

The Army's Nonlethal Weapons

An Overview

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Over the past ten years, nontraditional military operations (such as peacekeeping, humanitarian, and stability and support missions) have placed demanding requirements on our soldiers and leaders. The presence of noncombatants and civilians in these operations has forced our troops to use more initiative and imagination in executing their missions, and having nonlethal weapons available in potentially volatile situations will enhance their capability.

Nonlethal weapons are defined as weapons explicitly designed and primarily employed to incapacitate personnel and materiel, while minimizing

fatalities, permanent injury to personnel, and undesired collateral damage to property and the environment.

Some capability requirements were identified by warfighting commanders as the core for a joint concept for nonlethal weapons in both categories—counterpersonnel and countermateriel.

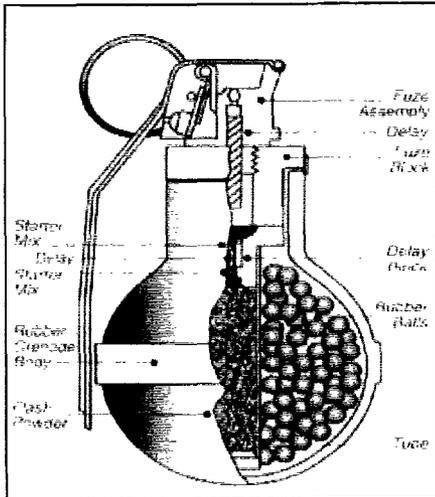
Counterpersonnel capabilities help reduce the risk of fatalities or serious casualties among noncombatants and friendly or enemy forces. Countermateriel capabilities render equipment and facilities unusable without completely destroying them.

Within these two categories, there are

six functional areas. Counterpersonnel capabilities include four functional areas: crowd control, incapacitation of personnel, area denial to personnel, and clearing facilities of personnel. The countermateriel category includes two functional areas: area denial to vehicles and disabling vehicles, vessels, and facilities.

The U.S. Army Infantry Center is the proponent for tactical applications, and the U.S. Army Military Police School is the proponent for law enforcement applications.

In the near future, when a unit is notified to deploy and execute a nontradi-



The sting ball/stun grenade can be used to break contact or enforce a buffer zone with a violent crowd.

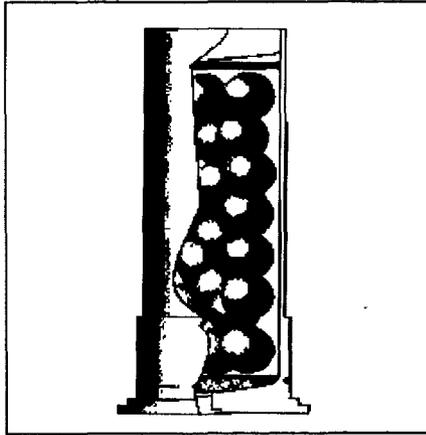
tional military operation, it will draw and use a nonlethal capability set (NLCS) to enhance its force protection and reduce noncombatant casualties. Following is a brief description of an NLCS and how the Army plans to use and train on it in the near future:

An NLCS will contain the weapon systems, munitions, and equipment required to satisfy most operational requirements for an enhanced capability to apply nonlethal force. It is designed to augment lethal forces and will be employed in a manner that will incapacitate personnel or materiel, while minimizing fatalities or permanent injury, and damage to property and the environment. The set was designed to support a battalion/task force. A 200-man company, reinforced with support personnel, was selected as a conceptual basis for employment of the components. The set can be divided into four distinct categories:

Individual Protective Equipment. These items include face and body shields (ballistic and riot control types), shin and knee guards, and other protective garments as they become available.

Weapons. These items include a shotgun, riot batons, individual oleoresin capsicum (OC) pepper spray or M36 CR dispensers, riot control agent dispensers, restraining devices, and a variety of nonlethal munitions.

