

**ARMY, MARINE CORPS, NAVY**

# **NLW**

## **MULTISERVICE PROCEDURES FOR THE TACTICAL EMPLOYMENT OF NONLETHAL WEAPONS**

**FM 90-40  
MCRP 3-15.8  
NWP 3-07.31  
USCG PUB 3-07.31**

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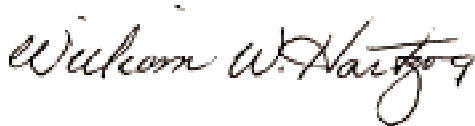
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**MULTISERVICE TACTICS, TECHNIQUES, AND PROCEDURES**

## FOREWORD

This publication has been prepared under our direction for use by our respective commands and other commands as appropriate.



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# PREFACE

## 1. Scope

This publication describes multiservice tactics, techniques, and procedures (MTTP) for consideration and use during the tactical employment of nonlethal weapons (NLW) in support of warfighting personnel conducting training and tactical operations. This publication—

- a. Provides an overview of NLW.
- b. Provides NLW system description/ interoperability.
- c. Describes the capabilities of NLW.
- d. Discusses training with the NLW capability set.
- e. Discusses the tactical employment of NLW.
- f. Discusses lessons learned from previous NLW use.

## 2. Purpose

a. This publication provides a single-source, consolidated reference on the tactical employment of NLW and supporting systems on the nonlinear battlefield of today. Additionally, it will fill the void that currently exists about MTTP for the tactical employment of NLW.

b. This publication is not intended to restrict the authority of the commander from organizing the force and executing the mission in a manner deemed appropriate.

## 3. Application

a. This publication provides commanders and their staffs unclassified guidance for NLW employment and planning. Commanders and staffs can use this publication to aid in the tactical

employment of NLW during exercises and contingencies.

b. The United States (US) Army, Marine Corps, Navy, and Coast Guard approved this multiservice publication.

## 4. Implementation Plan

Participating service command offices of primary responsibility (OPRs) will review this publication, validate the information, and reference and incorporate it in service manuals, regulations, and curricula as follows:

**Army.** The Army will incorporate the procedures in this publication in US Army training and doctrinal publications as directed by the commander, US Army Training and Doctrine Command (TRADOC). Distribution is in accordance with DA Form 12-11E.

**Marine Corps.** The Marine Corps will incorporate the procedures in this publication in US Marine Corps training and doctrinal publications as directed by the commanding general, US Marine Corps Combat Development Command (MCCDC). Distribution is in accordance with MCPDS.

**Navy.** The Navy will incorporate these procedures in US Navy training and doctrinal publications as directed by the commander, Navy Warfare Development Command (NWDC). Distribution is in accordance with MILSTRIP Desk Guide and NAVSOP Publication 409.

**Coast Guard.** The Coast Guard will incorporate the procedures in this publication in US Coast Guard doctrinal and training publications as directed by the assistant commandant for operations, Director of Operations Policy, US Coast Guard. Distribution of this publication is in accordance with Coast Guard standing operating procedures.

## 5. User Information

a. The TRADOC-MCCDC-NWDC-AFDC Air Land Sea Application (ALSA) Center developed this publication with the joint participation of the approving service commands. ALSA will review and update this publication as necessary.

b. We encourage recommended changes for improving this publication. Key your comments to the specific page and paragraph and provide a rationale for each recommendation. Send comments and recommendation directly to—

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**NLW**  
**Multiservice Procedures for the**  
**Tactical Employment of Nonlethal Weapons**

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# **EXECUTIVE SUMMARY**

## **NLW**

### **Multiservice Procedures for the Tactical Employment of Nonlethal Weapons**

No longer can force be viewed as either on or off (lethal force or no force) because whole spectrums of threats are present today. NLWs' options allow force to be viewed as a continuum. Much like a rheostat switch where power can be dialed up or down as desired, NLW provide tools to allow a commander to employ sufficient force to accomplish an objective without requiring the destruction of an enemy or the habitat. The intent of employing NLW is not to add another step in the progression of escalation with an adversary but to add another tool to use anywhere along that continuum. This publication provides initial guidance for the employment of NLW in a tactical environment.

#### **Overview of NLW**

Chapter I describes the concept of NLW and provides the background on development and employment of NLW. The chapter goes on to explain the relationship of NLW to deadly force capabilities. The final portion of the chapter reviews policy per Office of the Secretary of Defense instructions on employment of NLW.

#### **Purpose, System Description, and Organization**

Chapter II describes the purpose of NLW and gives a brief description of the currently available commercial or government off-the-shelf (COTS/GOTS) equipment and munitions. The chapter goes on to explain the currently anticipated distribution of nonlethal equipment for the United States Army, Marine Corps, and Air Force units. The final portion of the chapter addresses personnel requirements, organizational structure requirements, and mission requirements/tactical structure.

#### **Capabilities of NLW**

Chapter III describes capabilities of NLW and missions across the range of military operations. Additionally, a detailed discussion of munitions and nonmunitions capabilities is presented.

#### **Training With the NLW Capability Set**

Chapter IV describes training requirements, methods, locations, and a program of instruction currently available for NLW options.



## **Employment of NLW Capability**

Chapter V describes employment prerequisites, mission-planning factors, and personnel requirements needed to employ NLW options. The chapter also discusses employing NLW as augmentation to lethal weapons and provides logistic and safety considerations.

## **Lessons Learned**

Chapter VI focuses on lessons learned from recent operations. The chapter discusses how nonlethal technology has changed the way we look at our adversary, the force continuum, mission accomplishment, and media interaction.

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# OVERVIEW OF NONLETHAL WEAPONS

## 1. Background

a. Today in an operational environment, United States (US) forces regularly perform missions that were almost inconceivable a few decades ago. In this new environment, firepower or the threat of its use may no longer be the default solution to all crises or problems. Senior leaders face a new level of public sensitivity and scrutiny concerning the proper role of the military as an instrument of national power. Field commanders must understand these sensitivities and attempt to achieve measured military force. Junior leaders must apply the resulting decisions wisely, often in situations filled with uncertainty and danger.

b. Throughout history, changes in culture and technology influenced the character of military force and the manner in which it is employed. These changes are an attempt to maximize the utility of military force in a new operational regime. Promising new nonlethal weapons (NLW) proposals represent advances in technology. In the complex and changing political and social domain of the modern world, nonlethal capabilities may offer the opportunity to increase the utility of the military as an instrument of national power.

## 2. Definition

NLW are defined as weapons that are explicitly designed and primarily employed, at a minimum, to discourage or at most, incapacitate personnel or materiel while minimizing fatalities and undesired damage to property and the environment. NLW achieve these benefits by employing means other than catastrophic physical

destruction to incapacitate their targets. The term “nonlethal” should be understood as a function of intent; zero mortality or permanent damage are goals not guarantees of these weapons. NLW add flexibility to combat operations and enhance force protection by providing an environment in which friendly troops can engage threatening targets with limited risk of noncombatant casualties and collateral damage.

## 3. Concept Description

Nonlethal capabilities may provide armed forces with the necessary means to control the flow of refugees, enforce mandates, and protect themselves in consonance with the specified rules of engagement (ROE) for a specific operation. The food relief effort in Somalia is a superb example where use of lethal weapons, with the exception of force protection, was inconsistent with the mission.

## 4. Background on Development and Employment

a. Military forces have long used nonlethal force to influence behavior of people and nations, defeat adversaries with minimum use of lethal capabilities, and weaken adversaries to defeat them with conventional arms. Examples of classic nonlethal means include a show of force; physical obstacles; noise to create or enhance psychological effects; smoke and obscurants to mask operations or defeat homing and guidance mechanisms; and light used to disorient combatants. These classic nonlethal means will remain relevant in future operations and are a part of an evolutionary process of weapons development.

b. Increased interaction between US forces and civilian populations has become a feature of the contemporary operational landscape that is likely to remain the case for the foreseeable future. Two factors account for this forecast:

(1) Worldwide patterns of population growth and migration have resulted in an expansion of urban culture within the established industrialized nations and also in many preindustrial and emerging Third World societies. The prevalence of urbanization in many crisis-prone regions of the world creates the potential for large, vulnerable groups of noncombatants to be caught up in volatile confrontations involving the deployment of military forces.

(2) US forces increasingly operate in the challenging environment known as “military operations other than war” (MOOTW); a category that includes such missions as humanitarian assistance, disaster relief, noncombatant evacuations, and the various types of peace operations. These operations commonly involve close and continual interaction between US forces and noncombatant civilians. Some MOOTW scenarios include the presence of paramilitary forces, armed factions, or rogue elements that present a constant but uncertain threat to our forces. In these situations, the mission of military forces includes preventive tasks. In other words, US forces enhance mission accomplishment by preventing individuals or factions from carrying out specified undesirable activities, such as rioting, looting, attacking, harassing, or threatening. Sometimes, the adversary blends in with the local population of innocent citizens. Other times, sectors of the local population may rise against our forces and become active participants in acts of violence. Factional alignments, the level of violence, and the threat to mission accomplishment may change frequently and with little or no warning. Under such circumstances, the identity of our adversaries is uncertain and the use of deadly force for purposes other

than self-defense may be constrained by ROE or the judgment of the on-scene commander.

## 5. Relationship of NLW to Deadly Force

a. The commitment of military power to resolve crises has traditionally involved the use of deadly force or the implicit or explicit *threat* of the use of deadly force. Military units are trained, organized, and equipped for this purpose. A force armed only with traditional military weapons normally has two options for enforcing compliance: *threats of deadly force* and *application of deadly force*. This limitation creates a critical vulnerability that belligerents may quickly discern and use to their advantage.

b. Nonlethal capabilities provide a wider range of options that augment but *do not replace* traditional means of deadly force. The option to resort to deadly force must always remain available when the commander believes it is appropriate to the mission. The Department of Defense Directive (DODD) 3000.3, “*Policy for Nonlethal Weapons*,” 9 July 1996, states that “*the availability of NLW will not limit a Commander’s inherent authority and obligation to use all necessary means available and to take all appropriate action in self-defense.*” The existence of nonlethal capabilities does not represent the potential for “nonlethal war,” and unrealistic expectations to that effect must be vigorously avoided. Noncombatant casualties, to include serious injuries and fatalities, will continue to be a regrettable but often unavoidable outcome when military power is employed, regardless of NLW availability. This principle, “augment deadly force,” is fundamental to the planning and execution of any operation where the employment of nonlethal capabilities is contemplated.

c. ROE must be clearly articulated and understood to establish the role of NLW as an *additional* means of employing force for the particular purpose of limiting the

probability of death or serious injury to noncombatants or belligerents. Use of deadly force must always remain an inherent right of individuals in instances when they, their fellow servicemen, or personnel in their charge are threatened with death or serious bodily harm. NLW add flexibility to combat operations and enhance force protection by providing an environment where US forces can permissively engage threatening targets with limited risk of noncombatant casualties and collateral damage.

d. Commanders and public affairs officers must prepare personnel to address media questions and concerns regarding the role of NLW. Operational experience indicates that novel capabilities give rise to significant media interest. Personnel participating in interviews or briefings must be prepared to address the role of NLW. They must make it clear that the presence of NLW in no way indicates abandoning the option to employ deadly force in appropriate circumstances.

## **6. Advantages of Employing NLW**

NLW provide commanders the flexibility to influence the situation favorably with reduced risk of noncombatant fatalities and collateral damage. Some advantages follow:

a. They can be more humane and consistent with the political and social implications implicit in humanitarian and peacekeeping missions.

b. The force that properly employs nonlethal options gains advantages over those who rely on lethal options alone, because the degree of provocation required to employ these options is substantially less. This advantage results in a more proactive posture and quicker response as well as a diminished likelihood of having a situation escalate to a point where deadly force is required to resolve the conflict.

c. NLW options are less likely to provoke others; however, the use of NLW may, in fact, provoke a negative response.

d. Demonstrated restraint greatly diminishes feelings of anger and remorse when deadly force is required after nonlethal options fail.

e. NLW can facilitate postincident stabilization by reducing populace alienation and collateral damage.

## **7. Policy Per Office of the Secretary of Defense Instructions on Employment of NLW**

a. By Department of Defense (DOD) policy, all developmental weapon systems must be submitted for legal review and must receive favorable findings before they can be incorporated into the force. This review includes examination for consistency with applicable international and domestic laws, including the laws of war, various arms control treaties, and protocols. US forces can be assured that any NLW they are given have passed this critical test. Any legal restrictions on employment will also be incorporated into applicable ROE.

b. Some capabilities, although designed to minimize fatalities and serious injuries, may have effects that could actually discourage their use. Those based on the controlled use of pain, for example, could prove distasteful to the troops employing them, particularly when the target area includes children, the elderly, the handicapped, or others subject to special protection within the context of our cultural heritage. This concept of social acceptability also extends to the domestic and international public. Just as the basic decision to employ military force in defense of national interests is usually a matter of intense public concern, the manner in which that force is exercised is also subjected to the same scrutiny. Speculation

as to the employment (or nonemployment) of NLW creates a geometrically expanding matrix of options. As with all weapons the US military uses, the effects of NLW must be generally acceptable to our society. In some cases, the same considerations will extend to the larger international community. For example, some NLW effects could prove offensive to certain allies for religious or cultural reasons.

c. Neither the presence nor the potential effect of NLW shall constitute an obligation for their employment or a higher standard for employment of force than provided for by applicable law. In all cases, the US retains the option for immediate use of lethal weapons, when the on-scene commander deems it appropriate, consistent with international law.

# PURPOSE, SYSTEM DESCRIPTION, AND ORGANIZATION

## 1. Purpose

The purpose of NLW is to enhance the abilities of military commanders to conduct missions across the range of military operations. Over the past several years, military operations have gravitated towards the lower end of this spectrum and have involved US forces in missions, such as peacekeeping and peace enforcement, where the ROE are inherently restrictive. NLW are designed to address the special requirements of this low-intensity environment. They provide tools that enable the individual, team, or unit to anticipate and/or respond to provocation with more appropriate means than through the use of deadly force. Essentially, NLW provide US forces with a near-term capability for effectively controlling the nontraditional battlefield, within the constraints levied by ROE, by mitigating casualties and minimizing collateral damage.

## 2. System Description

The services are procuring versatile packages of NLW comprised of commercial off-the-shelf (COTS) and government off-the-shelf (GOTS) equipment and munitions. Advanced developmental technologies are also being explored for future procurements. In addition to addressing contingency requirements, the services' NLW capability sets address training requirements by providing limited sustainment training ammunition and appropriate sustainment training equipment.

The generic NLW capability set components (Appendix A) can be divided into four distinct categories: personnel protectors; personnel effectors; mission enhancers; and training devices. Personnel effectors are the NLW in the set.

- **Personnel Protectors.** Personnel protectors include items such as face shields and riot shields that protect the individual from blunt trauma injuries inflicted by thrown objects, clubs, etc.

- **Personnel Effectors.** Personnel effectors include items such as riot batons, stingball grenades, pepper sprays, and kinetic rounds, designed to, at a minimum, discourage, or at most, incapacitate individuals or groups.

- **Mission Enhancers.** Mission enhancers include items such as bullhorns, combat optics, spotlights, and caltrops. These items are designed to facilitate target identification and crowd control. Additionally, these items provide a limited ability to affect vehicular movement.

- **Training Devices.** Training devices include items such as training suits, training batons, and inert pepper sprays. They are designed to facilitate realistic hands-on scenario training in preparation for operations.

- a. **System Relationships and Inter/Intraoperability.** The generic NLW capability set is designed to provide an infantry battalion-sized element with limited, tactically deployable NLW. Fielding of this capability set enhances the operation of systems and equipment already fielded and planned within the joint community. The generic NLW capability set components are compatible with military equipment that is already fielded or planned for future use. Capability set munitions are either hand-thrown or can be fired from 12-gauge (ga) shotguns or 40 millimeter (mm) grenade

launchers. Other items in the generic NLW capability set comprise personal protective gear and support equipment, such as gas launch adapters for the 12-ga shotgun. In all instances, the components of the capability set are technically unsophisticated and supportable with current military logistic capabilities.

b. **Equipment Replaced.** No equipment is replaced by the generic NLW capability set. The operational intent of the capability set is to augment a battalion-sized unit with the required NLW munitions and equipment to enhance its force projection capability. The NLW capability set is additional equipment that will require incorporation into lift and load planning.

c. **Capability Increase.** With the exception of limited capability within military police units, the services do not possess an organic NLW capability. When fielded, the NLW capability set will provide US forces with the appropriate weapons, munitions, and equipment to employ a range of nonlethal options. NLW capability sets will augment existing lethal capabilities. The roles, missions, and quantities of existing lethal weapons systems are not replaced by nonlethal capabilities.

