

PA Permits and Sound Monitoring at Concert Events in Madison City Parks



Submitted to the City of Madison Board of Parks Commissioners

December, 2015

INTRODUCTION

In 2015, many special events occurred within Madison parks which were approved for the use of amplification. The coordinators of these events obtained PA permits as part of the conditions of using the parks for their events. The number of special events being granted PA permits has risen over the last five years. Consequently, the number of sound related complaints in and around Madison parks has also risen. As a result, the Park Commission has expressed an interest in having staff monitor sound levels at special events in order to enforce both maximum levels of sound permitted and times during which amplified sound is acceptable. The Park Commission also requested a report be made back to them about the results of the sound monitoring conducted at park events in 2015.

In 2015, PA permits came with specific guidelines. All event coordinators using PA permits were given specific times during which they were allowed to use amplified sound. They were also given a maximum sound level at which they could broadcast sound, set for most events at 85 decibels. An example of the language used in such a PA permit to inform organizers of their responsibility in maintaining these conditions is as follows:

Sound levels will be monitored at various places around event perimeter, particularly residential areas near the park. Sound levels are not to exceed 85 decibels within any 1/3 octave band as measured by Parks staff. If readings are above this level, and the organizers are told by Park Staff to comply, they must take action to correct the violation within 10 minutes. If the correction does not occur after 10 minutes, there will be a charge of \$100.00 every 10 minutes the organizer is in violation of the amplification condition. Violation charges will be deducted from the event damage deposit.

SUMMARY

In 2015, sound levels were monitored using a sound level meter with octave band analysis capability at eight park special events:

- | | | |
|---------------|-------------------------------|----------------------|
| • 6/13 | Marquette Waterfront Festival | Yahara Place Park |
| • 7/5 | Let's Eat Out | Burr Jones Field |
| • 7/8-7/11 | La Fete de Marquette | Central Park |
| • 7/14 | Concert in the Breese | Breese Stevens Field |
| • 8/8, 15, 16 | Central Park Sessions | Central Park |
| • 8/23 | Yum Yum Fest | Central Park |
| • 8/26-8/31 | Orton Park Festival | Orton Park |
| • 10/2 | Avett Brothers Concert | Breese Stevens Field |

Six of these events had at least one measurement that was above the permitted decibel level (all except for Let's Eat Out and Concert in the Breese). It should be noted that readings were typically only taken in conditions where it was believed that sound levels may be above the established limit, or when a noise complaint was called into park rangers or Madison police for the area¹. It should also be noted that a large number of the measurements that qualified as above the agreed upon standard were within a 3 dB

¹ An important exception is the Avett Brothers Concert, where readings were taken consistently throughout the evening to assess what kind of levels a concert of this size would have in the surrounding area based upon a collaboration between the organizer and Madison Parks.

margin from the standard. Non-amplified issues, for example crowd noise, could play a significant part in some of these peaks. For most events, there are many park ranger logs showing rangers patrolling the area and judging the sound levels to be within compliance and feeling no need to monitor the levels with the sound meter as a result. This discretion is afforded to ranger staff in the field to ensure they are utilizing tax payer resources efficiently and ensuring they are able to meet the needs of the entire park system. Because of this, the data is naturally skewed to show a high percent of readings which are close to and over the limits set for each event. Simply stated, Madison Parks is confident that the values of readings reflected in this report and analysis is skewed towards a higher decibel output than would have been the average sustained amplified output from these events. Given the lack of resources to allocate to a full scale continual monitoring program (with the exception of the Avett Brothers concert, which was funded by the organizer), this is somewhat anecdotal. However, one objective measure that will show this reduction in adverse impact on non-attendees is the number of complaints from these events from members of the public from 2014 to 2015 (staff is working on quantifying this data currently).

As attempts have been made to enforce conditions of PA permits given to event organizers, organizers have generally demonstrated a willingness to work on reducing sound when asked. When asked to comply with limits, organizers did make alterations at the time of the request. On each of the 3 occasions where ranger staff requested the sound levels be reduced an adjustment was made. Unfortunately, however, on two out of three of these occasions, rangers returned to the events and had to again ask event staff to turn down the sound levels because the levels had gone back up since first contact was made.

- **8/16 at Central Park for the Central Park Sessions**

Between 18:25 and 18:36, five readings were taken at the event. Three of these five readings were over the limit of 85 dB (ranging from 77.5-91.7). When asked, organizers turned down the sound levels.