Enhancement Devices. Such devices as bullhorns and voice amplifying devices (for protective masks) increase



The 40mm crowd dispersal round enables a soldier to stun an individual without penetrating the body.

command and control capabilities. They also include high intensity searchlights and devices that can be used for area denial or at local checkpoints.

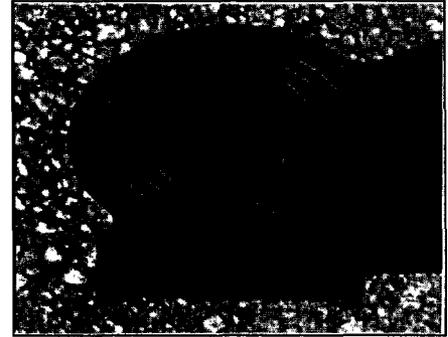
Training Devices/Allocations. Each capability set is designed to include training devices and training ammunition. The ammunition provided is the maximum necessary to conduct live-fire qualification or familiarization for each ammunition type. Since many of the operations that require nonlethal capabilities have proved to be of protracted duration, these sets are designed to provide training ammunition for three separate unit rotations before training stocks need to be resupplied or munition stocks need to be rotated.

Training Strategies

An NLCS is designed to be a pre-positioned stock of equipment that will be issued only in support of mission requirements. Due to this contingency method of allocation and the special characteristics of some nonlethal components, there will be special training requirements for soldiers:

User Training. User training will be handled through the development of a multi-media training support package and supplemented by a mobile training team (MTT) to conduct "train-the-trainer" certification. The support package will be drawn with the NLCS and will also be made available through one of the Army training websites to ensure the widest possible dissemination and rapid updating.

Train the Trainer. Train-the-trainer



The individual voice amplification system is critical while controlling a crowd while wearing a protective mask.

personnel can license or certify soldiers in the use of NLCS components and can certify unit trainers in small-unit tactics, techniques, and procedures. Personnel operating special support equipment can be licensed to do so on their automated DA Form 348 as a means of managing certification. Train-the-trainer training will be done through an approved course. Currently, the U.S. Marine Corps has the only Nonlethal Weapon Instructor Course, located at the U.S. Army Military Police School, at Fort Leonard Wood, Missouri. There are plans to make this a joint course in the future.

In addition to this course, the plan is to formalize an NLCS MTT to meet Army training requirements on an emergency basis. A unit that needs a nonlethal weapon MTT submits a requirements document to Department of the Army; if the request is approved, the tasking is forwarded to the Army's Training and Doctrine Command (TRADOC).

Institutional Training. Soldiers at all levels should be aware of NL programs in general as part of their professional development. There should be some general instruction on NLCS and their capabilities at various levels in the service schools, particularly in those branches (Infantry and Military Police) most likely to employ them. The MP School currently provides instruction on NL programs, and the Infantry School is looking at the requirements to provide it in the future.

The Army fielded five NLC sets in Fiscal Year 2000, and plans to have a total of 30 in the field by FY 2005. The distribution and training plans are cur-

rently being finalized at TRADOC and proponentry level.

Funded Acquisition Programs

Seven funded acquisition programs are under development:

Modular Crowd Control Munition (MCCM). MCCM is a nonlethal variant of the current Claymore mine. The lethal fragmentary payload is replaced with numerous rubber ball, blunt impact munitions for use in crowd control.

Portable Vehicle Immobilization System (PVIS). PVIS is a pre-replaced capture system designed to stop a 7,500-pound vehicle traveling at speeds up to 45 miles per hour without causing permanent injury to the occupants.

NL Crowd Dispersal Cartridge. This cartridge is intended to be fired from the M203 40mm grenade launcher for crowd control. It will give the warfighter a way to strike a targeted individual with a direct fire, low-hazard, and non-shrapnel-producing blunt trauma round from 15 to 30 meters.

Bounding NL Munitions (BNLM). BNLM is a nonlethal tactical area denial munition for site security and perimeter defense. The payloads being developed are expected to produce an audible alert signal to friendly forces within a minimum range of 200 meters.