### 3. Organization

Organizational structure is not anticipated to change as a result of NLW capability sets being added to the inventory.

a. **System Location/Distribution.** The generic capability set is intended to provide an interim NLW capability to the US forces for training and contingency operations. The locations and distribution procedures for NLW capability sets have been planned for US Marine Corps (USMC), US Army (USA), and US Air Force (USAF) procurements but not for US Navy (USN) systems. The USMC will distribute 14 NLW capability sets to the ground combat elements (GCE) of the three Marine expeditionary forces (MEFs). The USA plans to field company NLW capability sets to the active divisions and retain a limited number of sets as contingency stock. The

USAF is modernizing sets for security force units.

b. **NLW Capability Set Composition.** The USMC NLW capability set is comprised of 33 components (Appendix A). Thirteen items can be classified as ammunition or items that have special storage requirements and will be maintained at ammunition storage facilities. Five items are classified as either serialized weapons, SL-3 components to weapons, or items inherently dangerous to others and will be maintained in organizational armories. ***(Note: SL-3 is a USMC term to describe equipment that is secondary to the main equipment, such as cleaning equipment, tripods, etc. The equivalent term used by the US Army is basic-issue items list [BIIL]).*** Sixteen items are equipment-related items and will be maintained in unit supply warehouses. In all instances, these items will remain in appropriate storage facilities unless issued for training or contingency operations. The same procedures remain true for units deployed aboard amphibious ready group shipping. Ammunition storage will be divided between designated landing force operational reserve material (LFORM) and training ammunition storage compartments. Specific unit table of equipment (T/E) to be affected will be determined by MEF commanders.

c. **Personnel Requirements.** To date no change or increase in military occupational specialty (MOS) codes has been determined in order to field, operate, and maintain the NLW capability set. However, MEF special operations training groups (SOTGs) will possibly require up to three additional individuals each to conduct appropriate training for Marine expeditionary unit (MEU) special operations capable (SOC) units rotating through the unit deployment cycle. If these additions occur, consideration should be given to the development of another secondary MOS to accommodate individuals who specialize in the NLW area. Additionally because units other than MEUs are anticipated to train



with and potentially employ NLW, individuals within other MEF organizations may also be identified as trainers. This action may require an increase of manpower within other structures, or it may lead to the appointing of secondary NLW MOSs. Secondary NLW MOS instructor trainer is recommended in the program of instruction (POI) for the NLW instructor course found in Appendix C of this document. The USA will not create any new MOSs but may assign it as an additional skill identifier (ASI). The USAF will not create any new Air Force specialty codes (AFSCs) or special identifiers.

d. Mission Requirements/Tactical Structure.

(1) The mission requirements and tactical structure pertinent to the employment of the NLW capability set components will vary depending upon the type of contingency and subsequent task organization of the employing unit. Mission requirements, derived from commander's guidance, should be satisfied through the

appropriate combination of lethal and nonlethal capabilities.

(2) NLW provide US forces with a means of shaping their area of operation beyond traditional verbal threats, "shows of force," or risky riot control formations, and short of employing deadly force. However, it is imperative that US forces retain the means and are ready to employ lethal force in the event that nonlethal force fails to achieve desired outcomes. For example, NLW employment may provoke a lethal response from the adversary. Without the imminent threat of lethal force, nonlethal munitions will prove to be less effective and possibly even counterproductive. More importantly, denying US forces a lethal capability would place them at unacceptable risk. If nonlethal force is employed without the threat of lethal force, then the belligerent may opt to exploit a perceived vulnerability. The use of NLW then becomes counterproductive, because it serves only to aggravate the threat and causes the situation to deteriorate.

# CAPABILITIES OF NONLETHAL WEAPONS

## 1. Applicability Across the Range of Military Operations

The range of military operations has various levels of combat “intensity,” and NLW provide one more option to deal with the varying intensity. MOOTW may be found across the range of military operations and often include situations where noncombatants are mingled with the adversaries or involved in acts of violence, such as rioting or looting. In such circumstances, NLW provide commanders the flexibility to influence the situation favorably with reduced risk of noncombatant fatalities and collateral damage. NLW also provide a means by which to ascertain the intent of individuals/belligerents.

a. The need to reduce the risks of serious injury to personnel is not limited to crowd control scenarios. In military operations on urbanized terrain (MOUT), some of the local civilian populace may remain in an urban area in the midst of battle. The traditional solution to such challenges has been the implementation of restrictive ROE. Nonlethal capabilities may provide commanders the flexibility to adapt a fluid approach to MOUT, which allows their subordinates the freedom of action to employ appropriate levels of measured military force to accomplish their mission.

b. Another example of NLW applications in MOOTW is in peace enforcement. In these operations, NLW are used in an area denial role to separate belligerents without resorting to deadly force. They are also used to support humanitarian relief organizations in

protecting food and medical distribution sites.

c. Current NLW provide a limited capability to address the range of military operations. Ultimately, NLW will evolve to encompass other, more advanced technologies that will improve their operational effectiveness and expand their applications. For example, directed energy and acoustic NLW that are currently under development may provide the means to achieve this ultimate capability.

## 2. Core Capabilities

Core capabilities are those fundamental competencies that enable us to achieve desired operational outcomes. In the case of NLW, this equates to providing a flexible means of response in order to protect friendly forces and/or influence the actions of potential adversaries and non-combatants. These goals can be achieved without resorting to lethal force and in a manner that will minimize collateral damage. The core capabilities associated with nonlethal effects fall into two major categories: counterpersonnel and countermateriel.

### a. Counterpersonnel Capabilities.

(1) Nonlethal counterpersonnel capabilities enable the application of military force with reduced risk of fatalities or serious casualties among noncombatants or even, in some instances, among enemy forces. There are several specific nonlethal counterpersonnel capabilities to be explored. These include the means to influence the behavior and activities of a *potentially* hostile crowd, as well as the

capability to bring a mob engaged in a riot under control. While there are many similarities in these two scenarios, each involves unique challenges, which may require radically different solutions.

(2) US forces require the capability to incapacitate personnel. For the purposes of this document, “incapacitation” is achieved when weapons effects result in physical inability (real or perceived) or mental disinclination to act in a hostile or threatening manner. In keeping with the guiding principles for NLW, this incapacitation should be readily reversible, preferably, self-reversing through the passage of time. While the focus, at least initially, will be on capabilities that affect *groups* of people, NLW will also provide capabilities to incapacitate individuals without affecting those nearby.

(3) US forces require a nonlethal capability to deny personnel access to an area. This capability can include the use of physical barriers or systems that produce physical or mental discomfort to those who enter the denied area. Nonexplosive nonlethal area denial technologies would likely be exempt from the restrictions applied to conventional land mines. Thus, they can provide new possibilities for barrier planning in any type of military operation.

(4) US forces require a nonlethal capability to seize personnel. This may include some combination of technologies inherent in other core capabilities. Incapacitation methods or the use of entangling devices, such as those designed for area denial, may aid in seizing personnel. This capability is intended to augment lethal means used to capture specified individuals, such as enemy combatants or persons who are inciting a mob or crowd to violence.

(5) US forces require a nonlethal capability to clear facilities and structures of personnel. This application will

facilitate MOUT by reducing the risks of noncombatant casualties and collateral damage while simultaneously minimizing the advantages to an enemy who is defending in a built-up area.

b. Countermateriel Capabilities.

(1) Nonlethal countermateriel capabilities would enhance operations by rendering equipment and facilities unusable without complete destruction. A nonlethal countermateriel capability will enable the employment of military force to defuse potentially volatile situations under circumstances in where more destructive conventional military means might prove counterproductive. For example, preemptive strikes against troublesome, aggressive nations may be politically unacceptable when only conventional weapons, with their attendant high risk of personnel casualties, are involved. With nonlethal countermateriel capabilities, however, an enemy’s ability to threaten its neighbors could be curtailed with far less political risk by attacking only *weapons* of war and their supporting infrastructure.

(2) The joint NLW approach will focus on three specific countermateriel capabilities. US Forces require a nonlethal capability to deny vehicles to air, land, and sea areas. This requirement applies to wheeled, tracked, and surface effects vehicles, as well as aircraft on the ground. Physical barriers or systems that artificially reduce the trafficability of terrain may be included in this requirement.

(3) US forces require the ability to disable ships and other maritime vessels or deny their entry into targeted areas. US forces also require an enhanced ability to disarm personnel or disable maritime vessels to facilitate boarding.

(4) US forces require a nonlethal capability to disable or neutralize equipment and facilities. This capability encompasses a wide range of subcategories

limited only by the variety of the types of equipment to be targeted. Some examples are systems that alter combustion properties of fuels or the viscosity of lubricants and systems that cause the embrittlement or decay of materials. In addition, substances that attack rubber tires, gaskets, or hoses and those that act as adhesives or fusing metal parts are also required.

### **3. Limitations**

The limitations of NLW are conceptual, physical, and tactical. The conceptual limitation is that political leadership and media personnel may misunderstand the appropriate applications of NLW across the range of military operations. The incorrect perception that NLW will allow wars and MOOTW to be prosecuted without casualties may lead to conflicting

expectations between political and military leaders. These conflicts could result in US forces being vulnerable to misplaced or inconsistent ROE. All leaders, political and military, involved in planning and executing military missions must understand that there is no such thing as “nonlethal operations.”

The physical limitations of current NLW are their short range, brief effects, and the relative ease by which experienced combatants or belligerents can counter their effects. The current NLW capability set can also be lethal if improperly applied. Tactical limitations include the loss of momentum or tempo that may occur during the transition from nonlethal to lethal force. These types of limitations must be overcome by continual training and operational experience, which will also instill confidence in using NLW systems.

# TRAINING WITH THE NONLETHAL WEAPONS CAPABILITY SET

## 1. Fundamental Concepts and Training Requirements

The successful accomplishment of any operation in which nonlethal measures are employed requires extensive preparation, of which individual, unit, medical support personnel, and team training are vital parts. Training should be designed to give individuals an understanding of the entire subject area and enable them to function efficiently, individually, and as members of a unit. This training must be intensive and realistic. Training with the NLW capability set is critical if these weapons are to be employed with confidence. The training flow should be—train instructors—train staff—train unit—exercise.

Initial unit training should not be conducted without qualified instructors. All nontype classified and COTS nonlethal munitions cannot be fired without Army Materiel Command (AMC), Crane Naval Weapons, or Air Force Munitions Center approving the training course. Unit sustainment training should be conducted at a minimum annually.

## 2. Training of Instructors

Verbal communication skills, open-hand control techniques, riot control agents, effects of impact weapons, and civil disturbance tactics, techniques, and procedures (TTP) are areas trained to standard at the Military Police School, Fort McClellan, Alabama. The Marine Corps and the Army developed a Program of Instruction (POI) for a Nonlethal Individual Weapons Instructor Course (NIWIC). This is the only formal DOD nonlethal training course. The training requirements outlined

in the NIWIC represent the minimum training standards to be considered for inclusion in the development of NLW instructors. Additionally, the US Army Military Police School is developing a training support package that includes TTP for small units, company level and below, in the use of NLW in riot/mob control.

a. The NIWIC is offered as a 14-day resident course at Fort McClellan and as a nonresident course instructed by a mobile training team (MTT). The NIWIC is a “train the trainer” program designed to provide commanders nonlethal instructors within their command. The commander can then tailor the nonlethal instruction to fit mission needs. The establishment of the service-level NIWIC serves as an assurance measure giving the commander a quantifiable method of certifying nonlethal instructors. Upon completing the course, graduates are qualified instructors with certifications in communication skills, oleoresin capsicum (OC) spray, impact weapons, and internationally recognized open-hand control techniques. The US Army will award an additional skill identifier upon successful completion of this course.

b. NIWIC Program of Instruction. Appendix C is an extract from a comprehensive POI developed from lessons learned during recent deployments. Each annex within Appendix C has a lesson plan complete with handouts and training aids. The intent of this POI is to produce competent instructors, who will return to their unit with all the training materials and training aids needed to meet different NLW training requirements.

### 3. Nonlethal Training Topics for Deploying Units

The following 11 topics have been identified as essential training for units deploying with nonlethal capabilities and are part of the NIWIC curriculum:

a. Force Continuum. The subcourse is an introduction to the federal force continuum model as outlined by Marine Corps Order (MCO) 5500.6F, *Arming of Law Enforcement and Security Personnel and the Use of Deadly Force* (or other service orders). Levels of resistance, identifying the proper levels of force, and how nonlethal technologies affect force continuum are the minimum topics that should be covered.

b. Crowd Dynamics/Crowd Control. The subcourse, an introduction to the differences between crowds, mobs, and riots, teaches the student basic crowd control techniques that will be easily applied to various situations. The student should be familiarized with tactics and techniques (as found in Field Manual [FM] 19-15, Fleet Marine Force Manual [FMFM]1-3, FMFM 6, and Training Circular [TC] 90-1) but will also consider nontraditional and small unit application.

c. Communication Skills. The subcourse is an introduction to the stages of conflict management, verbal aggression, nonverbal communication, physical aggression, physiological diversions, and proper mental conditioning. The first NLW skill an individual must have is the ability to communicate. General A. M. Gray, former Commandant of the Marine Corps, said, "*A warrior's most formidable weapon is his mind.*" The results of an individual's mental processes are evident through actions and words, and the words and communication skills in dealing with people are truly the first line of nonlethal options.

d. Oleoresin Capsicum Aerosol Training. The subcourse is an introduction to the uses of OC/pepper spray and other riot control agents. The student should have

an appreciation for decontamination requirements, storage, and shelf life of OC. Legal and tactical considerations will also be taught. All OC training should be certified by existing training programs that include live agent training.

e. Open-Hand Control. The subcourse is an introduction to pressure-point control techniques, unarmed self-defense measures, weapon retention techniques, and other submission/restraint/search techniques. Handcuffing/flexcuffing should be covered for contact team members.

f. Impact Weapons. In this subcourse, students are taught how to use the rigid straight baton, collapsible straight batons, side handle batons, or riot control batons.

g. Introduction to Military Working Dogs. The subcourse is an introduction to the role of military working dogs and the potential support available to forces requiring nonlethal force options (FM 19-10, AFM 31-202).

h. ROE, Law of War, Constitutional Seizure. The subcourse is an introduction to the ROE, law of war, constitutional seizure, and their relationships (DODD 5100.77, FM 27-10, NWP 1-14M/MCWP 5-2.1/COMDTPUB P5800.7, and DA Pamphlet 27-1).

i. Nonlethal Munitions and Employment. The subcourse is an introduction to the capabilities and employment of available nonlethal weapons. When firing nonlethal munitions, transition to lethal munitions for familiarization will follow. Students participate in live-fire exercises as outlined in Tables IV-1 through IV-7.

j. Barriers/Physical Security Measures. The subcourse is an introduction to barriers and physical security measures available to tactical forces. These measures complement the use of nonlethal force or mitigate the need for deadly force. An understanding of proper emplacement of caltrop and foam are recommended.

**Table IV-1. 40mm Foam Baton Round**

<b>FAMILIARIZATION TABLE</b>		
<b>ROUNDS #</b>	<b>TARGET</b>	<b>GO/NO GO</b>
2	E-Silhouette 20m	
2	E-Silhouette 15m	
1	E-Silhouette 10m	
5	5.56mm Transition @ 10m	

**Table IV-2. 40mm Wood Baton Round**

<b>FAMILIARIZATION TABLE</b>		
<b>ROUNDS #</b>	<b>TARGET</b>	<b>GO/NO GO</b>
2	E-Silhouette 20m	
2	E-Silhouette 15m	
1	E-Silhouette 10m	
5	5.56mm Transition @ 10m	

**Table IV-3. 40mm Stinger Round (60 Caliber)**

<b>FAMILIARIZATION TABLE</b>		
<b>ROUNDS #</b>	<b>TARGET</b>	<b>GO/NO GO</b>
2	E-Silhouette 20m	
2	E-Silhouette 15m	
1	E-Silhouette 10m	
5	5.56mm Transition @ 10m	

**Table IV-4. 12-ga Bean Bag Round**

<b>FAMILIARIZATION TABLE</b>		
<b>ROUNDS #</b>	<b>TARGET</b>	<b>GO/NO GO</b>
2	E-Silhouette 20m	
2	E-Silhouette 15m	
1	E-Silhouette 10m	
5	12-ga 00 Buck/7 ½ Shot Transition @ 10m	

**Table IV-5. 12-ga Wood Baton Round**

FAMILIARIZATION TABLE		
ROUNDS #	TARGET	GO/NO GO
2	E-Silhouette 20m	
2	E-Silhouette 15m	
1	E-Silhouette 10m	
5	12-ga 7 ½ shot/00 Buck Transition @ 10m	

**Table IV-6. 12-ga Rubber Pellet Round**

FAMILIARIZATION TABLE		
ROUNDS #	TARGET	GO/NO GO
2	E-Silhouette 20m	
2	E-Silhouette 15m	
1	E-Silhouette 10m	
5	12-ga 7 ½ shot/00 Buck Transition @ 10m	

**Table IV-7. Stinger Grenade**

FAMILIARIZATION TABLE		
ROUNDS #	TARGET	GO/NO GO
2	Hand Thrown E-Silhouette 20/40m	
1	Shotgun Launched E-Silhouette 40m	
5	12-ga 7 ½ Shot/00 Buck Transition @ 40m	

k. Tactics. The subcourse is an introduction to tactics as outlined in Chapter V, paragraph 5. MOUT and tactics training requires close leader involvement. US Army Training and Doctrine Command is developing training support packages that will include company level and below TTP.

See Appendix D for sample 9-day unit-training schedule covering these 11 topics.

## 5. Unit Training

a. The NIWIC is primarily designed to produce instructors who will train individuals in the use and employment of

NLW. Collective unit tactical training is the unit's responsibility; however, a 9-day NLW example schedule based on NIWIC training is provided in Appendix D. Units should conduct collective training before deploying with NLW. Unit standing operating procedures (SOPs) and tactics may need adjusting to allow for the employment of this new equipment. All unit collective training should include nonlethal options and decision making.

b. Simulation Training. The goal of simulation training should be to reinforce current training courses. The Marine Corps Commandant's Warfighting Laboratory at



Quantico, Virginia, has a computer training simulation system designed to train small unit leaders in the application of nonlethal capabilities. Given a situation, mission statement, and ROE, the student will equip and place fire teams to conduct checkpoint operations and react to stimulus/events in a three-dimensional (3-D) representation of a MOUT site. Currently, there is a similar simulation system at the Human Systems Center at Brooks Air Force Base, Texas, that can be used for tactics development of directed energy NLW. Also, the Air Force's Force Protection Battle Laboratory at Lackland Air Force Base, Texas, is establishing a similar computer simulation facility. Finally, the DOD is conducting an ongoing effort to develop other computer simulation systems.

