



December 14, 2014

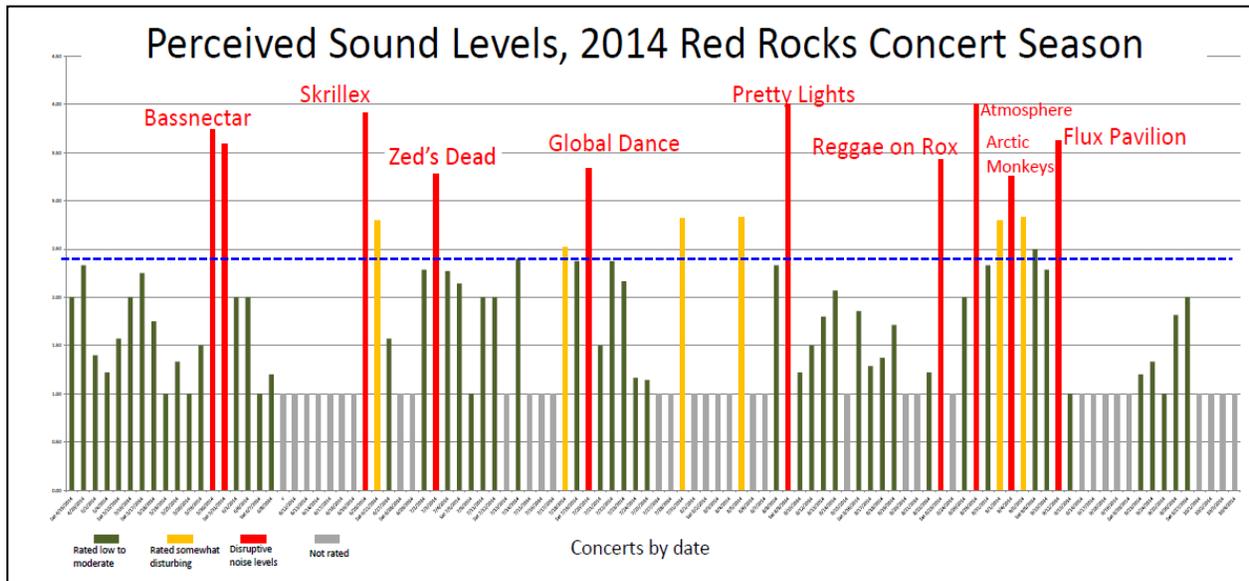
RE: Red Rocks concert noise

Dear Casey Tighe, Jefferson County Commissioner, District 2

We are writing you as representatives of the Morrison Neighbors in unincorporated Jeffco; our group is known as Save Red Rocks. We have been collecting perceived noise data throughout the concert season. When we compare our data with the data reported by K2 Audio we find a strong correlation that we would like to share with you.

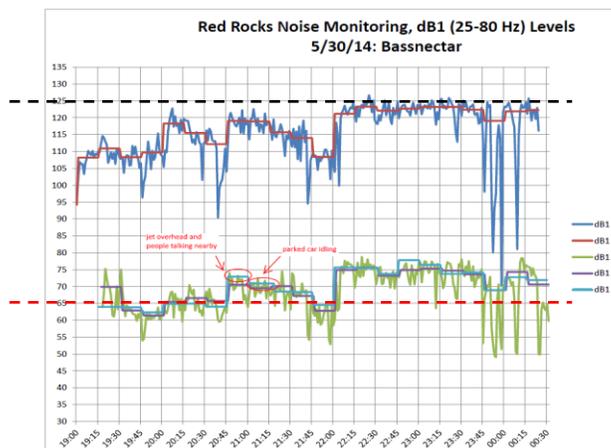
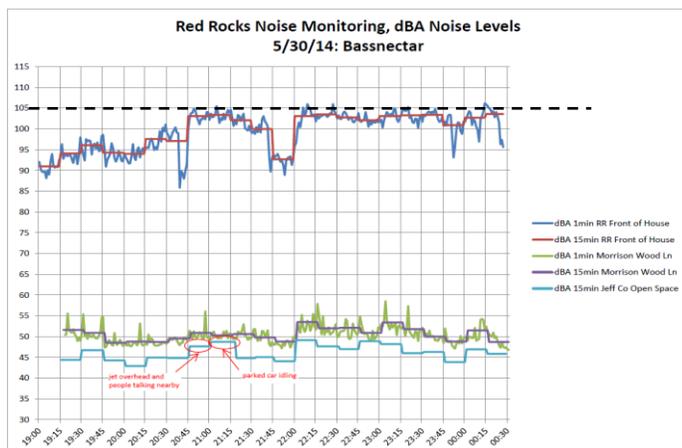
The sound readings performed by K2 during the 2014 concert season clearly confirm that the dB1 (flat) rate in our neighborhoods has been recorded as high as 75 to 80 dB on the nights that our neighborhoods complained of noise levels as being too loud. This level is 15 to 20 dB higher than the standard level of 65 dB considered acceptable at the periphery of other open air amphitheaters around the country. This means that we have been enduring low frequency sound levels that translate to being two to four times louder than the State limit of 65dB, and that our complaints are legitimate.

