

February 21, 2014

Marbled Murrelet Effects Thresholds

Criteria for Injury to Marbled Murrelets from Underwater Sound Resulting from Impact Pile Driving of Steel Piles/For repetitive impulsive underwater sounds :

Auditory Injury threshold - 202 dB SEL
Non-auditory injury threshold – 208 dB SEL
Potential behavioral response zone - 150 dBrms*

*USFWS considers this to be a guideline, not a threshold. In other words, murrelets may respond to sounds in this zone, but that response may not constitute an adverse effect. Other factors (e.g., duration) are important to consider when determining whether exposure in this zone will result in adverse effects.

There is currently no established threshold for estimating adverse effects from vibratory installation of piles.

SEL – Sound exposure level – reported as the cumulative amount of exposure for a single pile driving event.

rms = root mean squared for pile driving this is the square root of the mean square of a single pile driving impulse pressure event.