## 6. Leader Training

Commanders, unit leaders, and staff members also require NLW training before deploying. FM 19-15 covers all aspects of civil disturbance and is relevant in providing guidance for the commander and staff.

a. An understanding of the topics covered in the NIWIC is recommended. However they should also possess an in-depth understanding of the ROE that must be implemented and enforced as well as the politics, culture, and demographics of the area to which they are deploying. Because of the international attention that NLW receive, junior troops as well as commanders should also receive media training. From the beginning, commanders should involve their public affairs officers in NLW mission planning. Supply and logistic staff members also require training in NLW maintenance and environmental issues unique to the equipment being deployed.

b. Chapter V outlines seven tasks where NLW are well suited. During

exercises both units and staffs should focus on six of the seven tasks: crowd control, incapacitating personnel, area denial to both personnel and vehicles, seize personnel, and clear facilities of personnel. Disable/neutralize vehicles/aircraft are not easily trained tasks during exercises. This list is not all-inclusive and should be modified based on mission, enemy, terrain and weather, troops and support available, time available (METT-T).

c. Whenever NLW are employed during training, lethal capability must always be in place. Troops must always be prepared to protect themselves as required with a lethal response because it is impossible to accurately predict the response of an individual or mob.

d. Leaders, medical personnel, public affairs representatives, and personnel from the Staff Judge Advocate (SJA) office should be involved in exercises when possible. This will give the medical personnel a better understanding of OC decontamination and the possible injuries they may encounter as a result of NLW employment. The public affairs and SJA specialists also need to understand how these new tools are employed in order to better advise the commander on media matters and ROE.

## 7. Summary

In summary, here are some real-world lessons captured from recent conflicts that should never be overlooked or assumed during training:

a. *Never* apply a NLW in a situation where deadly force is appropriate.

b. *Never* apply NLW in a situation that will place troops in undue danger.

c. *Always* cover a NLW weapon with deadly force.

# EMPLOYMENT OF THE NONLETHAL WEAPONS CAPABILITY

## 1. Background

Fundamental to employing NLW is a thorough understanding of the force continuum. As stated before, nonlethal capabilities provide a wider range of options that augment traditional means of deadly force but do not replace them. Nonlethal alternatives allow a commander to increase and decrease the amount of force applied to accomplish a mission. The force continuum is generally continuous and seamless, yet a careful examination reveals five broad categories listed below:

a. *Threats.* The force continuum begins with threats. These can be either implied or expressed. An implied threat may be manifested through presence by **forming** into riot control formations, fixing bayonets, or donning gas masks. An expressed threat occurs when a commander makes known the consequences of defiance.

b. *Denial Options.* Denial options are usually placed in highly visible areas and are often marked with placards. Examples may include concertina, caltrops, barbed wire, foams enhanced with OC (pepper spray), or other obstacles.

c. *Munitions that Cause Physical Discomfort/Incapacitate.* Munitions that cause physical discomfort but fall short of inflicting trauma include flashbangs, tear gas, and OC. Although the discomfort or injury may be substantially less than concertina, the employment of these options require a decision to intervene. Factors such as training, discipline, prejudices, emotions and judgment all play a part in their application and require their use to be viewed closely and judiciously.

d. *Munitions that Inflict Trauma.* Munitions that inflict trauma will inflict painful injuries that may last from several hours to several days. These munitions constitute the upper end of nonlethal options within the force continuum. Examples might include batons, stingballs, beanbag, foam and pellet rounds.

e. *Lethal Weapons.* Lethal weapons are the highest on the spectrum. Although the particular conditions that merit deadly force should be described in the ROE, lethal options should always be regarded as **part of the force spectrum** and not as a separate option altogether. This avoids ambiguity and confusion as to when lethal weapons are authorized.

Nonlethal methods and capabilities may include the use of common materials and existing systems that were not designed as NLW, but they can achieve the desired result of minimizing fatalities, permanent injury to personnel, and undesired damage to property and the environment. However, this chapter will limit itself primarily to the use of weapons and components explicitly designed and primarily employed under the NLW capability. This focus is not intended to limit the commander's option to use whatever is available to accomplish the mission without lethality.

## 2. Mission Planning Factors

The fundamental principles of mission planning are not changed by the incorporation of NLWs into a plan. NLW are intended as an operational enhancement. The first concern of a commander is the successful completion of

the mission. ROE are critical in the commander's planning to determine the appropriate use of nonlethal and deadly force. The availability of NLW does not relieve the force from its obligation to defend itself; therefore, it must be equipped and trained with both lethal and nonlethal means.

### 3. NLW Tasks

The NLW tasks were derived from the commander in chief's and service's mission needs statements. These tasks are—

- Control crowds.
- Incapacitate personnel.

- Deny an area to personnel.
- Deny an area to vehicles.
- Disable/neutralize vehicles aircraft, vessels, and facilities.
- Seize personnel.
- Clear facilities of personnel.

These tasks are further addressed in Tables V-1 through V-7. The tables are not intended to be all-inclusive but merely a stimulus to planning. The equipment listed is taken from the currently available systems designed for nonlethal purposes. The user should not limit nonlethal options to this specific equipment and should be aware of the existing and emerging systems to achieve the desired mission end state.

**Table V-1. Crowd Control**

<b>TASKS</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Crowd control</b>	<u>Admin/Personnel</u> <ul style="list-style-type: none"> <li>• SJA/claims planning</li> <li>• Chaplain affairs</li> <li>• Casualty notification</li> <li>• Detainee disposition plan</li> <li>• PAO/media planning</li> <li>• Information dissemination</li> </ul>	<u>Support Equipment</u> <ol style="list-style-type: none"> <li>Riot face shield</li> <li>Full length riot shield</li> <li>Expandable riot baton</li> <li>Rifleman's combat optic</li> <li>Portable bull horn</li> </ol>	<ul style="list-style-type: none"> <li>• Distributed to troops in advance</li> <li>• Riot baton should be employed only after proper training</li> <li>• Optic employed with DM to ID mob leaders</li> <li>• Bull horn used for communicating with crowd and to control formations</li> </ul>	<ul style="list-style-type: none"> <li>• ROE needs to be strictly defined</li> <li>• NLW options require lethal cover fire</li> </ul>
<b>Crowd control</b>	<u>Intelligence</u> <ul style="list-style-type: none"> <li>• IPB</li> <li>• Background on country and culture</li> <li>• Route/map recon</li> <li>• Sensor emplacement for advance notification</li> <li>• Information on mob leaders</li> <li>• Patrols and LP/OPs</li> <li>• Determine reason for the crowd</li> </ul>	<u>Kinetics</u> <ol style="list-style-type: none"> <li>12 ga bean bag round</li> <li>12 ga rubber bullet</li> <li>12 ga launching cartridge</li> <li>40mm rubber baton</li> <li>40mm wooden baton</li> <li>40mm stinger grenade</li> <li>Stun grenade</li> <li>Flash bang</li> </ol>	<ul style="list-style-type: none"> <li>• Do not employ kinetics at less than 20 ft due to possible fatal outcome</li> <li>• Target area at 20-40 ft should be center mass</li> <li>• Head shots are not acceptable</li> <li>• Kinetic rounds will not be skipped fired</li> <li>• Kinetics effective against selected targets and to disperse individuals</li> <li>• M203 and shotgun are NL complementary; M203 has low rate of fire, area target; shotgun has high rate fire, point target</li> </ul>	

**Table V-1. Crowd Control (continued)**

<b>TASKS</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Crowd control</b>	<u>Operations</u> <ul style="list-style-type: none"> <li>• Tactical integration of NLW and lethal fires</li> <li>• FSE plans to include RCA</li> <li>• Allocation of NLW munitions</li> <li>• Integration of NLW fires and maneuver</li> <li>• Engineer barrier planning</li> <li>• Understand mission (deny access/disperse/monitor)</li> </ul>	<u>Riot Control Agents</u> <ul style="list-style-type: none"> <li>a. OC dispenser</li> <li>b. Team OC dispenser</li> <li>c. High volume dispenser</li> </ul>	<ul style="list-style-type: none"> <li>• Disrupt/disperse crowds</li> <li>• Disperse RCAs to face and eyes for full effect</li> <li>• Employ snatch teams to apprehend agitators</li> </ul>	
<b>Crowd control</b>	<u>Logistics</u> <ul style="list-style-type: none"> <li>• Distribution of NLW supplies</li> <li>• Security of rear area facilities</li> <li>• Resupply of NLW munitions</li> </ul>	<u>Riot Control</u> <ul style="list-style-type: none"> <li>a. Xenon searchlight</li> <li>b. Flex cuffs</li> <li>c. RCA markers</li> </ul>	<ul style="list-style-type: none"> <li>• Searchlights dazzle/disorient individuals (night only)</li> <li>• Flex cuffs used for agitators</li> <li>• RCA markers are used to mark agitators for future ID</li> </ul>	
<b>Crowd control</b>	<ul style="list-style-type: none"> <li>• Procurement of medical supplies</li> <li>• Hospital planning</li> <li>• Medic planning for tactical units</li> </ul>			

**Table V-2. Incapacitate Personnel**

<b>TASK</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Incapacitate personnel</b>	<u>Admin Personnel</u> <ul style="list-style-type: none"> <li>• SJA/claims planning</li> <li>• Media plan</li> </ul>	<u>Support Equipment</u> <ol style="list-style-type: none"> <li>a. Riot face shield</li> <li>b. Full length riot shield</li> <li>c. Expandable riot baton</li> <li>d. Rifleman's combat optic</li> </ol>	<ul style="list-style-type: none"> <li>• Distributed to troops in advance</li> <li>• Riot baton should not be employed to the head</li> <li>• Optic employed with DM to ID mob leaders and cover with lethal fire</li> </ul>	<ul style="list-style-type: none"> <li>• Commander needs to define in incapacitation mission</li> <li>• Public dissemination of NLW must take a balanced approach so countermeasures cannot be rapidly developed</li> <li>• NLW options must be covered by lethal force</li> </ul>
<b>Incapacitate personnel</b>	<u>Intelligence</u> <ul style="list-style-type: none"> <li>• ID types of insurgents and demonstrators</li> <li>• ID causes and factions</li> <li>• ID mob ringleaders</li> </ul>	<u>Kinetics</u> <ol style="list-style-type: none"> <li>a. 12 ga bean bag round</li> <li>b. 12 ga rubber bullet</li> <li>c. 12 ga launching cartridge</li> <li>d. 40mm rubber baton</li> <li>e. 40mm wooden baton</li> <li>f. 40mm stinger grenade</li> <li>g. Stun grenade</li> <li>h. Flash bang</li> <li>i. M203 and shotguns are NL complementary; M203 has a low rate of fire, area target; shotgun has a high rate of fire, point target</li> </ol>	<ul style="list-style-type: none"> <li>• Do not employ kinetics at less than 20 ft due to possible fatal outcome</li> <li>• Target area at 20-40 ft should be center mass</li> <li>• Head shots are not acceptable</li> <li>• Kinetic rounds will not be skipped fired</li> <li>• Kinetics effective against selected targets and to disperse individuals</li> <li>• M203 and shotguns are NL complementary; M203 has a low rate of fire, area target; shotgun has a high rate of fire, point target</li> </ul>	
<b>Incapacitate personnel</b>	<u>Operations</u> <ul style="list-style-type: none"> <li>• Prepare and confirm ROE for NLW</li> <li>• Integration of NLW and deadly force</li> <li>• Allocation of NLW and designated unit use</li> <li>• Integration of NLW fires and maneuver</li> </ul>	<u>Riot Control Agents</u> <ol style="list-style-type: none"> <li>a. OC dispenser</li> <li>b. Team OC dispenser</li> <li>c. High volume OC dispenser</li> </ol>	<ul style="list-style-type: none"> <li>• Disrupt/disperse crowds</li> <li>• Disperse RCA to face and eyes for full effect</li> </ul>	
<b>Incapacitate personnel</b>	<u>Logistics</u> <ul style="list-style-type: none"> <li>• Distribution of NLW munitions</li> <li>• ID special storage requirements</li> <li>• Resupply of NLW munitions</li> </ul>	<u>Riot Control</u> <ol style="list-style-type: none"> <li>a. Xenon searchlight</li> <li>b. Flex cuffs</li> <li>c. Chem markers</li> </ol>	<ul style="list-style-type: none"> <li>• Searchlights dazzle/disorient individuals (night only)</li> <li>• Flex cuffs used for agitators</li> <li>• RCA markers are used to mark agitators for incapacitation</li> </ul>	
<b>Incapacitate personnel</b>	<u>Civil Affairs</u> <ul style="list-style-type: none"> <li>• Collection of civilian intel</li> <li>• Care of injured personnel</li> <li>• Detention of civilian personnel</li> </ul>			

**Table V-3. Deny Area to Personnel**

<b>TASK</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Deny area to personnel</b>	<u>Admin Personnel</u> <ul style="list-style-type: none"> <li>• SJA/claims planning</li> <li>• Media plan</li> </ul>	<u>Support Equipment</u> <ol style="list-style-type: none"> <li>a. Area lights</li> <li>b. Area sensors</li> <li>c. Night vision</li> <li>d. Access control</li> <li>e. Warning signs written in host nation language</li> </ol>	<ul style="list-style-type: none"> <li>• Ensure area is well lighted to include perimeter</li> <li>• Night vision devices are generally employed outside the perimeter</li> <li>• Positively ID accessed personnel</li> <li>• Employ warning signs in native language</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize appropriate media to warn civilians away from denied area</li> </ul>
<b>Deny area to personnel</b>	<u>Intelligence</u> <ul style="list-style-type: none"> <li>• Terrain and map study</li> <li>• Threat ID</li> <li>• Sensor emplacement around area</li> <li>• IPB</li> </ul>	<u>Kinetics</u>		
<b>Deny area to personnel</b>	<u>Operations</u> <ul style="list-style-type: none"> <li>• Prepare and confirm ROE</li> <li>• Integration of NLW and deadly force</li> <li>• Allocation of NLW and designated unit use</li> <li>• Determine scope of mission.</li> <li>• Determine access procedures</li> <li>• Duration</li> <li>• Use of area (friendly or total denial)</li> </ul>	<u>Riot Control Agents</u>		
<b>Deny area to personnel</b>	<u>Logistics</u> <ul style="list-style-type: none"> <li>• Distribution of NLW munitions</li> <li>• ID special storage requirements</li> <li>• Resupply of NLW munitions</li> <li>• Security of rear area facilities.</li> </ul>	<u>Riot Control</u>		
<b>Deny area to personnel</b>	<u>Civil Affairs</u> <ul style="list-style-type: none"> <li>• Collection of civilian intel</li> </ul>	<u>Entanglements</u> <ol style="list-style-type: none"> <li>a. Caltrops</li> <li>b. Tanglefoot</li> <li>c. Barbed wire</li> <li>d. Foams</li> <li>e. Concertina/razor tape</li> </ol>	<ul style="list-style-type: none"> <li>• Disrupt/slow intrusion attempts</li> <li>• Maintain suitable reaction force</li> <li>• Channel passive traffic away</li> <li>• Use foam to cover caltrops</li> </ul>	

**Table V-4. Deny Area to Vehicles**

<b>TASK</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Deny area to vehicles</b>	<u>Admin Personnel</u> <ul style="list-style-type: none"> <li>• SJA/claims planning</li> <li>• Media plan</li> </ul>	<u>Support Equipment</u> <ol style="list-style-type: none"> <li>a. Area lights</li> <li>b. Area sensors</li> <li>c. Night vision</li> <li>d. Access control</li> <li>e. Warning signs written in host nation language</li> </ol>	<ul style="list-style-type: none"> <li>• Ensure area is well lighted to include perimeter</li> <li>• Night vision devices are generally employed outside the perimeter</li> <li>• Positively ID accessed vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Commander needs to define denial mission</li> <li>• Utilize appropriate media to warn civilians away from denied area</li> </ul>
<b>Deny area to vehicles</b>	<u>Intelligence</u> <ul style="list-style-type: none"> <li>• Terrain and map study</li> <li>• Threat ID</li> <li>• Sensor emplacement around area</li> <li>• IPB</li> <li>• Traffic analysis</li> </ul>	<u>Kinetics</u>		
<b>Deny area to vehicles</b>	<u>Operations</u> <ul style="list-style-type: none"> <li>• Prepare and confirm ROE</li> <li>• Allocation of NLW and designated unit use</li> <li>• Determine scope of mission.</li> <li>• Determine access procedures</li> <li>• Determine military police requirements</li> <li>• Duration</li> <li>• Use of area</li> </ul>	<u>Riot Control Agents</u>		
<b>Deny area to vehicles</b>	<u>Logistics</u> <ul style="list-style-type: none"> <li>• Distribution of NLW supplies</li> <li>• Be prepared to evacuate stalled vehicles</li> </ul>	<u>Riot Control</u>		
<b>Deny area to vehicles</b>	<u>Civil Affairs</u> <ul style="list-style-type: none"> <li>• Collection of civilian intel</li> </ul>	<u>Entanglements</u> <ol style="list-style-type: none"> <li>a. Caltrops</li> <li>b. Tanglefoot</li> <li>c. Barriers</li> <li>d. Organic equipment</li> <li>e. Barbed wire</li> <li>f. Foams</li> </ol>	<ul style="list-style-type: none"> <li>• Disrupt/slow intrusion attempts</li> <li>• Maintain suitable reaction force</li> <li>• Channel passive traffic away</li> <li>• Use foam to cover caltrops</li> </ul>	

