existing recorded ambient noise level exceeds these levels, the higher recorded noise level becomes the allowable level. In the following tables, the column labeled "Allowed" reflects the limit from the noise ordinance, corrected in some instances if the ambient noise level already exceeds the limit.

Hourly average sound levels during the Israeli Scout event that exceed the allowable limit are indicated in red font in the following tables. Note that there is only one time period in common across all three properties when a marginal exceedance of the allowed sound level was recorded. This exceedance occurred at all three properties during the sports tournament. Since amplified sound was used at the sports tournament, the mitigations proposed to govern amplified sound systems at Camp Ramah would be expected to avoid this exceedance from occurring in the future.

There were several isolated sound level exceedances recorded at MP2. One exceedance occurred between 5 AM and 6 AM, when no activity was occurring at Camp Ramah. Because there was no exceedance at the other two properties, it is assumed an isolated event occurred very close to (or on) this property. While above ambient levels, the recorded 50 dBA L_{eq} was probably not loud enough to cause sleep disturbance.

Another set of isolated exceedances also occurred at MP2 between 9 and 11 PM on Sunday Night, which coincides with the time of the Final Ceremony. Because an exceedance was not recorded at the other two properties, it is uncertain if Camp Ramah was the source of the noise. The recorded noise exceeded the limits by 2 to 5 dBA, which could have been noticeable against ambient noise levels in the hours before and after the exceedance. The overall sound level did not exceed 52 dBA L_{eq} which was unlikely to be disruptive in the indoor areas of the residence at this address. If the Final Ceremony was the source of the sound levels recorded at MP2 between 9PM and 11 PM, sound amplification systems used at this event would be governed by the newly proposed mitigations.

Overall, across 96 hours of continuous measurements at the three properties, there were only 7 instances where a recorded sound level exceeded an allowance; one instance at MP3, two instances at MP1, and four instances at MP2. These occurrences were therefore infrequent, and the sound levels that can potentially be correlated to Camp Ramah activities would be addressed by the proposed mitigation programs.

2.2 Results Tables

Are presented on the following pages, followed by Exhibit 1.

Memorandum

Subject: Camp Ramah President's Day Weekend 2020 Sound Level Survey

	14-Feb Friday	15-Feb Saturday	16-Feb Sunday	17-Feb Monday	18-Feb Tuesday	Allowed	Max Recorded
	Recorded Hourly Noise Levels (Leq)						
12		31.5	31.8	35	31.1	45	35
1		32.1	31.4	32.3	35.7	45	32.3
2		34.4	31	31.1	33.3	45	34.4
3		31.6	31.1	32.9	30	45	32.9
4		31.8	31.3	31.1	31	45	31.8
5		33.5	33.3	33.5	32.2	45	33.5
6		37.4	37.8	38.1	45	55	38.1
7		38	40	40.9	40.8	55	40.9
8		41.9	41	41.6	42	55	41.9
9		39.3	52.3	41.2	47.2	55	52.3
10		39.3	46.5	47.6	47.2	55	47.6
11		38.6	42.7	52.6	41.3	55	52.6
12		40	41.2	38.2	54.2	55	41.2
13		41.3	41.5	43.8	47.3	55	43.8
14	42	44.3	57.4	41.5	54.6	55	57.4
15	42.7	43	48.8	39.9		55	48.8
16	39.4	59	43	41.7		55	59
17	38.1	40.1	43.5	37.6		55	43.5
18	41.5	41.1	39.6	38.4		55	41.5
19	36	36.5	38.3	38		50	38.3
20	39.9	36.2	37.2	37.6		50	39.9
21	35.5	35.2	38.7	35.5		50	38.7
22	35.6	35.2	40.4	35.4		45	40.4
23	33.2	33.7	36.3	31.9		45	36.3

LEGEND

	Holiday Weekend Camp In-Session
	Outdoor Song Contest (Amphitheater)
	Sport Tournament
	Final Ceremony (Baseball Field)

"Allowed" noise level from County Noise Ordinance

"Max Recorded" is maximum noise level for a given hour, any day of the event.