Canister Launched Area Denial System. This system will provide friendly forces a rapidly dispensed nonlethal area denial capability. Its launcher will be used to deliver a variety of payloads, including BNLMs.

66mm Nonlethal Munitions. These munitions are intended to provide a short-range, indirect fire, crowd control/area denial NL capability that can be employed from the light vehicle obscurant smoke system. The two types of munitions are blunt trauma (450 .32 caliber rubber balls inside a rubber housing attached to a metal base) and distraction (flash bang) made of a polyurethane material that will produce an audible and visible distraction.

Foam Applications. Foam applications will enable units to delay access to building openings in urban operations and temporarily disable selected equip-

DOCTRINAL LITERATURE

FM 7-98, *Operations in Low-Intensity Conflict.*
FM 7-98-1, *Stability and Support Operations Training Support Package.*
FM 19-4, *Military Police Law and Order Operations.*
FM 19-15, *Civil Disturbances*
FM 100-23, *Peace Operations*
FM 90-40, *Multi-Service Procedures for the Tactical Employment of Nonlethal Weapons.*
TRADOC Pamphlet 525-5, *Force XXI Operations.*
TRADOC Pamphlet 525-66, *Military Operations Battlefield Visualization Concept.*
TRADOC Pamphlet 525-73 w/c 1, *Military Operations, Concept for Nonlethal Capabilities in Army Operations.*
Infantry Branch Concept on Nonlethal Tactical Applications.

ment, vehicles, and weapons.

These items will be included in the NLC sets, or used along with them once they are fielded.

Technology Investments Programs

Technology Investment Programs (TIPs) are short (one- to two-year) initiatives with products designed to meet identified needs relating to the core capabilities for nonlethal weapons. They are intended to stimulate governmental laboratories, industries, and academia to generate technological concepts and solutions that meet current or future NL mission needs and requirements. Seven of these programs are currently funded:

Pulsed Chemical Laser. The objective is intended to create a flash-bang effect on the target using varying amounts of energy. The effect is equivalent to delivering a massless, shrapnel-less blunt impact on the surface of the target.

Frangible Mortar Casing. The objective is to develop a nonlethal mortar round based on the existing M821 120mm high-explosive round. The flight performance of this round should match as closely as possible the rounds in the inventory in the areas of aerodynamics, ballistics, firing tables, and propellant loads.

Nonlethal 81mm Mortar. The objective is to develop and demonstrate a nonlethal mortar round capable of delivering payloads to a long range. The desired effect is to cause disorientation

and distraction among the crowd in a targeted area.

Microcapsules. The objective is to determine the effectiveness of delivering nonlethal encapsulated chemicals. It will offer significantly improved ways of delivering chemical agents similar to the ones already being used, but which are now only crudely delivered.

Airborne Tactical Laser. The objective is to conduct a feasibility study to determine the effectiveness of an airborne tactical laser to conduct nonlethal engagements against materiel targets.

Overhead Chemical Agent Dispersal System. The objective is to demonstrate the ability to disperse nonlethal chemicals rapidly over large areas. The system provides a flash-bang effect when the chemical agents are rapidly dispersed. It can be used for crowd control or to provide a remotely generated protective barrier.

NLW Guided Projectile. The objective is to conduct a feasibility study to determine possible usage, including payload tradeoff analysis and effectiveness studies. In addition, this effort will explore the feasibility of applying guided projectile technologies to the long-range delivery and deployment of nonlethal weapons.

At the conclusion of each TIP period, a decision to terminate or keep the program will be made by the proponent agency for nonlethal weapon development.

Nontraditional military operations will continue to be part of the Army's operations. The presence of non-combatants and civilians in these operations makes it very difficult to use strictly lethal weapons. The need for nonlethal weapons has become more demanding, and they will prove to be an effective force multiplier.

Reviewing the accompanying list of doctrinal literature should help unit leaders understand these new weapons.

Captain Alfred E. Jackson, when he prepared this article, was assigned to the Small Arms Division, Directorate of Combat Developments, U.S. Army Infantry School, at Fort Benning.