**Table V-5. Deny/Neutralize Vehicles, Aircraft, Vessels, and Facilities**

<b>TASK</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Deny/neutralize vehicles, aircraft, vessels, facilities</b>	<u>Admin Personnel</u> <ul style="list-style-type: none"> <li>• SJA/claims planning</li> <li>• Media plan</li> </ul>	<u>Support Equipment</u> <ol style="list-style-type: none"> <li>Sensors to track approaching vehicles, A/C, and vessels</li> <li>Night vision equipment</li> <li>Materiel handling equipment</li> <li>Portable bullhorn</li> </ol>	<ul style="list-style-type: none"> <li>• Ground and water sensors can be employed if required</li> <li>• Employment of aerial or naval pickets</li> <li>• Materiel handling equipment required to evacuate vessel</li> </ul>	<ul style="list-style-type: none"> <li>• Commander needs to define neutralization mission</li> <li>• Element of surprise remains a critical factor in mission accomplishment</li> <li>• Commander needs to develop IFF procedures</li> </ul>
<b>Deny/neutralize vehicles, aircraft, vessels, facilities</b>	<u>Intelligence</u> <ul style="list-style-type: none"> <li>• Sensor emplacement if required</li> <li>• Threat ID</li> <li>• IPB</li> <li>• Analyze target area</li> </ul>	<u>Kinetics</u>		
<b>Deny/neutralize vehicles, aircraft, vessels, facilities</b>	<u>Operations</u> <ul style="list-style-type: none"> <li>• Prepare and confirm ROE</li> <li>• Integration of NLW and deadly force</li> <li>• Allocation of NLW and designated unit use</li> <li>• Determine scope of mission</li> <li>• Determine access procedures</li> <li>• Determine boarding procedures (vessels and aircraft)</li> <li>• Determine apprehension procedures</li> </ul>	<u>Riot Control Agents</u> <ol style="list-style-type: none"> <li>Marking agent</li> </ol>	<ul style="list-style-type: none"> <li>• Marking agents can be used to mark a vessel for later interception</li> </ul>	
<b>Deny/neutralize vehicles, aircraft, vessels, facilities</b>	<u>Logistics</u> <ul style="list-style-type: none"> <li>• Distribution of NLW munitions</li> <li>• ID special storage requirements</li> <li>• Resupply of NLW munitions</li> <li>• Determine vessel/aircraft disposition</li> </ul>	<u>Riot Control</u> <ol style="list-style-type: none"> <li>RCA</li> <li>Xenon searchlight</li> </ol>	<ul style="list-style-type: none"> <li>• Riot control agents can be used to incapacitate crew members</li> <li>• Searchlights can disorient personnel or illuminate target</li> </ul>	
<b>Deny/neutralize vehicles, aircraft, vessels, facilities</b>	<u>Civil Affairs</u> <ul style="list-style-type: none"> <li>• Collection of civilian intel</li> <li>• Handling of displaced civilian personnel</li> </ul>	<u>Entanglements</u> <ol style="list-style-type: none"> <li>Caltrops</li> <li>Foams</li> <li>Speed bumps</li> <li>Nets</li> </ol>	<ul style="list-style-type: none"> <li>• Use caltrops to disable vehicle</li> <li>• Use combination of foam and caltrops to preserve the element of surprise</li> <li>• Channel passive traffic away</li> <li>• Use nets to foul props</li> </ul>	
<b>Deny/neutralize vehicles, aircraft, vessels, facilities</b>	<u>Medical</u> <ul style="list-style-type: none"> <li>• Treating injured civilian personnel</li> </ul>			



**Table V-6. Seize Personnel**

<b>TASK</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Seize personnel</b>	<u>Admin Personnel</u> <ul style="list-style-type: none"> <li>• SJA/claims planning</li> <li>• PAO media plan</li> </ul>	<u>Support Equipment</u> <ol style="list-style-type: none"> <li>a. Rifleman's combat optic</li> </ol>	<ul style="list-style-type: none"> <li>• Optic employed with DM to ID personnel to be seized</li> <li>• Covers personnel employing NL force</li> </ul>	<ul style="list-style-type: none"> <li>• Commander needs to define seizure mission and strictly enforce ROE</li> <li>• Element of surprise is critical for mission accomplishment</li> <li>• Speed is critical</li> <li>• Seizing personnel can be surgical with spec ops personnel or conducted within a crowd to seize an agitator</li> </ul>
<b>Seize personnel</b>	<u>Intelligence</u> <ul style="list-style-type: none"> <li>• Target area analysis</li> <li>• IPB</li> <li>• Analysis of target's movement pattern</li> <li>• Deception and psychological operations planning</li> </ul>	<u>Kinetics</u> <ol style="list-style-type: none"> <li>a. 12 ga bean bag round</li> <li>b. 12 ga rubber bullet</li> <li>c. 12 ga launching cartridge</li> <li>d. 40mm rubber baton</li> <li>e. 40mm wooden baton</li> <li>f. 40mm stinger grenade</li> <li>g. Stun grenade</li> <li>h. Flash bang</li> </ol>	<ul style="list-style-type: none"> <li>• Do not employ kinetics at less than 20 ft due to possible fatal outcome</li> <li>• Targeted individuals at 20-40 ft should be center mass</li> <li>• Head shots are not acceptable</li> <li>• Kinetic rounds will not be skipped fired</li> <li>• Kinetics effective against selected targets</li> <li>• M203 and shotguns are NL complementary; M203 has a low rate of fire, area target; shotgun has a high rate of fire, point target</li> </ul>	
<b>Seize personnel</b>	<u>Operations</u> <ul style="list-style-type: none"> <li>• Prepare and confirm ROE</li> <li>• Integration of NLW and deadly force</li> <li>• Allocation of NLW and designated unit use</li> <li>• Integration of NLW fires and maneuver</li> <li>• Breaching and assault planning</li> </ul>	<u>Riot Control Agents</u> <ol style="list-style-type: none"> <li>a. OC dispenser</li> <li>b. CS</li> </ol>	<ul style="list-style-type: none"> <li>• Riot Control agents can be used to incapacitate personnel</li> <li>• Need to spray into eyes and face for full effect</li> </ul>	
<b>Seize personnel</b>	<u>Logistics</u> <ul style="list-style-type: none"> <li>• Distribution of NLW munitions</li> <li>• ID special storage requirements</li> <li>• Resupply of NLW munitions</li> <li>• Transportation planning</li> </ul>	<u>Riot Control</u> <ol style="list-style-type: none"> <li>a. Xenon searchlight</li> <li>b. Flex cuffs</li> <li>c. RCA markers</li> </ol>	<ul style="list-style-type: none"> <li>• Searchlights dazzle/disorient individuals</li> <li>• Flex cuffs used for apprehension</li> <li>• RCA markers are used to mark agitators for seizure</li> </ul>	
<b>Seize personnel</b>	<u>Civil Affairs</u> <ul style="list-style-type: none"> <li>• Collection of civilian intel</li> <li>• Care of injured personnel</li> <li>• Detention of civilian personnel</li> </ul>			
<b>Seize personnel</b>	<u>Medical</u> <ul style="list-style-type: none"> <li>• Medevac planning</li> </ul>			

**Table V-7. Clear Facilities of Personnel**

<b>TASKS</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Clear facilities of personnel</b>	<u>Admin / Personnel</u> <ul style="list-style-type: none"> <li>• SJA/claims planning</li> <li>• Chaplain affairs</li> <li>• Casualty notification</li> <li>• PAO media plan</li> </ul>	<u>Support Equipment</u> <ol style="list-style-type: none"> <li>a. Riot face shield</li> <li>b. Full length riot shield</li> <li>c. Expandable riot baton</li> <li>d. Rifleman's combat optic</li> <li>e. Portable bull horn</li> </ol>	<ul style="list-style-type: none"> <li>• Distributed to troops in advance</li> <li>• Riot baton should not be employed to the head</li> <li>• Optic employed with DM to ID occupant leaders and provide lethal cover fire</li> <li>• Bullhorn used for communicating with occupants</li> </ul>	<ul style="list-style-type: none"> <li>• Surprise is a critical element for mission accomplishment</li> <li>• Commander must strictly define ROE</li> <li>• Due to close quarter tactics, the force must be instantly ready to utilize deadly force if required</li> </ul>
<b>Clear facilities of personnel</b>	<u>Intelligence</u> <ul style="list-style-type: none"> <li>• IPB</li> <li>• Background on facility, access, power plant</li> <li>• Route/map recon</li> <li>• Background info on building occupants</li> <li>• Determine any outside support for building occupants</li> </ul>	<u>Kinetics</u> <ol style="list-style-type: none"> <li>a. 12 ga Bean bag round</li> <li>b. 12 ga rubber bullet</li> <li>c. 12 ga launching cartridge</li> <li>d. 40mm rubber baton</li> <li>e. 40mm wooden baton</li> <li>f. 40mm stinger grenade</li> <li>g. Stun grenade</li> <li>h. Flash bang</li> </ol>	<ul style="list-style-type: none"> <li>• Do not employ kinetics at less than 20 ft due to possible fatal outcome</li> <li>• Targeted personnel at 20-40 ft should be center mass</li> <li>• Head shots are not acceptable</li> <li>• Kinetic rounds will not be skipped fired</li> <li>• Kinetics effective against selected targets and to disperse individuals</li> <li>• Stun grenade effects can be amplified in buildings</li> <li>• Visibility will be reduced once kinetics are employed</li> <li>• M203 and shotguns are NL complementary; M203 has a low rate of fire, area target; shotgun has a high rate of fire, point target</li> </ul>	<ul style="list-style-type: none"> <li>• Use of RCA greatly reduces visibility</li> <li>• Use RCA on noncombatants</li> </ul>
<b>Clear facilities of personnel</b>	<u>Operations</u> <ul style="list-style-type: none"> <li>• Tactical integration of NLW and lethal fires</li> <li>• FSE plans to include RCA</li> <li>• Allocation of NLW munitions</li> <li>• Integration of NLW fires and maneuver</li> <li>• Determine assault and breaching plan</li> <li>• Plan for isolation of facility</li> </ul>	<u>Riot Control Agents</u> <ol style="list-style-type: none"> <li>a. OC dispenser</li> <li>b. Team OC dispenser</li> <li>c. High volume dispenser</li> </ol>	<ul style="list-style-type: none"> <li>• Disrupt/disperse crowds</li> <li>• RCA should be applied to face and eyes for full effect</li> </ul>	<ul style="list-style-type: none"> <li>• Isolate area to prevent reinforcements</li> <li>• Prepare disposition plan for cleared personnel</li> <li>• Consider use of facility</li> <li>• Prepare security plan for cleared facility</li> </ul>

**Table V-7. Clear Facilities of Personnel (continued)**

<b>TASKS</b>	<b>NLW PLANNING FACTORS</b>	<b>EQUIPMENT</b>	<b>EMPLOYMENT CONSIDERATIONS</b>	<b>NOTES</b>
<b>Clear facilities of personnel</b>	<u>Logistics</u> <ul style="list-style-type: none"> <li>• Distribution of NLW supplies</li> <li>• Resupply of NLW munitions</li> <li>• Plan for transportation of displaced civilians</li> <li>• Plan facility maintenance or repair</li> </ul>	<u>Riot Control</u> <ul style="list-style-type: none"> <li>a. Xenon searchlight</li> <li>b. Flex cuffs</li> <li>c. RCA markers</li> </ul>	<ul style="list-style-type: none"> <li>• Searchlights dazzle/disorient individuals</li> <li>• Flex cuffs used for agitators</li> <li>• RCA markers are used to mark agitators for future ID</li> </ul>	
<b>Clear facilities of personnel</b>	<u>Civil Affairs</u> <ul style="list-style-type: none"> <li>• Collection of civilian intel</li> <li>• Care of injured civilians</li> <li>• Coordinate plans for control of civilians</li> </ul>			
<b>Clear facilities of personnel</b>	<u>Medical</u> <ul style="list-style-type: none"> <li>• Hospital planning</li> <li>• Medic planning for tactical units</li> <li>• Procurement of medical supplies</li> </ul>			

#### 4. Staff Planning/Responsibilities

a. Administration. A staff composed of the G-1/S1, public affairs office (PAO), SJA, and others as needed is responsible for the legal review of NLW employment and ROE. Additionally administrative personnel are responsible for processing all civilian detainees and claims that arise from NLW employment.

b. Intelligence. The G-2/S2 office is responsible for conducting the intelligence preparation of the battlefield (IPB) process and providing information on the adversary's culture, political stability, level of dedication to the cause, motivations, leadership, capabilities, equipment, and tactics. The G-2/S2 should locate native language speakers to assist the interrogator/translator team (ITT). Map study is an important part of preparation for the mission. Direct coordination with the chaplain, public and civil affairs officers

is required in preparation of a media plan that focuses on the different factions.

c. Operations. The G-3/S3 office is responsible for unit training, nonlethal certification of units, mission analysis, maneuver plans, and civil affairs planning when required.

d. Logistics. The G-4/S4 office is responsible for logistics considerations, ship-to-shore movement of weapons and ammunition, storage of equipment, resupply, transportation ashore, and other support requirements inherent in use of NLW.

e. Communications Officer. The communications officer's staff is responsible for installing, operating, and maintaining communication from units confronting belligerents to tactical operation center or combat operations center.

f. **Public Affairs Officer.** The PAO provides liaison with outside media and participates in the staff planning process. PAO is also responsible for ensuring the NLW media plan and news releases consider the perceptions of the native media and belligerents or adversaries. Public affairs personnel must receive training on NLW technologies, employment and capabilities, acute and long-term effects, impact on the environment, and legal approval procedures (as a minimum) so they can respond to media and public inquiries.

g. **Medical.** Medical personnel must be trained on NLW technologies and effects, as well as diagnostic and treatment procedures and prognosis for different types of possible injuries/NLW effects. Also, they must be prepared to treat local residents, noncombatants, and adversaries alike. At a minimum, medical personnel should be trained on risks and potential temporary and or permanent effects inherent in employing NLW. Medical personnel should be familiar with and able to provide decontamination of riot control agents as well as administer antidotes in cases of adverse reactions to riot control and other agents. They should be trained to provide medical treatment for bruises, abrasions, and cuts associated with nonlethal impact devices. Additionally, they should be trained to handle blunt trauma incidents to organs, tissue, and or bones.

h. **Chaplain.** Chaplain personnel should be prepared to provide counseling and religious services to both military and civilian personnel. Additionally, they should be trained to provide the religious and cultural background of the belligerents as they relate to crowd control.

i. **Civil Affairs.** The civil affairs office is responsible for planning and coordinating all aspects of civil affairs activities and providing assistance in

gathering intelligence from civilian sources.

## 5. Tactics

a. The following considerations should be included in the development of unit tactical operations involving nonlethal munitions:

(1) Avoid reconfiguring table of organization (T/O)/table of organization and equipment (T/O&E [USMC]), except for special configurations:

- (a) Special purpose teams.
- (b) Attachments.
- (c) Riot control formations.
- (d) Provisional security organizations.

(2) Standardize T/O&E (TO&E [USA]) equipment and postures in unit tactical standing operating procedures (TAC SOP). To add a higher volume of specialty impact munitions within squads, platoons, or units equipment may be added as follows:

- (a) Add nonlethal munitions for T/O&E M203s first.
- (b) Add additional M203s second.
- (c) Add shotguns last to patrols or first to static positions. If shotguns are added for patrols, add as an attachment or as miscellaneous billets.

(3) When loaded with nonlethal munitions, the longer reloading time of the M203 is protected with overlapping coverage from shotgun nonlethal fire. Nonlethal range cards should be made to assist in assuring safety distances are met.

(4) Avoid long weapons in contact teams or with front lines of civil disturbance reaction forces with response times.

(5) Attempt to focus riot control capabilities in specialized reaction forces.

(6) Establish base line NLW postures.

(7) Establish command relations for special units.

(8) Maximize distance and barriers.

(9) Use NLW range cards for stationary positions.

(10) Saturate force with available OC aerosol consistent with ROE.

(11) Selectively use impact batons.

(12) Never accept unnecessary risk.

(13) Always mutually support with lethal.

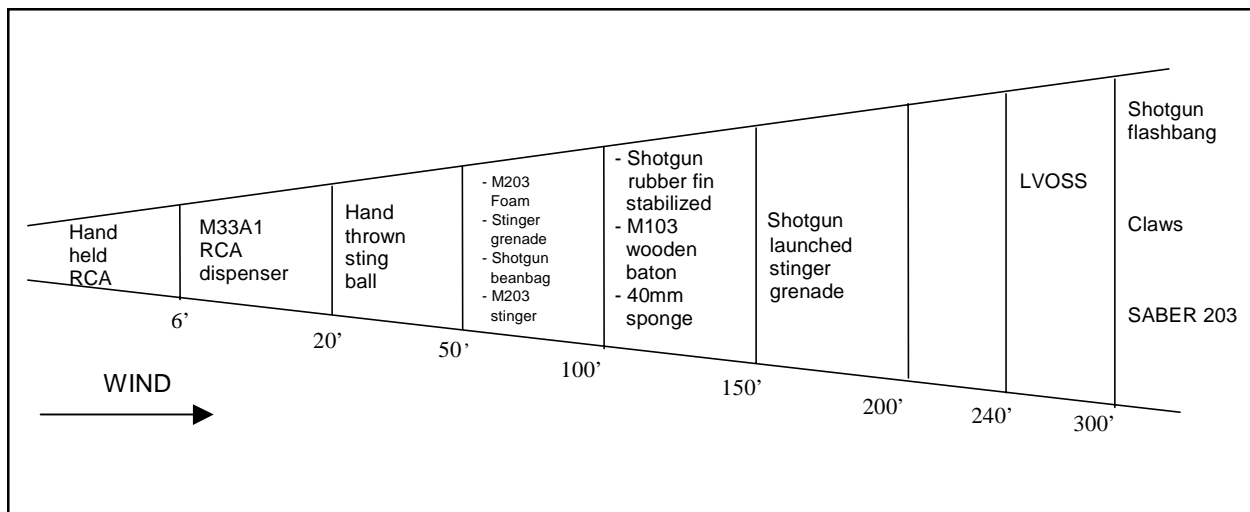
(14) Develop immediate actions drills (Playbook).

(15) Inspect all 40mm nonlethal munitions daily when deployed as these munitions are very susceptible to weather conditions (moisture). In Bosnia, task force eagle found that the 40mm round turned extremely hard when kept in a cold environment.

Currently, nonlethal rounds are black powder burning and leave the shotgun and M203 barrels contaminated with residue. The recommended field expedient method of cleaning is to flush the barrel with water. This operation frees the residue and enables the shooter to rapidly reengage the targets. Figure V-1 portrays maximum ranges of NLW systems that should be considered before employment.