Red text - indicates a noise level above the ordinance allowance

Measurement Point MP1 (1447 Foothill Road)

Memorandum

Subject: Camp Ramah President's Day Weekend 2020 Sound Level Survey

	14-Feb Friday	15-Feb Saturday	16-Feb Sunday	17-Feb Monday	18-Feb Tuesday	Allowed	Max Recorded
	Recorded Hourly Noise Levels (Leq)						
12		38	39.1	35.2	37.5	45	39.1
1		36.5	33.9	37.9	33.3	45	37.9
2		37.5	37.4	38.7	32.4	45	38.7
3		36.6	33.3	39.7	32.3	45	39.7
4		35.1	41.7	38.8	32.9	45	41.7
5		37.4	35.2	49.9	34.5	45	49.9
6		43.8	42.5	44.2	42.6	55	44.2
7		46.6	45.6	53.7	50.2	55	53.7
8		46.9	45.7	54	47.3	55	54
9		47.8	46.8	59.2	61.1	64	59.2
10		48.3	49.2	49	49.2	55	49.2
11		48.7	47.3	50.6	48.3	55	50.6
12		49.8	49.1	48.9	72.3	55	49.8
13		48.4	46.7	46.2	51.5	55	48.4
14	56.5	49.2	58.9	47.4	56.9	60	58.9
15	50.7	46.8	58.9	47.3		55	58.9
16	51.5	49.4	54	47.5		55	54
17	48.2	46.6	51.4	45.1		55	51.4
18	48	51.2	45.1	44.2		55	51.2
19	44.9	43	45.8	43.3		50	45.8
20	45.1	46.5	46.7	45.3		50	46.7
21	44.8	41.8	51.7	42.9		50	51.7
22	42.3	39.8	50.2	39.1		45	50.2
23	38.2	42.6	42.6	40		45	42.6

LEGEND

	Holiday Weekend Camp In-Session
	Outdoor Song Contest (Amphitheater)
	Sport Tournament
	Final Ceremony (Baseball Field)

"Allowed" noise level from County Noise Ordinance

"Max Recorded" is maximum noise level for a given hour, any day of the event.

Red text - indicates a noise level above the ordinance allowance

Measurement Point MP2 (406 Fairview Avenue)

Memorandum

Subject: Camp Ramah President's Day Weekend 2020 Sound Level Survey

Time	14-Feb Friday	15-Feb Saturday	16-Feb Sunday	17-Feb Monday	18-Feb Tuesday	Allowed	Max Recorded
Recorded Hourly Noise Levels (Leq)							
12		32.7	33.3	32.2	31.1	45	33.3
1		31.9	32	32.1	30.7	45	32.1
2		35	31.4	32.8	29.7	45	35.0
3		32.6	30.8	31.7	30	45	32.6
4		31.8	34.6	31.5	31.6	45	34.6
5		33.4	32.7	35.1	33.3	45	35.1
6		38.7	40	38.3	41.6	55	40.0
7		43	40.1	45.4	42.7	55	45.4
8		43.6	43.7	43.6	43.9	55	43.7
9		42.7	42.8	41.9	48.4	55	42.8
10		40	38.3	47.1	42.2	55	47.1
11		42.6	42.4	41.7	41.7	55	42.6
12		40	41.2	39.9	64.7	55	41.2
13		39.7	41.9	39.7	40.2	55	41.9
14	59.4	47.6	55.5	42.9	47.2	55	55.5
15	47.2	39.3	49	42.7		55	49.0
16	43.6	50.6	44	40.4		55	50.6
17	39.2	47	46.2	38.7		55	47.0
18	39.8	38.1	43.4	36.3		55	43.4
19	36.2	37.1	42.5	34.5		50	42.5
20	36.1	34.9	42.6	35.3		50	42.6
21	35.8	35.5	43	33.6		50	43.0
22	34.5	34.9	37.5	31.4		45	37.5
23	33.8	34.4	33.9	32.3		45	34.4

LEGEND

 Holiday Weekend Camp In-Session

 Outdoor Song Contest (Amphitheater)

