



Highlights of [GAO-09-344](#), a report to congressional requesters

## Why GAO Did This Study

Nonlethal weapons (NLW) provide an alternative when lethal force is undesirable. The Department of Defense (DOD) defines NLW as those that are explicitly designed and primarily employed to incapacitate personnel or materiel, while minimizing fatalities, permanent injury to personnel, and undesired damage to property and the environment. DOD created the Joint Non-Lethal Weapons Program in 1996 to have centralized responsibility for the development of NLW and coordinate requirements among the services. GAO was asked to review the status of NLW programs within DOD and the military services by identifying the extent to which (1) DOD and the Joint Non-Lethal Weapons Program have developed and fielded NLW since the program's inception; (2) DOD has established and implemented policy, doctrine, and training for NLW; and (3) DOD has conducted testing and evaluation prior to fielding NLW. GAO reviewed and analyzed DOD and service plans, guidance, and doctrine and interviewed officials associated with NLW development.

## What GAO Recommends

GAO recommends 8 actions to help DOD assess the extent to which capability gaps are filled, better incorporate logistics and supportability considerations, develop performance criteria and improve program oversight, clarify NLW policy and doctrine, and finalize a risk assessment methodology for NLW test and evaluation. DOD generally agreed with our recommendations.

To view the full product, including the scope and methodology, click on [GAO-09-344](#). For more information, contact Davi M. D'Agostino at (202) 512-5431 or [dagostinod@gao.gov](mailto:dagostinod@gao.gov).

## DEFENSE MANAGEMENT

### DOD Needs to Improve Program Management, Policy, and Testing to Enhance Ability to Field Operationally Useful Non-lethal Weapons

#### What GAO Found

The joint non-lethal weapons program has conducted more than 50 research and development efforts and spent at least \$386 million since 1997, but it has not developed any new weapons and the military services have fielded 4 items stemming from these efforts that only partially fill some capability gaps identified since 1998. Three major factors contribute to the program's limited progress in fully addressing capability gaps. First, DOD did not prioritize departmentwide non-lethal capability gaps until 2007 and still does not fully address these gaps. Second, DOD has not consistently incorporated logistics and supportability considerations early in the development process. As a result, DOD may miss opportunities to allocate resources more effectively. Third, DOD has exercised limited general oversight of the NLW program which has resulted in gaps in key program guidance as well as limited measurement of progress and performance. For example, DOD's road map of ongoing and projected NLW capabilities and efforts could be used to discharge oversight responsibilities, but the road map lacks guidance about how to allocate resources and evaluate performance. Further, DOD has no single organization with visibility over all spending, and available budget information may not fully capture all spending associated with the development of non-lethal capabilities.

DOD has begun to incorporate ideas about non-lethal capabilities into policy, doctrine, and training but has not yet clearly articulated what constitutes acceptable risk for fatality, fully developed weapons employment policies for the use of force in overseas warfighting or homeland applications, or ensured that warfighters and domestic responders are fully trained in NLW use. Until these issues are resolved, doctrine and training for non-lethal weapons may be limited, and the warfighter or domestic responder may have fewer options other than resorting to lethal force.

DOD lacks a clear methodology for estimating the human effects of non-lethal weapons and does not fully test and evaluate many non-lethal weapons because they have been fielded under urgent operational requirements that abbreviate normal DOD testing standards. Testing can be bypassed for commercial items because DOD officials can use contractor test data instead of conducting their own tests. Therefore, when NLW are fielded, commanders are uncertain about acceptable risk on targets and bystanders and cannot accurately predict their effects. DOD has begun to develop elements of a risk assessment methodology to address human effects testing; for example, it has drafted a Risk of Significant Injury scale, which broadly categorizes levels of health care capabilities required to reverse NLW effects. However, DOD has not completed a risk assessment methodology that would provide information to commanders so that they may then make a determination about its acceptability in their operating environment.