**b. Unit Weapons and Ammo Configuration.**

(1) Individual. When possible, do not change T/O or TO&E weapons. Designate individuals as nonlethal shooters. Nonlethal shooters should carry lethal munitions only for personal protection. Lethal rounds should be carried in a place to avoid confusing nonlethal rounds with lethal rounds.



**Figure V-1. Bands of Employment of Various NLW Systems**

(2) Squad. Squad leaders should carry stinger grenades and maintain their T/O weapon loaded with lethal ammunition. Ideally, the squad should not change their task organization to accommodate the addition of nonlethal equipment but should designate nonlethal shooters.

(3) Patrols. Commanders should not plan a nonlethal patrol but should plan a combat/security patrol with a nonlethal attachment, when mission dictates. Nonlethal attachments should carry only 40mm nonlethal rounds. Carrying a shotgun limits the flexibility that the individual has because of the time it takes to transition from nonlethal to lethal. Shotguns should be used only from a fixed position where adequate coverage is available.

(4) Static Positions. Individuals on static positions should have their weapons loaded with lethal ammunition. Additionally, they should carry nonlethal munitions. Both shotguns and M203s work well from static positions and should be used together when possible.

(5) Contact Teams. Contact Teams should be established before deployment. Team members should be trained in unarmed self-defense, open-hand control, and handcuffing/flex cuffing. Contact teams should be equipped with personal protection gear, 9mm, and flex cuffs. Due to the physical nature of contact teams, it's important not to arm contact team members with long rifles. If security for the contact team is an issue, a security element should be attached.

(6) Riot Formations. Riot control teams should be established with a minimum response time. Because of the physical nature of riot control, individuals in riot control formations should not carry long rifles. Nonlethal attachments should follow closely behind the riot control formation. Lethal coverage must be provided for this entire formation.

(7) Designated Marksmen. During a nonlethal engagement, the use of designated marksmen (DM) provides confidence and safety to those facing a riot. If a lethal threat is presented, the designated marksman who is in an overwatch position and armed with a standard infantry rifle, mounted with a high-powered scope, can scan a crowd and identify agitators and riot leaders for apprehension as well as fire lethal rounds if warranted. Additionally, they are ideally suited for flank security and counter sniper operations.

## 6. Employment Objectives

Innovative employment methods of NLW and ingenuity take on critical significance. Some options are so harmless that employment becomes the *key* factor in how effective they are. Aqueous foam, for example, is little more than soapsuds. Caltrops, although formidable to vehicles, are easily avoided or swept aside by personnel. However, when aqueous foam is used to cover the caltrops a synergistic effect occurs. An adversary cannot cross the foam because of the caltrops and cannot find the caltrops because of the foam.

The countermeasures for thwarting virtually all nonlethal options are usually apparent, quickly learned and readily available. Because they do not kill, nonlethal options "teach" an adversary what to avoid in the future. Small unit commanders must be prepared to keep one step ahead of motivated belligerents.

Many nonlethal options have both maximum effective and minimum safety ranges. Individuals struck short of the minimum safety range often suffer severe injuries or death while the effects of most nonlethal devices are greatly mitigated at longer ranges. In order to be effective, an adversary must be engaged within the "effective" zone beyond the minimum safety range and short of the maximum effective range.

## **7. Environment**

A military unit deployed to an area will conduct operations in accordance with present doctrine. The environment may contain both noncombatants and combatants. Nonlethal capabilities provide the military force with tools to engage adversaries and minimize collateral damage. These tools empower the military force with the capability to influence the environment with nonlethal means if required.

## **8. ROE**

US forces follow directives issued by competent military authority that delineate the circumstances and limitations under which deadly force will be initiated against other forces encountered. Intrinsic to the effective use of nonlethal options is the authorization to employ them. In peace-keeping efforts, ROE serve as an essential balance between what is imposed and what is allowed. ROE are the primary means by which the National Command Authorities (NCA) can, through the Chairman of the Joint Chiefs of Staff (CJCS) and the combatant commanders, provide guidance to deployed forces in peacetime for handling crises and, in wartime, to help control the level of hostilities.

a. ROE should be distinguished from tactical control measures, threat conditions, and arming orders. Although arming orders are sometimes listed on the same quick reference card as ROE, for easy reference, ROE should also be distinguished from other policies and directives developed, such as weapons confiscation rules.

b. The decision to use NLW against an adversary during a confrontation should be

delegated to the lowest possible level, preferably to the platoon, flight, or squad level. However, this requires that all personnel, not just leaders, have a clear understanding of ROE and commander's intent.

c. The use of lethal force, employed under the standing ROE, will never be denied. At no time will forces be deployed without the ability to defend themselves against a lethal threat nor will they forego normal training, arming, and equipping for combat. Nonlethal options are a complement to, not a replacement for, lethal force and seek to expand a proactive response across the range of military operations.

## **9. Logistic Considerations Including Maintenance and Transportation**

Munitions must be resilient and deployable under all conditions. Nonlethal munitions tend to degrade substantially faster than conventional military munitions. A round that is effective in the heat of Somalia or Liberia may not work in the snows of Bosnia, because of the degradation of the round and its employment against people who are more heavily clothed. Proper storage, periodic inspections, and rotation of NLW ammunition are critical to maintaining the effectiveness and viability of nonlethal munitions.

Furthermore, most NLW are not type classified, that means they are not necessarily certified for air or sea transportation without specific preparation. Additionally, storage requirements can be unusual for NLW and must be adhered to so they do not rapidly become unserviceable.

## Chapter VI

# LESSONS LEARNED

### 1. Background

Though lessons learned from employment of NLW are still being studied and impacts analyzed, it is beneficial to look at the preliminary lessons gained from the NLW experience. These lessons are far from conclusive because US forces have yet to see the first large-scale employment of the NLW option. However, we can gain tremendous insight from the experience of others and use what has been learned to guide future NLW employment.

### 2. Force Continuum

The use of nonlethal options needs to be based on the principle of a graduated and proportional response, using the minimum force necessary to respond to the threat.

a. Attempts to legislate and regulate every aspect of NLW employment can prove disadvantageous to the on-scene commander. In Somalia, for example, the ROE made an arbitrary and unnecessary distinction between situations justifying deadly force and those which justified only lesser means. Crowd control items were restricted to situations requiring deadly force. Many soldiers, airmen, and marines asked, why resort to nonlethal means at all, if I have to wait until deadly force is authorized before I can shoot them with a beanbag? Additionally, the use of sticky foam was limited to deadly force situations because of the perception that adversaries might suffocate from its application. This stipulation effectively eliminated sticky foam as a nonlethal option to the forces in Somalia.

b. With ROE that take into account the force continuum and encourage graduated

response to nonlethal threats, the commander can employ NLW to enhance flexibility, deterrence, and reaction to uncertain situations. To accomplish the mission with minimum loss of life and property the commander needs to have ROE that allows proper employment of NLW.

### 3. Employment

Through use of modeling and simulation and field exercises, new concepts for employment of NLW are continually being developed. Training with NLW should be accomplished to the same degree as for lethal weapons. In this way, units become confident when using nonlethal options in a chaotic and uncertain situation. The decision to employ NLW must be pushed to the lowest possible tactical level. Commanders who intend to use NLW in achieving military objectives must recognize the fluidity of the situations in which they are likely to be employed. The decision-making cycle is short, stressful, and the level of violence can move in both directions along the force continuum. In quick succession, a small unit leader might employ nonlethal munitions, then decide to employ deadly force to an immediate specific threat that arises, then return to using nonlethal means in response to unarmed hostile elements.

In an operational scenario, a mixture of nonlethal “tools” is advantageous. As the situation develops, different nonlethal responses can be applied with respect to range/distance capability and severity of effect. For example, to disperse a crowd, area fire weapons would precede use of close-in point target nonlethal munitions.



An important point is NLW are just one element of a graduated response available to the force commander. Other elements, short of deadly force, make up a large contribution to the success of US forces, including barrier plans and psychological operations (PSYOP). An example of this operation would be the use of barriers such as roadblocks or concertina wire, warning commands to inform a mob of potential responses based on their actions, and only then taking actions through escalated employment of NLW. These continued responses would involve smoke, riot control agents, and blunt munitions. Every escalation of nonlethal means should be preceded by a specific verbal warning.

Whenever NLW are employed, a separate lethal capability must always be in place. Troops must always be prepared to protect themselves as required by lethal means, because it is impossible to accurately predict the response of an individual or mob to NLW employment.

#### **4. Publicity and Media**

The media can be used to the commander's advantage, as they will inform the local population of the military's capabilities and responses available. In Somalia, the local media was informed of the marines' nonlethal options and "new technologies" to discourage hostile actions. The media was encouraged to report this to the population. Intelligence had indicated the Somalis were planning to mix civilians with armed clansmen, creating hostile mobs. In fact, feuding warlords successfully demonstrated this strategy on several occasions. Lack of deadly mob incidents implies that the Somalis were not anxious to test this new technology and publicity had actually helped in mission accomplishment.

The public dissemination of the presence of NLW capabilities must strike a balance between information sufficient to discourage hostile actions and information

that enables the local population to learn about the capabilities of NLW. Too much information allows adversaries to develop countermeasures or avoid the NLW effects. Commanders who employ NLW systems must include the PAO. From the beginning of planning, the PAO must be familiar with the objectives of the mission, commander's intent, ROE, NLW and lethal weapons employed and be prepared to advise the commander on the best methods of dealing with outside media. The commander should fully integrate the public affairs plan with PSYOP objectives and the concept of operations. Additionally, care must be taken with native and western media to ensure that the "sensationalism" of such a new technology does not create unrealistic expectations by which the on-scene commander may be unfairly judged.

#### **5. Capabilities and Impact on Mission Accomplishment**

The commander should understand the unique capabilities of NLW and use them to enhance mission accomplishment. NLW should be used in consonance with the planned employment of the force and within established ROE to minimize loss of life and property while accomplishing the mission. The force requires early hands-on training to recognize the capabilities and limitations of nonlethal weapons. (See Appendix D for a training plan developed to meet these objectives.)

Additionally, the force commander must fully integrate planning for the use of nonlethal options as quickly as possible in the staff planning cycle. In order to have a full range of alternatives for use against unarmed but hostile elements, nonlethal systems need to be delivered; necessary ROE and legal review completed; and sufficient quantities of each NLW made readily accessible to the force. The choice of nonlethal capabilities should be based on several factors. First, are the NLW systems available and can they be delivered on time? Second, are they compatible with, and do

they complement existing weapons and training? Third, are there clear and unambiguous guidelines and ROE for employment? Finally, can the NLW be effectively employed to save lives and contribute to mission accomplishment?

Technologies and capabilities that NLW bring to the battlefield must be recognized to not represent a panacea of solutions. As in Somalia and Haiti, insurgents and demonstrators will find ways to avoid or defeat the effects of NLW. When this occurs, the commander must plan for other alternatives that capitalize on the capabilities of this technology and employ them wisely.

## **6. Knowing Your Adversary**

Although commanders desire thorough intelligence of any potential adversary, such a goal may be difficult to reach in a NLW employment environment. In Somalia and Haiti, a study of the local population's culture, history, and customs enabled the commanders to anticipate and control many situations before they got out of hand. On the other hand, poor intelligence led to the Haitians and Cubans being billeted together in Guantanamo Bay. This situation led to riots between factions who had a deep dislike for each other. By understanding a

particular crowd's motivation, friendly forces may be better able to take necessary steps to prevent the escalation that may result in the use of deadly force. Early training in crowd dynamics and riot control will enhance the effective use of NLW.

## **7. Summary**

The wide range of military operations in which US forces are involved has demanded the introduction of NLW into the arsenal of weaponry available to commanders. NLW provide a graduated and proportional response to threats posed by a variety of adversaries. The ROE must be consistent with the rapidly changing situation of today's chaotic and uncertain military operations. This reality demands a high level of training in the proper employment of NLW.

Effective use of NLW involve a synergy between PSYOP activities, intelligence gathering, and professional media/public affairs plan. NLW's effectiveness is enhanced through integration of these activities to reduce the chance an adversaries will be able to develop effective countermeasures. NLW, when combined with lethal weapons, provide the commander with a force response across a wide range of military operations.

## Appendix A

# NONLETHAL WEAPONS CAPABILITY SET INDIVIDUAL

### Item Description

The following information describes each of the 33 components of the NLW capability set currently being pursued by the US Marine Corps. Comparable sets are being pursued by the other services.

#### 1. Riot Face Shield

The requirement exists to provide individuals facial protection from thrown objects. The face shield must be lightweight, adaptable to the current personnel armor system for ground troops (PASGT) helmet, transparent, scratch-resistant and nonreflective. The mechanism for attaching to and detaching from the helmet should be simple, uncomplicated, and requires a minimum of tools in the field. It should be adjustable to an up-and-down position. When in the down position, it should resist fogging caused by the wearer's body heat and respiration. When in the up position, it must lock in place to prevent either partial or inadvertent employment. Further, considering the added weight to the helmet, a more robust helmet suspension system should be considered to keep the helmet more squarely on the individual's head.

#### 2. Full-Length Riot Shield

US forces require a full-length shield for protection against hand-thrown missiles and physical assaults by individuals, crowds, or mobs. It should be constructed of a lightweight (not greater than 20 pounds), durable and flame retardant material. It should be no smaller than 36 inches long by 20 inches wide. It should provide for an ambidextrous grip and have sufficient padding to protect the forearm from impact shock. It should be well balanced, opaque, and provide a clear

viewing port, constructed of equally protective material, through which US forces can observe without exposing their bodies.

#### 3. Expandable Riot Baton with Holder Carry Case

US forces require the capability to strike noncombatant antagonists beyond arm's reach without using the stock or bayonet of their T/O weapon. The baton should be employed in a manner commonly used by law enforcement agencies to inflict and deflect blows and to apply submission holds to noncompliant detainees. The extended length of the baton, when in use, should be at least 24 inches. The baton, when not in use, must be telescoping, collapsible, or otherwise capable of being stored in a holder not greater in length than 14 inches and be easily attached to the marine's combat clothing or equipment.

#### 4. Riot Baton Training Suit

To hone their riot baton skills, US forces require realistic hand-to-hand engagement training. This training is best provided where one marine, armed with a riot baton, is pitted against another who is outfitted in a protective suit constructed of heavy, durable material designed to absorb the blows inflicted by a riot baton. This suit should provide all-around protection, from head to toe, without significant degradation of the wearer's mobility.

#### 5. Training Riot Baton

US forces require a training baton as an aid to hone their riot baton skills. This baton must be of a design similar to the actual riot baton but made of lightweight materials. It must be capable of being used in riot training scenarios against unprotected US forces to provide realistic training without causing

impact injuries. Additionally, it must be sufficiently rigid to practice riot baton submission and compliance holds.

## **6. Rifleman's Combat Optic**

The requirement exists to enhance the US forces capability to acquire, positively identify and engage targets with an M16A2 mounted scope. This scope should not interfere with the marines' ability to use their iron sights and should enhance their ability to engage point targets out to the maximum range of the weapon. The scope should have a reticle pattern to assist in target location and target identification.

## **7. Portable Bullhorn**

Squad leaders and above need the capability to project their voices above the noise and commotion created by crowds and mobs. This will assist them in controlling these masses and in maneuvering their US forces. These bullhorns should be highly portable and easy to carry when not in use. They should be colored to blend with current combat equipment and must be powered by standard batteries found in the Marine Corps inventory. Ideally, the system should consist of a small transmitter that sends the transmission to a local receiver and speaker system, thereby relieving the marines of the burden of carrying all bullhorn components on their person at all times.

## **8. High-Intensity Xenon Searchlight**

US forces require a rugged, lightweight, hand-held, high-intensity spotlight for use during low-light conditions. The unit must be capable of accepting 12 volt direct current (DC) electrical power and have a light output of at least 6 million candlepower for a minimum of 90 minutes on a contractor supplied rechargeable powerpack. The beam should cover a wide area and be capable of converging to cover relatively

small areas for long distance uses. The handle of the portable device must contain the on/off switch and focus control. The light beam should have capability to be spread at least 35 degrees for flood applications and narrowed to a 3 degree or less pinpoint spot. The light must have a "pulse-strobe" capability to create a temporary "dazzling" effect that does not cause permanent impairment of vision. Additionally, the light must be equipped with an 830 nanometer infrared (IR) filter for use with image-intensifying devices.

## **9. Disposable, Double, Restraining Wrist/Forearm/Ankle Cuff**

US forces require a means of restraining and controlling suspects, prisoners, and other individuals encountered during operations. The restraining devices need to be disposable, flexible, nonmetallic, and of double configuration (that is, should have capability to attach to an individual by a single wrist/forearm/ankle, and then with the same device to the opposing wrist/forearm/ankle, to another suspect, or to an inanimate object). The devices should be of sufficient width (approximately 1/2 inch) so as not to cause undue physical damage to the cuffed individual and have the capability to be interlocked with other identical cuffs. The devices should be black or lusterless in color.

## **10. Buttcuffs**

A nylon or canvas device that attaches to the butt of the shotgun and holds not less than 5 shotgun rounds. The intent of the device is to make immediately available a shotgun round of the gunners choice for chambering without resorting to the more time-consuming tactic of having to pull the round from a 25-round pouch.

## **11. Caltrop**

US forces require a caltrop device to be used as a vehicle and pedestrian barrier.

The caltrop must be capable of flattening pneumatic tires and be capable of inflicting puncture wounds to the feet. The device should be lightweight, "stackable," and so constructed to nest during storage. Nested, caltrops should occupy no more than 15 percent of their deployed volume. The caltrop should cause immediate and catastrophic failure of pneumatic tires. Additionally, the device should accommodate deployment in a "chained" configuration to form a connective and flexible series. This configuration creates additional damage and disablement of targeted vehicles by wrapping around and reattacking an encountered tire.