Here is our perceived noise chart for 2014 based on noise ratings and complaints. The red bars indicate disruptive noise levels and yellow are somewhat disruptive. The blue line is the boundary between tolerable and disruptive.

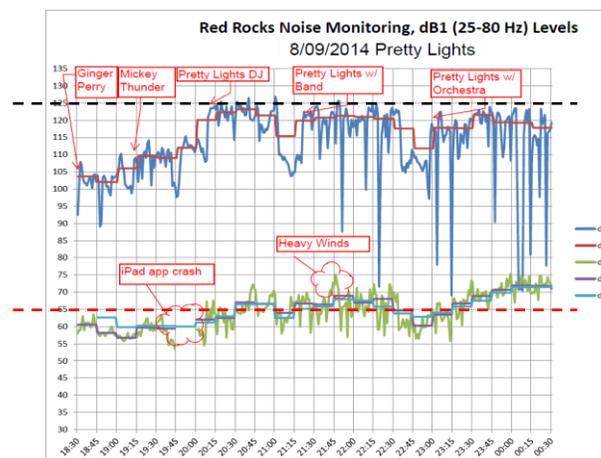
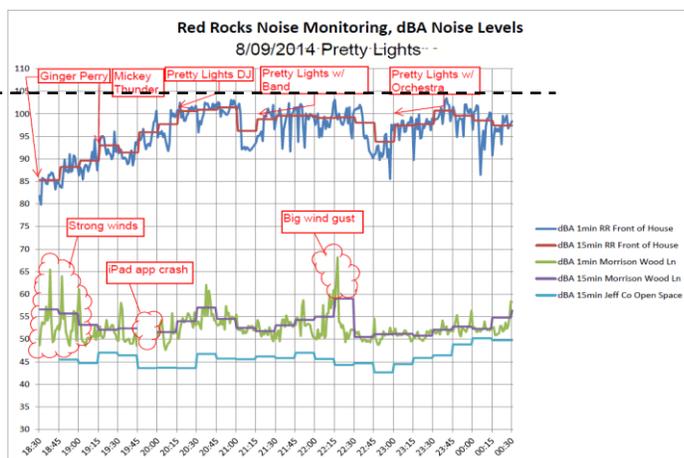


It is fortunate that K2 Audio also collected sound data for those red bars so that we can compare what we perceived and the actual sound ratings. We have attached just a few examples for comparison.

The first example is from the first of two Bassnectar concerts.



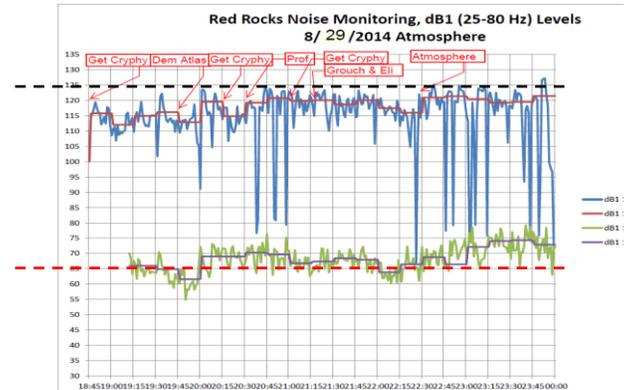
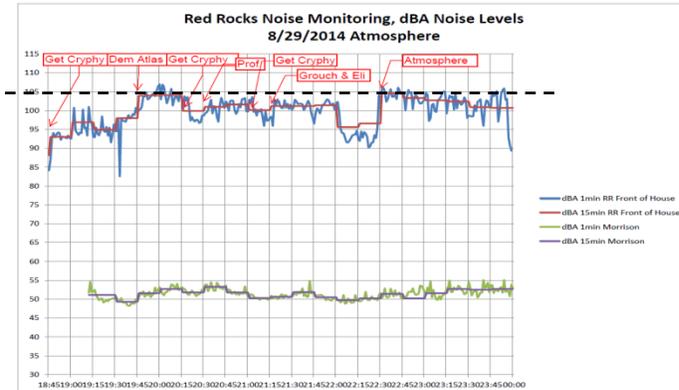
The black dashed lines near the top of the graphs are K2/Denver's recommendation for limits for the 2015 concert season, 105 dBA and 125 dB1. The red dashed line in the dB1 chart is the 65dB level. This concert in 2015 would be approved and yet will generate a large number of complaints from residents of Jefferson County. The same can be said for the Pretty Lights concert shown below, and yet The Pretty Lights concert was considered one of the loudest and most disturbing concerts of the season.



