

How the Navy measures jet noise

At a 2014 meeting with residents in Coupeville on the topic of jet noise, a Navy representative described the process of sound measurement as that of placing a GE engine on a test platform on the ground, turning it on and recording its noise. That data was fed into noise mapping software that considered land contour data. The processed data was then averaged with quiet time over the length of a year to produce a “Day-Night Average,” as is done at commercial airports by the FAA. Day-Night Averages do not show what the loudest event is or how many noise events there may be in a 24-hour period.

According to Navy calculations, a Growler jet is capable of 150 decibels, about the same as a gun muzzle blast. Imagine averaging that over 365 days that include long quiet periods and ask yourself, is the result going to reflect reality?

No live jet takeoffs or landings were measured in establishing the Day-Night Average, according to the Navy official, nor was the frequent use of afterburners ever factored into those sound levels, nor was the significant extra noise from extended flaps, landing gear and speed brakes included. At a [public meeting in Pacific Beach](#), the Navy admitted that this is indeed how it measures jet noise.

Growler jets are capable of flying at 1400 mph, more than double the speed of the Prowlers they have replaced. As any school child knows, anything passing through air creates friction and makes noise, especially at higher speeds. [Does it make sense](#) for the Navy to not measure anything but an engine sitting on a test platform and call it good? Noise levels over the [Olympic Peninsula](#), Salish Sea, [San Juan Islands](#), [Whidbey Island](#) and even over [Canada](#) have steadily increased over the years.

Through computer modeling, the Navy developed a [decibel average of 65](#), which is under the limit for hearing damage but over the limit, according to the Navy’s own figures, for residential development. 65 decibels does not, however, account for the times when the decibel level *inside* some residential homes is above 100, which is more than enough to cause hearing loss, or the fact that at some homes at Admiral’s Cove the [decibel level has been measured by an independent sound professional](#), at 134.2. According to a [CDC report](#), less than one second of exposure to noise above 130 decibels will damage hearing.

No Environmental Impact Statement (EIS) was done for the replacement of Prowler jets with Growlers; instead, the Navy used the shorter [Environmental Assessment \(EA\) route in 2005](#), so that impacts from 82 of the proposed 118 Growlers at Naval Air Station Whidbey Island were never fully evaluated.

If, according to a [report from Citizens of Ebey’s Reserve](#), the Central Whidbey Island community can “...document that there is a 5% increase in noise from that predicted, this may be sufficient grounds to re-open the Navy’s 2005 EA – and a 5% increase seems to have been well surpassed. The Navy, under [NEPA](#) regulations, will

then have to re-open their 2005 EA that allows for the transition to EA-18G Growlers at NASWI. The Navy's NEPA regulations lay it out. The Navy has a duty to prepare a new EA or EIS and there is a discovery that substantial environmental degradation is occurring as a result of the ongoing operation; or (2) there is discovery that the environmental effects are significantly and qualitatively different or more severe than predicted in an earlier NEPA document."

Growler jets are far louder (some say twice as loud) than the Prowlers they are replacing, and the Navy has promised that the minimum altitude they will be flying over land is 1200 feet. [VIDEO CLIP] That has been frequently contradicted by hikers on mountainous forest trails, who have reported seeing jets fly past beneath them. SCREENSHOTS According to the Navy's own figures for older jets, one at 1000 feet produces a "Single Event Level" of 113 decibels, which is enough to damage hearing and cause medical problems in people subjected to it. According to a [report from the CDC](#), the highest permissible noise exposure for unprotected human ears at 113 decibels is 45 seconds. In the Roosevelt-Okanogan Military Training Area the Navy is authorized to fly at 300 feet above ground level. It is not clear what would prevent them from authorizing that lower altitude in airspace over the western part of the Olympic Peninsula if it becomes an Electronic Warfare Range, nor is it known what minimum altitudes if any are required for other aircraft, such as attack helicopters or drones.

A recent study called [Community Aircraft Noise: A Public Health Issue](#) identified serious health effects in Coupeville, WA, caused by chronic and acute noise episodes.

With regard to jet noise and emissions, the Citizens of Ebey's Reserve on Whidbey Island have created a web page that includes this [Links and Files](#) section, full of valuable information.

As a result of the Navy's apparent underestimation of sound levels caused by jets, the effects of loud noise on threatened and endangered species in the [Fish and Wildlife Service's Biological Opinion](#) for the Navy, which was begun in 2009 and issued in 2010, may be based on inaccurate or misleading information from the Navy. Additionally, the area around the Olympic National Forest and Olympic national Park was not evaluated for low-level flight. The 2010 Biological Opinion should be considered invalid for the proposed new increased activity and its impacts through the year 2020, and formal consultation should be re-initiated under Section 7 of the Endangered Species Act, using actual sound measurements from real jets in ways that real ears perceive it.

A more technical explanation of noise and its measurement can be found on [this fact sheet](#) produced by [Quiet Skies Over San Juan County](#).