## **12. Individual OC Dispenser With Carrier**

The requirement exists to provide the individual soldiers, sailors, airmen, and marine the capability to defend themselves at ranges not less than 10 ft with a highly portable OC dispenser. The dispenser may contain only food-grade irritants and may not use flammable or ozone depleting propellants. A Material Safety Data Sheet (MSDS) and documentation verifying that all ingredients are food and drug administration (FDA) approved *must* be supplied with the device. The dispenser should not exceed a capacity of 4 ounces (oz), must project a ballistic stream vice an aerosolized spray, and *must* contain not less than 10, 1/2-second bursts. Each individual dispenser *must* include a protective safety cover that encloses the actuator proper and allows for attaching the dispenser to the marine's combat clothing or equipment. Each unit should be individually serialized for quality control tracking.

## **13. Team OC Dispenser With Carrier**

The requirement exists to provide an individual marine the capability to defend himself or herself and members of the team or squad from noncombatants at ranges not less than 20 ft with a highly portable OC dispenser. The dispenser may contain only food-grade irritants and may not use

flammable or ozone depleting propellants. A MSDS and documentation verifying that all ingredients are FDA approved must be supplied with the device. The dispenser must project a ballistic stream rather than an aerosolized spray, and it must contain enough OC material (not more than 20 oz) to yield at least 20 1/2-second bursts. Individual dispensers should have a pull-ring type safety pin that enables the dispensing of contents. Each unit should be individually serialized for quality control tracking.

## **14. High Volume Output, High Capacity OC Dispenser**

US forces require an OC dispenser that has a greater range and capacity than the nominal aerosol units supplied for individual use. The unit's effective range should be at least 25 ft via a ballistic stream rather than an aerosolized spray and contain enough OC material (not more than 50 oz) to yield approximately 25 half-second bursts. The dispenser may contain only food-grade irritants and may not use flammable or ozone depleting propellants. A MSDS and documentation verifying that all ingredients are FDA approved must be supplied with the device. Individual dispensers should have a pull-ring type safety pin that enables the dispensing of contents. Each unit should be individually serialized for quality control tracking. The dispenser should be factory refillable.

## **15. Inert Individual OC Canister**

US forces require inert canisters for familiarization and training purposes. The devices should emulate the live round in all respects; however, they should be loaded with a nonirritant, nontoxic formulation payload. Safety release, range, dispersal pattern, weight and balance, volume content, and number of "shots" per inert device should match those of live rounds. The devices should be prominently marked with content and should be rechargeable at the unit level. It is also desired that the

devices contain a nontoxic, water-soluble marker to allow immediate feedback on content delivery to target.

#### **16. Inert Team OC Canister**

US forces require inert team OC canisters for familiarization and training purposes. The devices should emulate the live round in all respects; however, they should be loaded with a nonirritant, nontoxic formulation payload. Safety release, range, dispersal pattern, weight and balance, volume content, and number of “shots” per inert device should match those of live rounds. The devices should be prominently marked with content and should be rechargeable at the unit level. It is also desired that the devices contain a nontoxic, water-soluble marker to allow immediate feedback on content delivery to target.

#### **17. Inert High Volume Output, High Capacity OC Canister**

US forces require inert high volume output, high capacity OC canisters for familiarization and training purposes. The devices should emulate the live round in all respects; however, they should be loaded with a nonirritant, nontoxic formulation payload. Safety release, range, dispersal pattern, weight and balance, volume content, and number of “shots” per inert device should match those of live rounds. The devices should be prominently marked with content and should be rechargeable at the unit level. It is also desired that the devices contain a nontoxic, water-soluble marker to allow immediate feedback on content delivery to target.

#### **18. 12-Gauge Shotgun**

This item will be redistributed within the Marine Corps by the commander, Marine Corps Systems Command, to meet the required number of weapons per capability set in each MEF.

#### **19. Double Zero (00) Buckshot**

US forces carrying the 12-ga shotgun require a 00 Buckshot-loaded 12-ga shotgun cartridge as a backup lethal capability to their nonlethal munitions. A standard DOD or law enforcement agency (LEA) issue round will fulfill the requirement.

#### **20. 12-Gauge Flexible Baton Standard Bean Bag Round**

US forces require a cartridge fired from the 12-ga shotgun containing a lead shot filled fabric bag. The round provides a capability to stun individuals without penetrating the body. The lead shot filled fabric bag delivers a strong blow to the body and momentarily stuns the subject. Inclusion of a marking dye would allow the identification of the targeted individual after the engagement is over. The round should have a velocity at the muzzle of 300 ft per second (fps). The diameter of the expanded fabric bag should be 2 inches. The round should have dimensions of a 2 3/4-inch long standard 12-ga shell. The rounds should be prominently marked with type of round. The markings should be both physical and visual to aid determination of round type in low-light conditions.

#### **21. 12 Gauge Rubber, Fin Stabilized Round**

US forces require a 12-ga fin stabilized rubber projectile round for use in controlling and dispersing crowds and subduing individuals. The projectile should weigh approximately 0.2 oz and be contained in a 12-ga shotgun shell approximately 2.5 inches in length. The muzzle velocity should be 500 fps, to yield a maximum range of 250 ft and a maximum effective range of 100 ft. Fin stabilization is required to assure a sufficiently small circular error probable (CEP) to allow successful engagement of a particular individual at maximum effective ranges. The rounds should be prominently marked with type of round. The markings should

be both physical and visual to aid determination of round type in low-light conditions.

## **22. 12-Gauge Inert (Training) Round**

US forces require an inert 12-ga standard shotgun round for training purposes. The inert rounds should match those of standard 00 buckshot-loaded rounds in all respects except live propellant and primer. The rounds should be prominently marked with type of round. The markings should be physical and visual to aid determination of round type in low-light conditions.

## **23. 12-Gauge Launching Cartridge**

US forces require a 12-ga blank/launching cartridge to propel grenades and other specialty submunitions. The blank munitions will be used in conjunction with the appropriate launching cup (separately described below) to propel specific grenades. Compatibility between the launching cartridge, the launching cups, the specific grenade(s) to be procured and the Marine Corps standard 12-ga shotgun should be assured. The rounds should be prominently marked with type of round. The markings should be physical and visual to aid determination of round type in low-light conditions. The overall length of the blank cartridge should be 2 inches. The weight should be 0.5 oz and it should contain 4.2 oz of propellant.

## **24. 12-Gauge Launching Cup**

A 12-ga launching cup is required to propel specific grenades separately described. Compatibility between the launching cups, launching cartridge, specific grenade(s) to be procured, and the Marine Corps standard 12-ga shotgun should be assured. The grenades to be launched using this configuration are similar in all respects to the Number 15 series. Blank munitions (described above) will be used in conjunction with the

launching cup. It should be durable, rust resistant, and resistant to deformation caused by dropping, "hitting and rolling," and other combat tasks. The mechanism for attaching to and detaching from the shotgun barrel should be uncomplicated and require only simple tools in the field. The capability to fire either lethal or nonlethal rounds with the shotgun while the launcher cup is attached must be retained. The launching cup diameter should be 3.3 inches with an overall length of 7.25 inches. Its weight should be less than 9 oz.

## **25. 25 Round, 12-Gauge Shell Pouch**

This item must provide a means of carrying up to 25 12-ga shotgun rounds and must securely attach to the marine's combat gear or clothing. It should be made of highly durable material and be colored either green or blend with the color of the woodland uniform. The pouch must be easily accessible. Its carry should not interfere with the individual marine in the conduct of combat tasks.

## **26. 40mm Foam Rubber Baton Round**

US forces require a rubber baton-filled, 40mm cartridge to provide standoff capability in crowd control situations. The cartridge should contain three rubber batons in a 40mm cartridge case, length 4 5/16 inches and 1 1/2 inches diameter. The propellant should be smokeless to minimize the fouling of weapons systems. Muzzle velocity should be 325 fps. The rounds should be prominently marked with type of round. The markings should be both physical and visual to aid determination of round type in low-light conditions.

## **27. 40mm Wooden Baton Round**

US forces require a wooden baton-filled, 40mm cartridge for use in controlling and dispersing crowds and subduing individuals. The cartridge should contain

3 hardwood batons in a 40mm cartridge case with a length of 4.8 in. The propellant should be smokeless to minimize the fouling of weapons systems. The projectile should have a muzzle velocity of 260 fps to yield a maximum range of 100 yards and a maximum effective range of 50 yards in “skip” fire mode. These rounds are not intended for direct fire at targeted individuals. The rounds should be prominently marked with type of round. The markings should be both physical and visual to aid determination of round type in low-light conditions.

### **28. 40mm Stinger Cartridge**

US forces require a capability to fire a distraction round from the 40mm M203 grenade launcher to disperse threatening crowds, mobs, or to control individuals who are resisting arrest or failing to heed calls to order. The round should have a maximum range of 100 ft. This will extend the capability to control or distract crowds at ranges beyond those which can be achieved with hand thrown devices. The round should contain, as submunitions, approximately 24 rubber balls of an average 60 caliber. The propellant should be smokeless to minimize the fouling of weapons systems. Initial velocity of the rubber balls at dispersal should be 325 fps. The maximum effective range of the rubber balls at dispersal is a radius of 50 ft. An individual round should have a diameter of 1.5 inches with a length of 4.8 inches. Weight should be approximately 4 oz. The rounds should be prominently marked with type of round. The markings should be both physical and visual to aid determination of round type in low-light conditions.

### **29. 40mm Carrying Pouch**

Because the current M203 grenade load-bearing vest is ill suited for carrying nonlethal 40mm munitions, a separate pouch is required. This item must provide a means of carrying not less than six 40mm nonlethal rounds and must securely attach

to the marine’s combat gear or clothing. It should be made of highly durable material and be colored either green or colored to blend with the color of the woodland uniform. The pouch must be easily accessible and should not interfere with the marine’s conduct of combat tasks.

### **30. Sting Ball Grenade**

US forces require a hand-held, hand-thrown grenade that disperses rubber balls, produces a loud report, and a bright flash of light. The grenade must have a 1-second fuse delay. The rubber spheres are to be dispersed in a radial pattern with an initial velocity of 700 fps. This grenade should also be capable of being launched from a standard Marine Corps 12-ga shotgun equipped with the 12-ga launching cup attachment and 12-ga launching cartridge. The grenade components, particularly the “spoon,” should be durable, rust resistant, and resistant to deformation caused by dropping, “hitting and rolling,” and other combat tasks.

### **31. Inert Sting Ball Grenade**

US forces require an inert sting ball grenade for familiarization and training purposes. The inert rounds should match the characteristics of the live sting ball grenade rounds in all respects, except that they will be nonexplosive. Practice fuses similar to those commonly used with training fragmentation grenades would be appropriate to provide realistic training. The inert sting ball grenades should be prominently marked “inert” to distinguish them from live sting ball grenades.

### **32. Diversionary Device, Hand Thrown**

For diversionary purposes, US forces require a low hazard, nonshrapnel-producing device which produces an intense flash of light and an extremely loud report with a minimal amount of smoke. The devices are required to provide a less-than-lethal means of temporarily dazzling,



dazing, and subduing targeted individuals or groups before they can injure themselves or others. The intense flash is intended to cause temporary blinding effects with no permanent damage to the retina. The loud report is intended to create a sensory overload which greatly diminishes an adversary's ability to effectively react. The diversionary device should be equipped with a safety pull ring, a safety release lever, and a delay before final action of at least 1.0 seconds. The device should not produce enough smoke to interfere with achieving mission objectives or produce any substantial fragmentation. It should have a low probability of initiating unintended fire. The report should not be greater than 185 dB at 5 ft and the light level at same distance should be 2.0 million candela or

greater. It is also desired that the device be compatible with the launching cup and launching cartridge, separately described, as well as with the Marine Corps standard 12-ga shotgun.

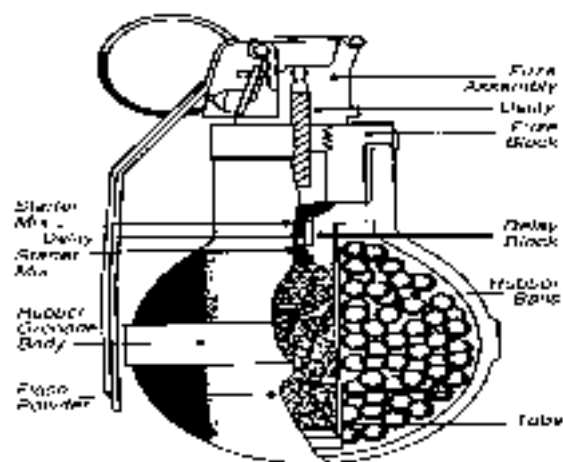
### **33. Sting Ball Grenade/Flash Bang Pouch**

This item should hold up to 6 sting ball grenades or 6 flash bangs and must securely attach to the marine's combat gear or clothing. It should be made of highly durable material and be colored either green or colored to blend with the color of the woodland uniform. The pouch must be easily accessible. Its carry should not interfere with the marine's conduct of combat tasks.

## Appendix B

### SPECIALTY IMPACT MUNITIONS

Figures B-1 through B-11 are the Defense Technology product specification listings of the munitions included in the Marine Corps capabilities kit. **All specifications are averages.** Defense Technology is not the only producer of nonlethal rounds. To reduce the possibility of serious injury or death, the following standards of employment are recommended:



Construction .....	Rubber ball grenade body
Diameter .....	3.1 in (7.9 cm)
Length .....	5.2 in (13.2 cm)
Projectiles .....	180 rubber balls (approx)
Total Weight .....	9.65 oz (273.6 g)
Launchable .....	Yes
Explosive Content .....	13.55 g

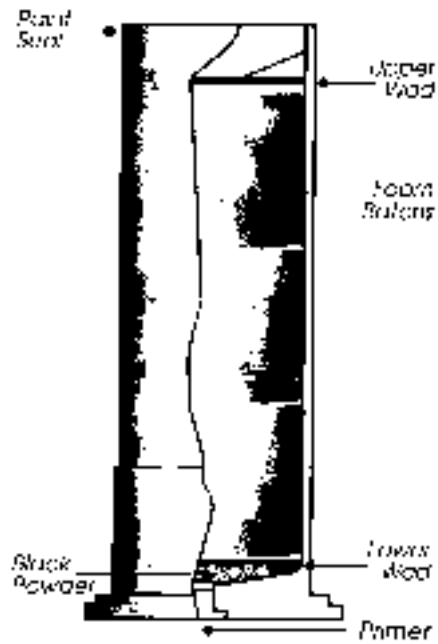
#### Submunition Specifications:

Caliber .....	32
Pellet Hardness .....	75 durometer "A" scale
Explosive Weight .....	0.28 oz (7.9 g)

Following the fuse operation, a 1-second delay separates the fuse assembly from the body with little or no velocity. There is an additional 1-second delay before charge detonates. Rubber balls are then dispersed in a circular pattern of approximately 50 ft. This device may be launched. This device is launchable from a 12-ga shotgun utilizing the No. 34 launching cup and the No. 35 launching cartridge. As noted in the operation section, the fuse assembly separates from the grenade body before detonation. When launching the No. 15 stinger grenade, consideration should be given to the free falling fuse assembly potentially striking an individual.

Figure B-1. No. 15-Stinger Team Grenade

37/40mm - Designed for use in the M203



Diameter .....	1.5 in (37/40mm)
Length .....	4.8 in (12.2 cm)
Projectiles .....	3 foam rubber batons
Total Weight .....	3.85 oz (1 IO g)
Velocity .....	300 fps (average)
Maximum Range .....	100 ft (30.5m)
Maximum Effective Range .....	50 ft (15.2m)
Explosive Content .....	2.27 g

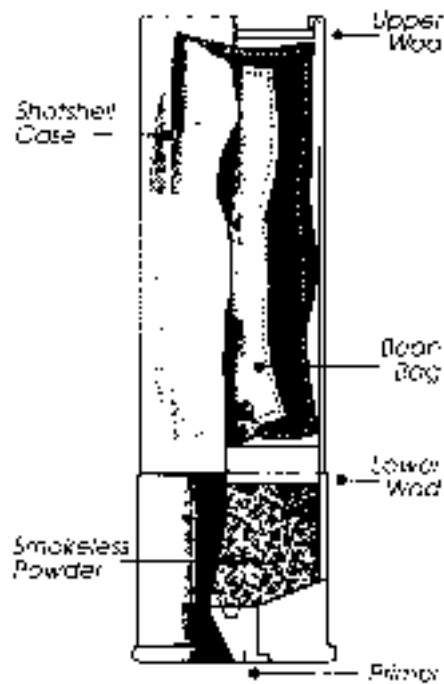
Submunition Specifications:

Length .....	1.5 in (3.8 cm) each
Diameter .....	1.5 in (3.8 cm) each
Material .....	Foam rubber
Weight .....	0.60 oz (17 g) each

- At distances of less than 20 ft, extreme caution should be exercised due to the high possibility of a fatal outcome.
- At distances of 20 to 40 ft, the target area should be center mass.
- Training should reinforce that headshots are NOT ACCEPTABLE.
- This round will not be skip-fired. Once striking a hard object, this round becomes unpredictable.
- This round is effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance.

