



## MEDIA RELEASE

### Joint Non-Lethal Weapons Program



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### Light and Sound Experiments Show Non-Lethal Applications

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*The Distributed Sound and Light Array, shown here mounted on a Humvee, uses combined light and sound stimuli to non-lethally hail and warn a vehicle.*

*Official JNLWP photo by Vincent A. DePrenger*

The Department of Defense's Joint Non-Lethal Weapons Program (JNLWP) recently sponsored combined non-lethal light and sound human effects and military utility experiments. The Directed Energy Warfare Office at the Naval Surface Warfare Center Dahlgren Division, Va., performed the research using the Distributed Sound and Light Array (DSL). The goal of the experiments was to determine the effects of combined non-lethal light and sound stimuli on vehicle and vessel drivers. The results will aid in determining the effects' potential military utility for both checkpoint operations and naval vessel exclusion areas, according to Randy Woods, the technical lead for the DSLA experiments at Dahlgren.

The Department of Defense defines non-lethal weapons as "weapons, devices and munitions that are explicitly designed and primarily employed to incapacitate targeted personnel or materiel immediately, while minimizing fatalities, permanent injury to personnel and undesired damage to property in the target area or environment. Non-lethal weapons are intended to have reversible effects on personnel and materiel." Non-lethal weapons provide warfighters with escalation-of-force options when lethal force is not the best first response.

Some of the highest-priority capability gaps the JNLWP and the Services have identified include the ability for operating forces to non-lethally stop suspicious vehicles and vessels at safe distances. The combined non-lethal light and sound experiments will help determine whether the DSLA technology has non-lethal vehicle or vessel stopping applications. The DSLA produces distant alert and warning effects using a combination of distributed high-output acoustical warnings and high-output non-coherent and coherent light sources.

The DSLA provides a non-lethal capability to hail, warn, inform, distract, deter and dissuade targeted individuals at significant stand-off distances. The first set of experiments, conducted in August and September, involved stationary testing to gather baseline data. The second round of experiments, conducted in October and November, involved testing the DSLA's technology against drivers in vehicles and vessels.

According to Rick Scott, project engineer at the Joint Non-Lethal Weapons Directorate, preliminary results indicate that non-lethal sound and light at moderate intensities are effective at producing measured effects in targeted individuals. Researchers anticipate that final reports will confirm that the DSLA's sound and light components working together will be more effective than either stimulation employed alone.

Future plans call for DSLA demonstrations for Service and Combatant Command representatives to show how this developing escalation-of-force technology can provide important non-lethal hail and warn capabilities to U.S. operating forces.