It is also interesting to note that K2 Audio tried to explain high noise reading as a result of high winds. The normal prevailing evening winds is from NW to the SE, from Red Rocks to Morrison and south.

The last example is on the next page; it is the K2 report from the concert by Atmosphere, August 29 2014. This also represents a 3-week window from August 23 through September 12 when we were hit by six loud obnoxious concerts. Yet Atmosphere barely went over the 105 on dBA scale, producing only 55 dBA in our area. Once again, the dB1 data are within the 125 limit at the venue, but levels in the neighborhood exceed 70 dB. It is also thoughtful of the concert promoter to save the loudest noise for the period between 10:30 pm and 12:00 midnight. Although our records also show high perceived levels, there are too few to be decisive in this case.

We can provide more examples but they tell the same story, all the complaints happened at or below the levels K2/Denver recommends for the 2015 concert season, that is, a maximum of 105 dBA and 125 dB1 at the front box. According to the K2 reports, 125 dB1 at the front box will equate to a 75 dB1 level at Morrison and our neighborhoods.



From this evidence, we cannot help but think that Denver is not serious about noise reductions at the Red Rocks amphitheater. As a reminder, State noise regulations put a limit of 65dB (Low Frequency noise) at a distance of 25ft from our houses. Based on the K2 reports, to achieve a max 65dB (Low Frequency) the sound levels need to be reduced to max of 115 dB1 at the front box.

As a result of our findings, we would make the following recommendations regarding Red Rocks as a concert venue:

1. As a start, for the 2015 season, maximum levels of 105 dBA and 115 dB1 (Low Frequency 25-80 hz)
2. Sound restrictions must include all sounds generated during the concert – including audience participation/cheering. Performers will not entice the audience to make extra noise.
3. Cannon sound effects and pyrotechnic blasts are restricted and must also conform to the max sound levels.
4. Denver/Promoters will pay for sound monitoring throughout every concert.
5. A hotline will be provided to record and document all complaints.
6. Denver, Jefferson County and neighbors will meet at least twice a season to review the sound reports and address any concerns and evaluate results.
7. During the concert season the County will have the right to lower maximum sound levels if needed to address additional noise complaints.
8. Denver will start work toward sound mitigation to address future sound restrictions that will be lowered in subsequent years. 2016 Max levels should be down to 95dBA and 105dB1.
9. In the event of blatant noise violations, Jeffco Sheriff will be able to shut off the power to the sound stage.

With your assistance, 2014 has been a better year for us than previous years. It was nice to be able to sit outside and enjoy an evening dinner on deck and take in the beauty of our State and County. We also realize the county's need to balance additional sales revenue and quality of life. Fortunately the data also show that only a fraction of the concerts (16-18 concerts) are problematic. It is not that big a problem, Denver/Promoters can turn it down or pay for sound mitigation equipment. If Bassnectar and the others decide not to play at Red Rocks, I am sure someone else more responsible would take their place. Red Rocks is a world class stage, and should not be reduced to an open air nightclub.

I know you are busy in negotiations with Denver and Morrison to resolve this issue before the 2015 concert season is rolled out. But please take our findings and recommendations to the table. We look forward to meeting with you and other parties soon. If there is anything else we can do to help you on this matter please contact us.

Hadi Soetrisno
Hadi.soetrisno2011@gmail.com
303-697-5439

Please visit our website at SaveRedRocks.com. We are on Twitter as @saveredrocks.