 Sport Tournament

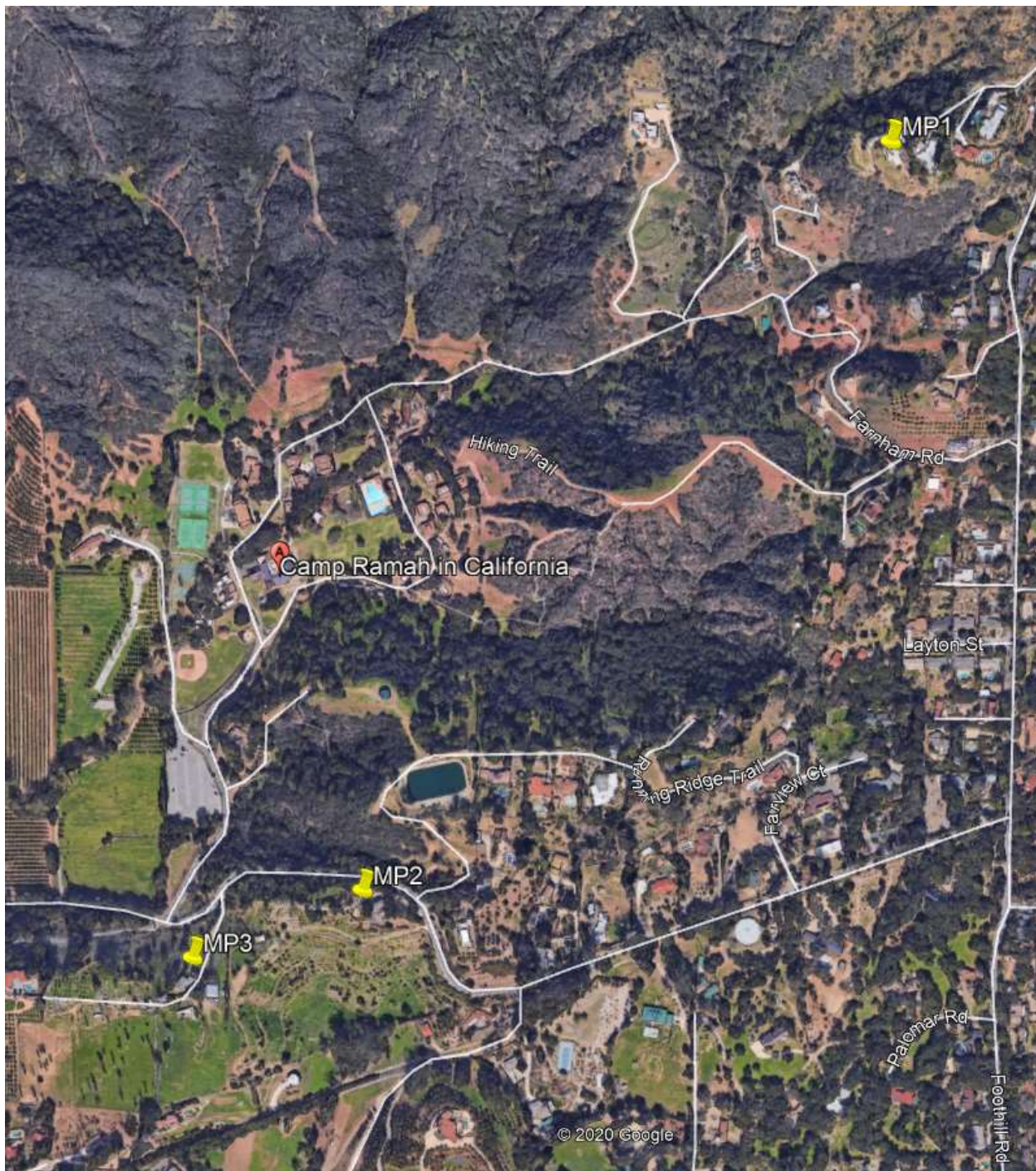
 Final Ceremony (Baseball Field)

"Allowed" noise level from County Noise Ordinance

"Max Recorded" is maximum noise level for a given hour, any day of the event.

Red text - indicates a noise level above the ordinance allowance

Measurement Point MP3 (312 Fairview Avenue)



LEGEND

MP# = Measurement Point

Exhibit 1 - Noise Measurements Locations