When rangers returned at 21:18, a reading showed a sound level of 88.9 dB. Organizers again were asked to turn down the sound levels, and again did so when requested.

- **8/23 at Central Park for Yum Yum Fest**

At 20:03 event staff were asked to turn down the sound levels. They did so when asked. Rangers were unable to return to the event to see if compliance was maintained.

- **8/30 at Orton Park for Orton Park Festival**

A noise complaint was called into MPD at 16:27. Between 16:49 and 16:59, readings were taken which showed sound levels between 87-88 dB. Event staff turned down the sound levels when asked. When rangers returned roughly two hours later, readings were taken between 18:56 and 19:05 which showed sound levels ranging from 87.9 to 93.6 dB. Again, event staff turned down the sound levels when asked.

On two occasions in 2015, park rangers observed special events in parks whose organizers did not have the amplified sound turned off by the time they were required to based on the conditions in their PA permits.

- **Orton Park Festival (8/29)**

The PA permit for this date expired at 21:45. Two rangers reported to the event and turned the amplified music off from the sound booth at 21:48. However, the band's own amplifiers were not controlled by the house sound and thus the band continued to play until 21:55. Ranger reported that the event organizer was upset that the band continued to play after the sound board was shut down. No citation was issued, as the ranger determined the organizer made every reasonable attempt to comply and that it was the choice of the artist to not comply.

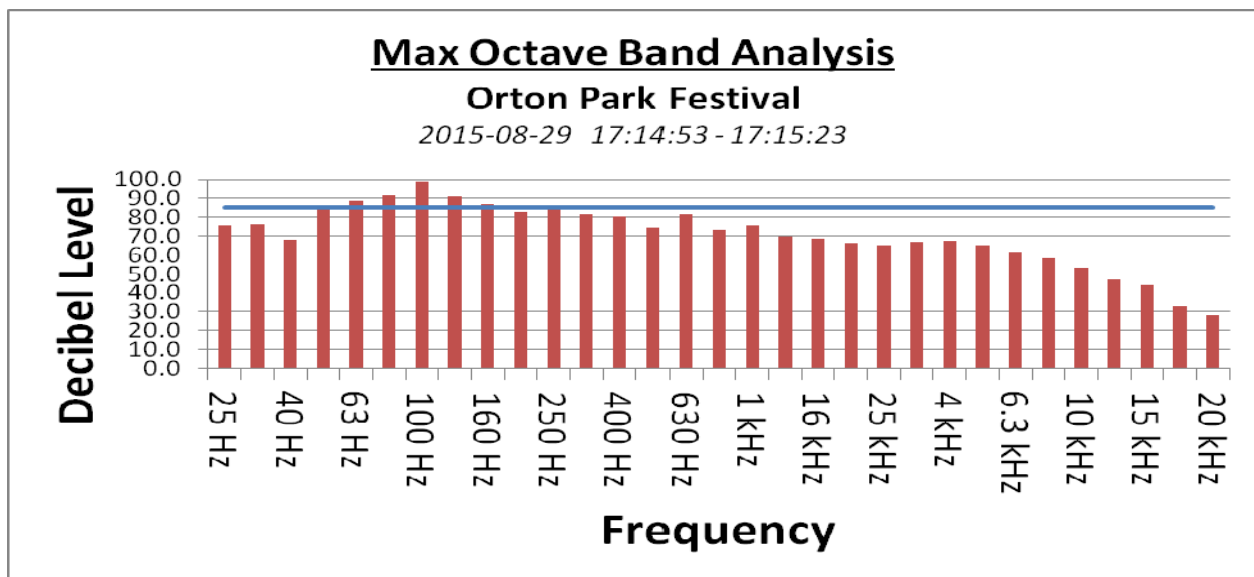
- **Central Park Sessions (9/3)**

The PA permit for this event expired at 22:00. A ranger reported to the event. At 22:00, the event organizer informed the band that they could play another song. The band finished their final song at 22:04. A citation was issued for this violation.

A total of 120 readings were taken at events in Madison parks in 2015. Of these 120 readings, 44 of them (36.67%) had frequencies with values over the limits allowed in the events' PA permits. In nearly all instances, the readings above the prescribed standard occurred in one to four octave bands across the sound spectrum, with the majority of readings in excess of limits being in the 50 – 250 Hz bandwidths. Of the 120 readings, 51 were taken at the Avett Brothers concert at Breese Stevens field on October 2, 2015. The large number of readings is the result of a collaborative effort between the organizer and Madison Parks to ensure a large amount of monitoring was collected to ensure solid analytical tools for post-event evaluation. Park rangers conducted the readings, and Madison Parks was reimbursed for the staff cost associated with this extraordinary service. If these readings are taken out of the aggregate total, 57.97% of the remaining readings at the other seven events monitored were over the limits allowed in the events' PA permits.