Figure B-2. No. 40F-Foam Rubber Multiple Baton Round

## 12-Gauge



Diameter .....	12-ga
Length .....	2.6 in (6.6 cm)
Projectile .....	1 single bean bag
Total Weight .....	1.79 oz (59 g)
Velocity .....	280 fps (average)
Maximum Range .....	150 ft (45.8m)
Maximum Effective Range .....	50 ft (15.3m)

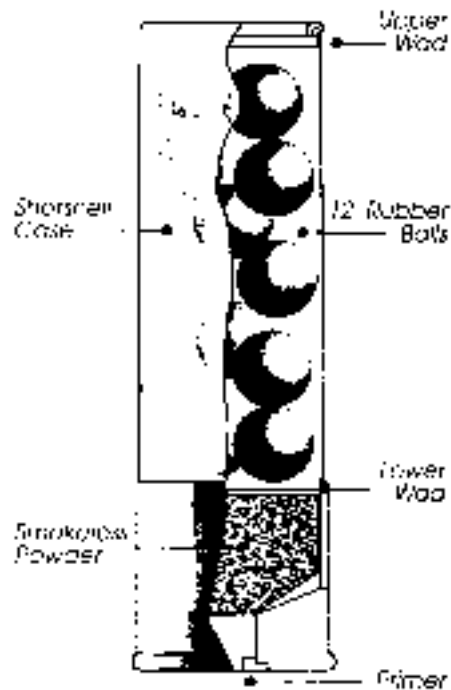
### Submunition Specifications:

Size .....	2x2 in square
Material .....	Heavy cordurag nylon filled with #9 shot
Weight .....	1.44 oz (41.0 g)

- At distances of less than 20 ft, extreme caution should be exercised because of the high possibility of a fatal outcome.
- At distances of 20 to 40 ft, the target area should be center mass.
- Training needs to reinforce that headshots are NOT ACCEPTABLE.
- This round will not be skip-fired. Once striking a hard object, this round becomes unpredictable.
- This round is extremely effective against individually selected targets or subjects who demonstrate violence or aggression. It is also effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance.

Figure B-3. No. 23BR-Bean Bag Round

## 12-Gauge



Diameter .....	12-ga
Length .....	2.6 in (6.6 cm)
Projectiles .....	12 rubber balls (approx.)
Total Weight .....	0.56 oz (16 g)
Velocity .....	900 fps (average)
Maximum Range .....	125 ft (38m)
Maximum Effective Range .....	60 ft (18.3m)
Explosive Content .....	0.50 g

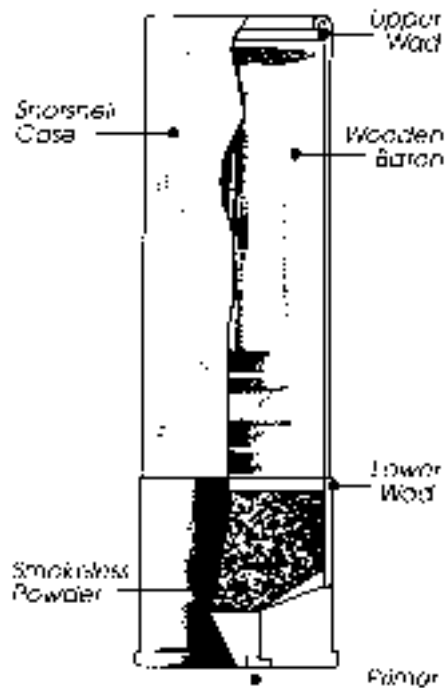
### Submunition Specifications:

Caliber .....	32
Diameter .....	0.32 in (0.8 cm) each
Material .....	PVC rubber compound
Hardness .....	75 durometer "A" scale
Weight .....	0.01 oz (0.25 g) each

- At distances of less than 20 ft, extreme caution should be exercised due to the high possibility of a fatal outcome.
- At distances of 20 to 40 ft, the target area should be center mass.
- Training needs to reinforce that headshots are NOT ACCEPTABLE.
- This round will not be skip-fired. Once striking a hard object, this round becomes unpredictable. It is effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance. This round is best used against subjects lightly dressed, as winter clothing or padding may absorb most of the effect of the munition.

**Figure B-4. No. 23HV-Rubber Pellet Round High Velocity**

## 12-Gauge



Diameter ..... 12-ga  
Length ..... 2.6 in (6.6 cm)  
Projectile ..... 1 single wooden baton  
Total Weight ..... 0.56 oz (16 g)  
Velocity ..... 950 fps (average)  
Maximum Range ..... 100 yds(91.4m)  
Maximum Effective Range ..... 60 yd (55m)  
Explosive Content ..... 0.50 g

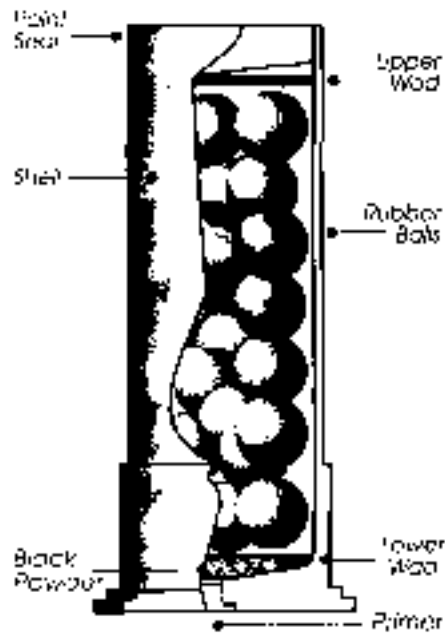
### Submunition Specifications:

Length ..... 0.92 in (2.3 cm)  
Diameter ..... 0.62 in (1.6 cm)  
Material ..... Hardwood  
Weight ..... 0.11 oz (3.0 g)

- These rounds are designed for skip fire as opposed to direct fire and perform successfully from 10 yd to 50 yd. Performance will vary depending on angles of deflection and surface material and density (for example, grass versus concrete).
- When rounds are skip-fired consideration should be given to the angle of deflection as to ensure the round is striking the lower extremities.
- This round is effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance.

Figure B-5. No. 23WB-Single Wood Baton Round

37/40mm - Designed for use in the M203



Diameter .....	1.5 in (37/40mm)
Length .....	4.8 in (12.2 cm)
Projectiles .....	24 rubber balls (approx)
Total Weight .....	4.10 oz (117 g)
Velocity .....	325 fps (average)
Maximum Range .....	100 ft (30.5m)
Maximum Effective Range .....	50 ft (15.2m)
Explosive Content .....	2.27 g

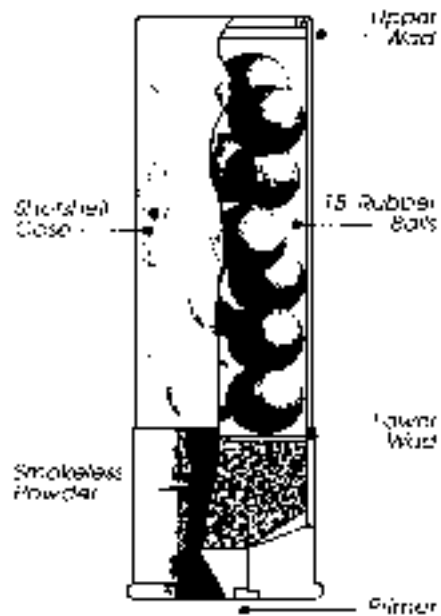
Submunition Specifications:

Caliber .....	60
Diameter .....	0.60 in (1.5 cm) each
Material .....	Rubber
Hardness .....	60 durometer "A" scale
Weight .....	0.08 oz (2.25 g) each

- At distances of less than 20 ft, extreme caution should be exercised because of the high possibility of a fatal outcome.
- At distances of 20 to 40 ft, the target area should be center mass.
- Training needs to reinforce that headshots are NOT ACCEPTABLE.
- This round will not be skip-fired. Once striking a hard object, this round becomes unpredictable.
- This round is effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance. This round is best used against subjects lightly dressed, as winter clothing or padding may absorb most of the effect of the munition.

Figure B-6. No. 40B-Stinger Team Round

## 12-Gauge



Diameter .....	12-ga
Length .....	2.6 in (6.6 cm)
Projectiles .....	15 rubber balls (approx)
Munition Weight .....	0.5 oz (14.5 g)
Velocity .....	400 fps (average)
Maximum Range .....	100 ft (30.5m)
Maximum Effective Range .....	50 ft (15.3m)
Explosive Content .....	0.32 g

### Submunition Specifications:

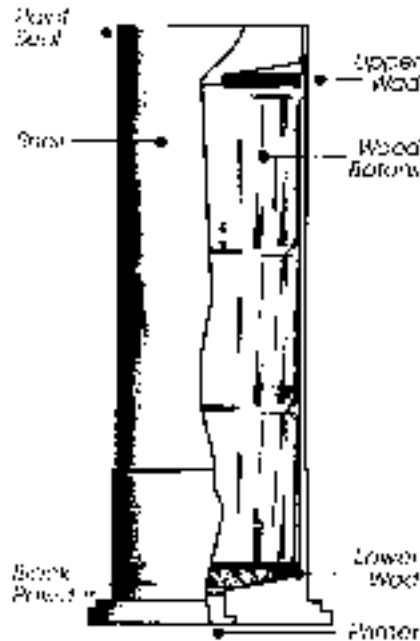
Caliber .....	32
Diameter .....	0.32 in (0.8 cm) each
Material .....	Rubber
Hardness .....	75 durometer "A" scale
Weight .....	0.01 oz (0.3 g) each

- At distances of less than 20 ft, extreme caution should be exercised because of the high possibility of a fatal outcome.
- At distances of 20 to 40 ft, the target area should be center mass.
- Training needs to reinforce that headshots are NOT ACCEPTABLE.
- This round will not be skip-fired. Once striking a hard object, this round becomes unpredictable.
- This round is effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance. This round is best used against subjects lightly dressed, as winter clothing or padding may absorb most of the effect of the munition.

**Figure B-7. No. 23RP-Rubber Pellet Round**



37/40mm - Designed for use in the M203



Diameter ..... 1.5 in (37/40mm)  
Length ..... 4.8 inches (12.2 cm)  
Projectiles ..... 3 wood batons  
Total Weight ..... 4.6 oz (130 g)  
Velocity ..... 260 fps (average)  
Maximum Range ..... 100 yd (91.4m)  
Maximum Effective Range ..... 50 yd (45.7m) skip-fired  
Explosive Content ..... 1.62 g

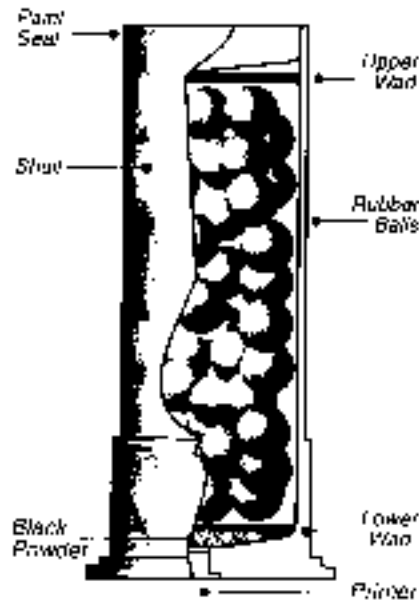
**Submunition Specifications:**

Length ..... 1.35 in (3.4 cm) each  
Diameter ..... 1.35 in (3.4 cm) each  
Material ..... Hardwood  
Weight ..... 0.77 oz (22.0 g) each

- At distances of less than 20 ft, extreme caution should be exercised because of the high possibility of a fatal outcome.
- At distances of 20 to 40 ft, the target area should be center mass.
- Training needs to reinforce that headshots are NOT ACCEPTABLE.
- This round will not be skip-fired. Once striking a hard object, this round becomes unpredictable.
- This round is effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance.

**Figure B-8. No. 40W-Wood Multiple Baton Round**

37/40mm - Designed for use in the M203



Diameter ..... 1.5 in (37/40mm)  
Length ..... 4.8 in (12.2 cm)  
Projectiles ..... 175 Rubber Balls (approx)  
Total Weight ..... 4.10 oz (117 g)  
Velocity ..... 385 fps (average)  
Maximum Range ..... 100 ft (30.5m)  
Maximum Effective Range ..... 36 ft (10.9m)  
Explosive Content ..... 2.27 g

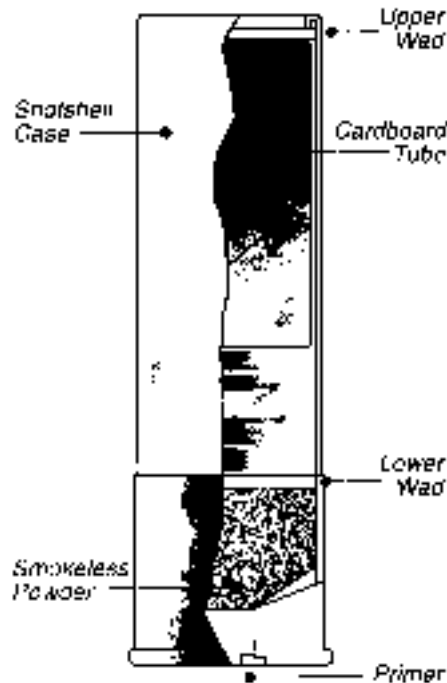
Submunition Specifications:

Caliber ..... 32  
Diameter ..... 0.32 in (0.81 cm) each  
Material ..... Rubber  
Hardness ..... 75 durometer "A" scale  
Weight ..... 0.01 oz (0.3 g) each

- At distances of less than 20 ft, extreme caution should be exercised because of the high possibility of a fatal outcome.
- At distances of 20 to 40 ft, the target area should be center mass.
- Training needs to reinforce that headshots are NOT ACCEPTABLE.
- This round will not be skip-fired. Once striking a hard object, this round becomes unpredictable.
- This round is effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance. This round is best used against subjects lightly dressed, as winter clothing or padding may absorb most of the effect of the munition.

Figure B-9. No. 40A-Stinger Team Round

### 12-Gauge (Aerial Distraction)



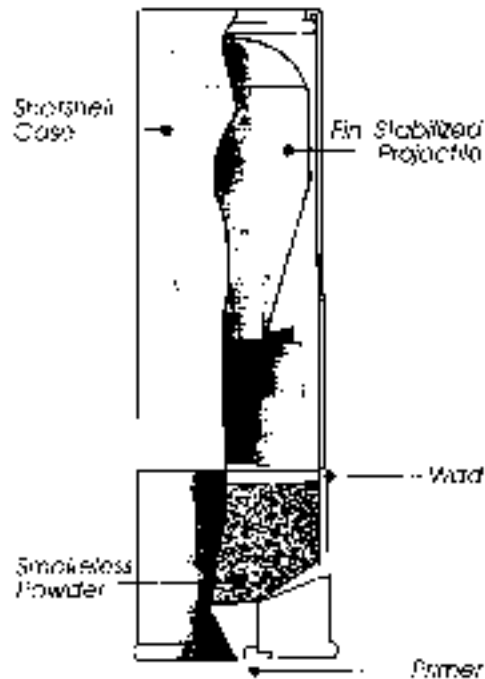
Diameter ..... 12-ga  
Length ..... 3.0 in (7.6 cm)  
Range ..... 55 yd approx (50.2m)  
Report ..... 100 dB @ 50 yd  
Explosive Content ..... 1 g

This 12-ga munition is designed for use as an outside aerial distraction. This round is extremely effective in diverting attention away from an approach or entry, by deploying overhead, beyond individuals or crowds or to the far side of buildings.

***Notes: The No. 23FB round is not intended or designed to be used as a barricade penetrating round. This round should not be direct fired at personnel.***

Figure B-10. No. 23FB-Diversionsary Device

## 12-Gauge



Diameter .....	12-ga
Length .....	2.5 in (6.4 cm)
Projectile .....	1 rubber projectile
Total Weight .....	0.54 oz (15.5 g)
Velocity .....	500 fps (average)
Maximum Range .....	250 ft (76.3m)
Maximum Effective Range .....	100 ft (30.5m)
Explosive Content: .....	0.52 g

### Submunition Specifications:

Caliber .....	12-ga
Length .....	1.7 in (4.3 cm)
Material .....	Rubber
Hardness .....	75 durometer "A" scale
Weight .....	0.2 oz (5.8 g)

- At distances of less than 20 ft, extreme caution should be exercised because of the high possibility of a fatal outcome.
- At distances of 20 to 40 ft, the target area should be center mass.
- Training needs to reinforce that headshots are NOT ACCEPTABLE.
- This round will not be skip-fired. Once striking a hard object, this round becomes unpredictable.
- This round is effective for the dispersion of crowds. It is also effective for the disbursement of individuals in crowd control or civil disturbance situations and against subjects who offer violent resistance

Figure B-11. No. 23FS-Rubber Fin Stabilized Round

## Appendix C

### NONLETHAL INDIVIDUAL WEAPONS INSTRUCTOR COURSE

This appendix provides an overview of the Nonlethal Individual Weapons Instructor Course (NIWIC). NIWIC is a “train the trainer” course taught in 12 sub-courses. Section I provides NIWIC descriptive data that includes the purpose, scope, peacetime, and mobilization training requirements, student prerequisites, and equipment/ammunition requirements to successfully complete the course. Section II lists the

total training days and hours required per academic subcourse. Section III gives a detailed description of each sub-course and terminal learning objectives that each student must meet to complete the course. Section IV is a listing of 12 annexes that comprise the NIWIC POI. Additionally, the entire NIWIC with history, updates, and lesson plans can be accessed at—  
**<http://www.ftmc-marine.army.mil/>**.

#### SECTION I - NIWIC DESCRIPTIVE DATA

##### COURSE DESCRIPTION

1. Course Title: Nonlethal Individual Weapons Instructor Course
2. Location: Military Police School, Ft McClellan, Alabama
3. Marine Corps Service: TBD  
School Code:
4. Other Service Course Number: TBD
5. Military Assistance: N/A  
Program Articles and Service List Number:
6. Purpose: To certify selected marines/soldiers as nonlethal individual weapons instructors.
7. Scope: This course is designed to train marines/soldiers in the tasks necessary to perform duties as nonlethal individual weapons instructors. This course is primarily designed for 58XX/85XX NCOs, SNCOs, and officers. Combat arms MOSs can be trained also.
8. Length (Peacetime) 14.5 training days
9. Curriculum Breakdown (Peacetime)  
116.5 total hours  
44 hours lecture/demonstrations  
65.5 hours practice application  
5.0 hours written exams  
2.0 hours administrative hours

### **COURSE DESCRIPTION (CONTINUED)**

10. Length (Mobilization): Same as Peacetime
11. Curriculum Breakdown (Mobilization): Same as Peacetime
12. Maximum Class Capacity: 20
13. Optimum Class Capacity: 15
14. Minimum Class Capacity: 5
15. Class Frequency: 8
16. Prerequisites: Students must be selected by commanders or provost marshals as nonlethal individual weapons instructors.
17. MOS Received: 5816 (secondary)
18. Quota Control: CMC/DA
19. Funding: CMC/DA/Local
20. Reporting Instructions: Marine students report with orders to the commanding officer, Marine Corps Detachment, Building 1602, Ft McClellan, Alabama, no later than 2400 on the day prior to class convening. No quarters or messing are available for SNCOs or officers.
21. Instructor Staffing: Two additional 5811 SNCOs are required. Requirements, current staffing is not adequate to conduct this course.
22. School Overhead: Additional overhead will be necessary for live fire training, handouts, and training aids.
23. Training Support: All training and administrative support will be provided by the Marine Corps Detachment, Ft McClellan, Alabama.

