Safety $aves

Noise and Hearing Protector Use at Montana Logging Operations

Shawn McClain, MT Tech Grad Student

Logging is a dangerous industry. One often overlooked logging hazard is the exposure to loud noise. High levels of noise can damage the ear and cause hearing loss. This damage usually develops slowly over many years until it results in a disability. Fortunately, hearing loss caused by noise is 100% preventable and we owe it to ourselves and our crews to try and protect hearing by measuring and controlling noise exposures on the job...and it's the law.

The Occupational Safety and Health Administration (OSHA) has rules in place to protect employees from hazards at work. The OSHA rule for noise (29 CFR 1910.95) limits uncontrolled noise exposures to 90 decibels as an 8-hour time-weighted average, and states that an employer will administer a hearing conservation program (HCP) whenever employee noise exposures equal or exceed an 8 hour average sound level of 85 decibels. This is commonly referred to as the action level. When loggers work for longer than 8 hours, the average noise level they can be exposed to goes down, and when they work shorter shifts, the allowable exposure level goes up.

A HCP requires that employers:

- Measure noise exposures on the job;
- Test employee hearing at baseline and annually for every year they are exposed to noise;
- Provide training on the hazards of noise and on the proper use and care of hearing protectors;
- And, maintain noise monitoring, hearing test, and training records.

The most common way to control noise exposures is by wearing hearing protection devices, usually in the form of ear plugs and ear muffs. OSHA requires that these devices be tested and verified to control noise, as indicated by a "noise reduction rating" label. OSHA also requires that employers provide workers with at least two different types to choose from, preferably at least one ear muff and one set of ear plugs. Workers exposed to 100 decibels or more should wear both ear muffs and ear plugs at the same time.

This past year, the Montana Logging Association partnered with the Safety, Health, and Industrial Hygiene Department at Montana Tech to measure noise exposures and evaluate hearing protector use at Montana logging sites. Noise dosimeters were used to measure noise levels at five mechanized sites and two line sites. Job tasks evaluated at the mechanized sites included operating feller-bunchers, skidders, processors, bulldozers, and haul trucks. Tasks at line sites included hooker, crane operator, landing position, and sawyer. In addition, loggers at all sites completed activity cards about noise exposures and hearing protector use.

All of the tasks at mechanized sites, except the bulldozer, were below the OSHA action level of 85 decibels as an 8-hour average. However, many loggers at these sites reported working 12+ hours per shift. When 12 hour shift lengths were used to estimate noise exposures, one third of workers were overexposed to noise, including two Timbco feller-buncher operators, two skidder operators, one processor, and the bulldozer driver. None of the haul truck drivers were over exposed for either 8 or 12 hour shifts. At line sites, all of the tasks had workers that were over the OSHA action level. The loudest task at line operations was felling trees with a chainsaw, with an 8 hour average of 100 decibels. At mechanized sites only 6% of the loggers wore hearing protection (only the bulldozer operator) while only 46% wore hearing protectors at the line sites.

Based on these results, line sites should consider establishing a HCP and providing ear muffs and ear plugs for all loggers. In addition, sawyers should be required to wear both types at the same time. At mechanized sites, a HCP and hearing protectors may be required depending on the noise exposures and shift lengths at your specific operation. The Montana Logging Association can help with noise monitoring and establishing a HCP. Please take care of your hearing and take steps to protect your workers. And always remember – ***Safety Saves!***