DATA AND METHODOLOGY

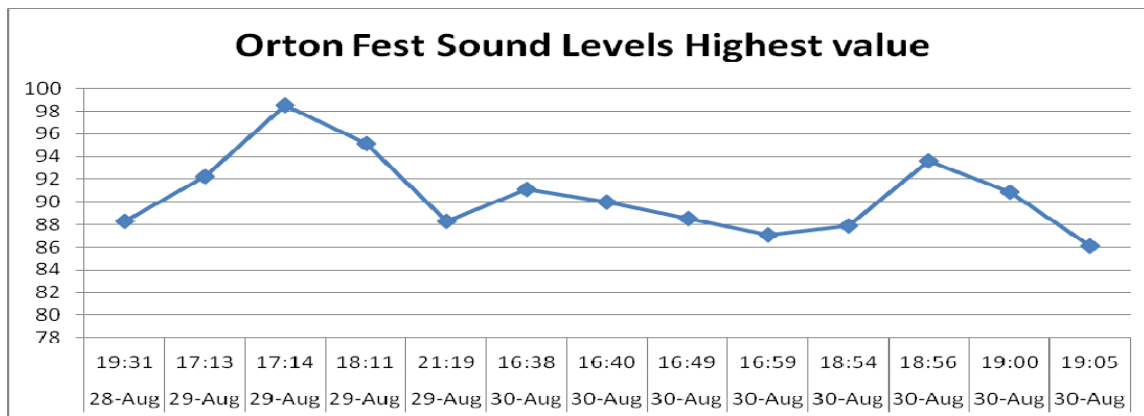
Data is based on maximum octave band analysis as obtained using a Larson Davis SoundTrack LxT1 sound level meter. Data is obtained directly from the sound level meter and then imported into Microsoft Excel and graphed. Numbers for sound levels are in decibels. The graph and chart below are an example of how the data from the sound meter is exported for evaluation.



85 decibels was the upper permitted limit for sound at Orton Park Festival, marked by the line in the graph at 85. Bars going over this line thus show sound levels at various frequencies which are over the permitted limit for this event. Each of the 120 readings taken in 2015 has a corresponding graph.

For each reading, the highest level was recorded in order to track the maximum levels being produced at each point in time. For instance, in the bar chart above the highest value recorded at that reading was at 100Hz, 98.5 decibels. An example of the highest values (on a specific frequency) for each reading at a particular event can be viewed in either tabular or graphical formats, such as the following:

Orton Fest Sound Levels		
<u>Date</u>	<u>Time</u>	<u>Highest value</u>
28-Aug	19:31	88.3
29-Aug	17:13	92.2
29-Aug	17:14	98.5
29-Aug	18:11	95.1
29-Aug	21:19	88.3
30-Aug	16:38	91.1
30-Aug	16:40	90
30-Aug	16:49	88.5
30-Aug	16:59	87.1
30-Aug	18:54	87.9
30-Aug	18:56	93.6
30-Aug	19:00	90.9
30-Aug	19:05	86.1



Event	Number of readings taken	Number of readings over allowed limits	Percent of readings over allowed limits	Average highest decibel level recorded	Permit limit *
Marquette Waterfront Festival	3	3	100.00%	95.47	85
Let's Eat out	3	0	0.00%	79.13	90
La Fete de Marquette	29	13	44.83%	90.14	90
Concert in the Breese	5	0	0.00%	80.34	85
Central Park Sessions	15	10	66.67%	86.31	85
Orton Park Festival	13	13	100.00%	90.58	85
Avett Brothers	51	4	7.84%	87.05	105
Yum Yum Fest	1	1	100.00%	99.2	85
Total	120	44	36.67%		

*At the perimeter for all events with the exception of the Avett Brothers concert, which was measured at the sound board.

The summary table above shows data for the eight events that were monitored using the sound level monitor. To acquire this data, every reading was imported and the highest level for each reading was recorded (typically falling in the lower bands between 25-125 Hz).

Some events clearly had more monitoring than others, and levels were monitored at different times for every event; thus, the data cannot be generalized to say that any one event was more frequently compliant than any other, or used in any other type of statistical comparison. What can be seen with this data is how compliant each event was at the times that sound was monitored for that event.