

Recommendations for Navy Noise Study

Noise Measurement and Analysis *(See Reference Below)*

SDA's top issues:

- At a minimum twelve monitoring sites are needed. SDA suggests spreading the recording equipment over more sites and reducing seasonal sampling.
- Each monitoring period should capture at least four 45 minute sessions of Field Carrier Landing Practice training.
- Because Growlers produce a lot of low-frequency noise, all analysis should be in both A-weighted (used by FAA and DoD but eliminates low frequencies) and C-weighted (includes low frequencies).
- Encourage the Navy to speak with citizen groups before the process concludes.
- All raw data recorded must be made available to the public on the internet with information on how to read the files.
- Aircrews should not modify their normal flight paths during monitoring.
- The study should provide a full range of noise descriptors (metrics) to represent human and environmental impacts as used in the National Park Service 2016 report on acoustical monitoring at Ebey's Landing.

Data to be collected at each noise measurement station:

- Continuous digital audio recordings
- Sound Pressure Level (SPL) in the form of one-third octave frequency bands ranging from 12.5 Hz – 20,000 Hz every second
- SPL in the form of A-weighted decibel readings (dBA) every second
- SPL in the form of C-weighted decibel readings (dBC) every second
- Meteorological data including wind speed, direction, temperature, and relative humidity

Analysis for each station: At a minimum provide the following analysis in the report

- The percent of time that measured levels were above the specified levels (Table 6) for truncated and full frequency range during daytime and nighttime (Table 7)
- Exceedance levels for daytime and nighttime for truncated and full frequency range during daytime and nighttime (Table 8)
- Day and night dB levels for 33 one-third octave bands (Figure 8)
- Equivalent Continuous Sound Pressure Level - LA_{eq} Daytime, LA_{eq} Nighttime, LA_{eq} 24 Hours and DNL (Table 9)
- Maximum value of the A-weighted sound pressure level LA_{max} (Figure 10) and C-weighted LC_{max}
- Peak sound pressure level L_{Peak}
- Session Sound Exposure Level L_{SEL}
- For time interval metrics, eg DNL, calculate for A Busy Day (ABD) and for an Average Annual Day (AAD)
- Ambient noise before jet activity in dBA and dBC
- For FCLPS: event duration, number of arrivals, departures and FCLP bounces for each session number of jets in the session flight track (runway)

Reference for Measurement and Analysis: Pipkin, A. 2016. Ebey's Landing National Historical Reserve: Acoustical monitoring report. Natural Resource Report NPS/ELBA/NRR—2016/1299. National Park Service, Fort Collins, Colorado. https://irma.nps.gov/dsscholar/documents/2233340/EBLA_report_final_11_08_2016.pdf