**REQUIRED EQUIPMENT**

<b><u>Item</u></b>	<b><u>Quantity</u></b>
Riot Face Shield	30
31 Inch Riot Baton w/Belt Ring	30
PR-24 Side Handle Baton	30
Striking Bags	15
25 RNA 12-ga Shell Pouches	30
Portable Bull Horn	2
12-Volt Hand-Held Spotlight	2
P250 Water Pump (Fueled Powered)	2
Red Man Suit	1
Full Length Riot Shield	30
Vehicle Mounted Sticky Foam Dispenser	2
Caltrops	100
Sandbags	5000
M203 Grenade Launcher	12
Mosburgh 1100 3-Inch Shotgun	6
Benelli Super 90 Shotgun	6

### CLASS V REQUIREMENTS

<u>Type Student</u>	<u># Per Per Class</u>	<u>#Demo Rds Per Class</u>	<u>Total Per Year</u>	<u>Total</u>
12-ga OO Buck	5	5	130	1040
12-ga 7 1/5 Shot	5	5	130	1040
12-ga Rubber Pellet	10	5	250	2000
12-ga Beanbag	10	5	250	2000
12-ga Flashbang	5	5	130	1040
12-ga Fin Stabilized	10	5	250	2000
40mm Stinger	5	5	130	1040
40mm Multiple Wood Baton	5	5	130	1040
40mm Foam Baton	5	5	130	1040
#15 Stinger Grenades	12	4	304	2432
12-ga Stinger Launcher	12	4	304	2432
MK141 Diversion Devices	5	2	130	1040
5.56mm (Ball)	50	20	1270	10160



## SECTION II - TOTAL TRAINING DAYS

### 16.5 TRAINING DAYS

<b><u>Academic Subjects</u></b>	<b><u>Hours</u></b>
Instructor Development	8.2
Force Continuum	2.2
Crowd Dynamics/Crowd Control	8.4
Communication Skills	8.0
Oleoresin Capsicum Aerosol Training	8.0
Open Hand Control	24.0
Impact Weapons	36.0
Introduction to Military Working Dogs	1.0
ROE/Law of War/Constitutional Seizure	2.5
Nonlethal Munitions and Employment/Live Fire	12.2
Barriers/Physical Security Measures	4.0
Tactics (Dismounted/Mounted)	<u>4.0</u>
<b>Subtotal</b>	<b>114.5</b>
<b><u>Administrative Subjects</u></b>	
Student Processing	2.0
<b>Grand Total</b>	<b>116.5</b>

## SECTION III - BODY

### PEACETIME/MOBILIZATION - 16.5 TRAINING DAYS

#### Subject

- 1. Instructor Development.** This subcourse reinforces the student's instructional capabilities.
- 2. Force Continuum.** This subcourse introduces the student to the federal force continuum model as outlined by MCO 5500.6F, *Arming of Law Enforcement and Security Personnel and the Use of Deadly Force*. Upon completion, the student will be able to instruct others on the six levels of resistance, proper levels of force, and factors influencing the decision to use force. Additionally, students will also instruct how nonlethal technologies affect the force continuum, preconditions of deadly force, six authorized occasions for the use of deadly force continuum, and the proper application of force.
- 3. Crowd Dynamics/Crowd Control.** This subcourse outlines the differences between crowds, mobs, and riots and teaches the student basic crowd control techniques that will easily be applied to various situations. Upon completion, the student will be able to instruct others in on the behavioral aspects of a crowd during a civil disturbance, various aspects of controlling a civil disturbance, and how to form and conduct a riot patrol formations. The student will be familiarized with classical tactics and techniques and will also consider nontraditional and small unit application.
- 4. Communication Skills.** This subcourse will teach the student how to instruct others on interpersonal communication skills and techniques to defuse situations.
- 5. Oleoresin Capsicum Aerosol Training.** This subcourse will teach the student how to safely and thoroughly instruct others to use pepper spray, supervise proper employment for training and discuss actual situations. The student will learn decontamination requirements, legal/policy considerations, and tactical considerations imposed by detainees/casualties.
- 6. Open-Hand Control.** This subcourse will teach the student to employ pressure point control techniques, unarmed self-defense measures, weapon retention techniques, and other submission/restraint/search techniques. Upon completion, the student will be certified to instruct proper open-hand control techniques and control of compliant and noncompliant individuals.
- 7. Impact Weapons.** This subcourse will teach the student in the uses of various impact style weapons (batons) to include the rigid straight baton, collapsible straight batons, side handle batons, and riot control batons. Upon completion, students will be certified to instruct control of compliant and noncompliant individuals, proper straight baton and side handle baton techniques, and riot baton and shield tactics.

**8. Introduction to Military Working Dogs.** This subcourse will teach the student how to instruct on the role of military working dogs and the potential support available to forces requiring nonlethal force options. Upon completion, students will be able to instruct others on military working dogs capabilities, missions, and limitations.

**9. Rules of Engagement, Law of War, Constitutional Seizure.** This subcourse will teach the student how to instruct standing ROE surrounding domestic use of force to effect a seizure. Upon completion, students will be able to instruct others on the basic guidelines for establishing unit rules of engagement cards that include the use of nonlethal technologies.

**10. Nonlethal Munitions and Employment/Live Fire.** This subcourse will teach the student how to instruct the nonlethal munitions available. Students will participate in live fire exercises and upon completion of the course will be able to instruct others on the capabilities and limitations of various nonlethal rounds. Additionally, students will be able to conduct live fire ranges and certification of nonlethal munitions.

**11. Barriers/Physical Security Measures.** This subcourse will teach the student how to instruct others on barriers and physical security measures available to tactical forces. These measures complement the use of nonlethal force or mitigate the need for deadly force. Upon completion, the student will be able to instruct others on the proper employment of barriers/physical security expedients.

**12. Tactics (Mounted/Dismounted).** This subcourse will teach the student how to instruct others on mounted/dismounted tactics as they are related to the use of NLW. Upon completion, the student will be able to instruct others on proper tactical employment (mounted and dismounted) and nonlethal methods to quell civil disturbance. The instructor will use training tactics and actual operations scenarios. Military operation on urbanized terrain (MOUT) requires different tactics, techniques, and procedures because of the heavily built-up environment.

## SECTION IV - ANNEXES

### LISTING OF THE ANNEXES FOR EACH SUBCOURSE WITHIN THIS POI

<u>Annexes</u>	<u>Title</u>	<u>Page No.</u>
A	Instructor Development	
B	Force Continuum	
C	Crowd Dynamics/Crowd Control	
D	Communication Skills	
E	Oleoresin Capsicum Aerosol Training	
F	Open-Hand Control	
G	Impact Weapons	
H	Introduction to Military Working Dogs	
I	Rules of Engagement, Law of War, Constitutional Seizure	
J	Nonlethal Munitions and Employment/Live Fire	
K	Barriers/Physical Security Measures	
L	Tactics (Mounted/Dismounted)	

## Appendix D

### SAMPLE UNIT TRAINING SCHEDULE

#### NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE

##### TRAINING DAY #1

<u>Time</u>	<u>Subject</u>	<u>Location</u>	<u>Uniform</u>	<u>Instructor</u>	<u>References/Notes</u>
0800	Administration Time	Classroom	U1		
0830	Introduction Introduce Cadre Force Continuum Rules of Engagement	Classroom	U1		
0930	Communications Skill	Classroom	U1		
1100	Noon Chow				
1300	Communication Skills	Classroom	U1		
1600	Secure/End of Duty Day				

##### Administration:

##### Uniforms:

U1: BDU/utility uniform

U2: BDU/utility uniform with LBE/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

##### Transportation:

##### Weapons:

##### Ammunition:

##### Classroom Requirements:

1. Screen
2. Video show projector with central processing unit
3. Televisions
4. VCR

##### Miscellaneous:

1. All personnel are required to have a notebook, pencil, and pen.
2. Handouts prepared and passed out

## NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE

### TRAINING DAY #2

<u>Time</u>	<u>Subject</u>	<u>Location</u>	<u>Uniform</u>	<u>Instructor</u>	<u>References/Notes</u>
0800	Communication Skills Practical Application	Plt Areas	U1		
1000	NL Equipment Brief (Equipment Identified and Explained)	Classroom	U1		
1100	Noon Chow				
1300	Crowd Control I Crowd Dynamics	Classroom	U1		
1500	Riot Control Formations				
1600	Secure/End of Duty Day				

### Administration:

#### Uniforms:

U1: BDU/utility uniform

U2: BDU/utility uniform with LBE/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

#### Transportation:

#### Weapons:

#### Ammunition:

Classroom Requirements: Same

#### Miscellaneous:

1. Students are required to have a notebook, pencil, and pen.
2. Copies of equipment list for students.

## NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE

### TRAINING DAY #3

<u>Time</u>	<u>Subject</u>	<u>Location</u>	<u>Uniform</u>	<u>Instructor</u>	<u>References/Notes</u>
0800	K-9 Demonstration	Football Field	UI		
1000	Oleoresin Capsicum Aerosol Training	Classroom	UI		
1100	Noon Chow				
1300	Oleoresin Capsicum Aerosol Training	Classroom	UI		
1400	Oleoresin Capsicum Aerosol Training (Practical Application)	TBD	UI		
TBD	Secure/End of Duty Day				

### **Administration:**

#### Uniforms:

UI: BDU/utility uniform

U2: BDU/utility uniform with LBE/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

#### Transportation:

#### Weapons:

(60) Can INERT OC

(18) Can (MK4) OC

Miscellaneous: INERT OC for classroom instruction.

#### Ammunition:

Classroom Requirements: Same with OC training requirements.

(5) Galvanized trash cans (with liners)

(2) Water hoses with fresh running water

## NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE

### TRAINING DAY #4

<u>Time</u>	<u>Subject</u>	<u>Location</u>	<u>Uniform</u>	<u>Instructor</u>	<u>References/Notes</u>
0800	Open Hand Control Techniques	Classroom	U2		
0900	Open Hand Control Techniques (Practical Application)	Field	U2		
1100	Noon Chow				
1300	Open Hand Control Techniques (Practical Application)	Field	U2		
1600	Secure/End of Duty Day				

### **Administration:**

#### Uniforms:

U1: BDU/utility uniform

U2: BDU/utility uniform with LBE/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

#### Transportation:

#### Weapons:

#### Ammunition:

#### Classroom Requirements:

1. Screen
2. Video show projector with central processing unit
3. Televisions
4. VCR
5. Overhead projector
6. Trauma chart in classroom and at the training area

#### Miscellaneous:



## NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE

### TRAINING DAY #5

<u>Time</u>	<u>Subject</u>	<u>Location</u>	<u>Uniform</u>	<u>Instructor</u>	<u>References/Notes</u>
0800	Nonlethal Munitions and Employment	Classroom	U1		
1100	Noon Chow				
1300	Riot Control Platoons (Riot Control Baton Techniques)	Field 1	U3		Class will be split into riot control and contact platoons
	Contact Platoons (Expandable Straight Baton Techniques)	Field 2	U3		
1600	Secure/End of Duty Day				

### **Administration:**

#### Uniforms:

U1: BDU/utility uniform

U2: BDU/utility uniform with/ harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

#### Transportation:

#### Weapons:

#### Ammunition:

#### Classroom Requirements:

1. Screen
2. Video show projector with central processing unit
3. Televisions
4. VCR
5. Overhead projector

#### Miscellaneous:

**NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE**

**TRAINING DAY #6**

<b><u>Time</u></b>	<b><u>Subject</u></b>	<b><u>Location</u></b>	<b><u>Uniform</u></b>	<b><u>Instructor</u></b>	<b><u>References/Notes</u></b>
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**CONTACT PLATOONS/M203/MI200**

0800	Movement to Range		U4		
0830	Range Brief/Safety Brief	Range	U4		
0900	Nonlethal Munitions (Live Fire Exercise)	Range	U4		
TBD	Noon Chow				
TBD	Movement to Mainside		U4		
TBD	Weapons Cleaning	Armory			
TBD	Secure/End of Duty Day				

**CONTACT PLATOONS/ESCORTS RIOT CONTROL PLATOONS**

0800	Riot Control Formations (Review)	Classroom	U1		
0900	Riot Control Formations (Practical Application)	Field	U3		
1100	Noon Chow				
1300	Riot Control Formations (Practical Application)	Field	U3		
1600	Secure/End of Duty Day				

**Administration:**

Uniforms:

U1: BDU/utility uniform

U2: BDU/utility uniform with/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

Transportation:

Weapons:

Ammunition:

**TRAINING DAY #6 (CONTINUED)**

<u>Time</u>	<u>Subject</u>	<u>Location</u>	<u>Uniform</u>	<u>Instructor</u>	<u>References/Notes</u>
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**RIOT CONTROL PLATOON/DESIGNATED MARKSMEN**

0800	Movement to Range		U4		
0830	Range Brief/Safety Brief	Range	U4		
0900	Designated Marksman Training and Live Fire	Range	U4		
TBD	Noon Chow				
TBD	Movement to Mainside		U4		
TBD	Weapons Cleaning	Armory			
TBD	Secure/End of Duty Day				

**Administration:**

Uniforms

U1: BDU/utility uniform

U2: BDU/utility uniform with LBE/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

Transportation:

0800 Transportation to range (M203 and M1200 shooters) (—) PAX and return.

0800 Movement to range (designated marksmen) (—) PAX and return.

Weapons: Students will be required to have their T/O weapons

Ammunition: TBD

Classroom Requirements: Same

## NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE

### TRAINING DAY #7

<u>Time</u>	<u>Subject</u>	<u>Location</u>	<u>Uniform</u>	<u>Instructor</u>	<u>References/Notes</u>
0800	Riot Control Formations Classroom Instruction Exercise Brief	Classroom	UI		
0900	Riot Control Formations (Practical Application)	Field	U4		
1100	Noon Chow				
1300	Barriers/Physical Security	Classroom	UI		
1800	Secure/End of Duty Day				

### **Administration:**

#### Uniforms:

U1: BDU/utility uniform

U2: BDU/utility uniform with LBE/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

#### Transportation:

#### Weapons:

#### Ammunition:

#### Classroom Requirements:

1. Screen
2. Video show projector with central processing unit
3. Televisions
4. VCR

Miscellaneous: Riot control formation PE will be conducted as individual platoons and eventually brought together for company size formations.

**NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE**

**TRAINING DAY #8**

<b><u>Time</u></b>	<b><u>Subject</u></b>	<b><u>Location</u></b>	<b><u>Uniform</u></b>	<b><u>Instructor</u></b>	<b><u>References/Notes</u></b>
0600	Movement to MOUT Facility		U4		
0700	Exercise Brief	MOUT	U4		
0800	Nonlethal Munitions Demonstration	MOUT	U4		
0900	MOUT Exercise	MOUT	U4		
TBD	Noon Chow				
1300	MOUT Exercise	MOUT	U4		
TBD	Evening Chow				
TBD	Movement to Mainside				
TBD	Secure/End of Duty Day				

**Administration:**

**Uniforms:**

U1: BDU/utility uniform

U2: BDU/utility uniform with LBE/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE / harness, canteens, flak jacket, helmet, and T/O weapon

**Transportation:**

**Weapons:**

**Ammunition:**

**Classroom Requirements:** N/A

**NONLETHAL INDIVIDUAL WEAPONS TRAINING COURSE TRAINING SCHEDULE**

**TRAINING DAY #9**

<b><u>Time</u></b>	<b><u>Subject</u></b>	<b><u>Location</u></b>	<b><u>Uniform</u></b>	<b><u>Instructor</u></b>	<b><u>References/Notes</u></b>
TBD	MOUT Exercise	MOUT	U4		
TBD	Secure/End of Duty Day				

**Administration:**

Uniforms:

U1: BDU/utility uniform

U2: BDU/utility uniform with LBE/harness and canteens

U3: Utility uniform with LBE/harness, canteens, flak jacket, and helmet

U4: Utility uniform with LBE/harness, canteens, flak jacket, helmet, and T/O weapon

Transportation:

Weapons:

Ammunition:

Classroom Requirements:

## REFERENCES

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Joint Publication 3-07, *Joint Doctrine for Military Operations Other Than War*

Joint Publication 3-07.3, *JTTP for Peacekeeping Operations*

Joint Publication 3-57, *Doctrine for Joint Civil Affairs*

Joint Publication 3-58, *Joint Doctrine for Military Deception*

Joint Universal Lessons Learned System, *Operation UNITED SHIELD*

### Multiservice

FM 100-23-1/FMFRP 7-16/NDC TACNOTE 3-07.6/ACCP 50-56/PACAFP 50-56/USAFEP 50-56,  
*Multiservice Procedures for Humanitarian Assistance Operations*

### Army

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## **Air Force**

AFI 31-202, *Military Working Dog Program*

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# GLOSSARY

## PART I—ABBREVIATIONS AND ACRONYMS

### A

<b>A/C</b>	aircraft
<b>admin</b>	administration
<b>AFDC</b>	US Air Force Doctrine Center
<b>AFM</b>	Air Force Manual
<b>AFSC</b>	Air Force specialty code(s)
<b>AMC</b>	Army Materiel Command
<b>Approx</b>	approximately
<b>ASI</b>	additional skill identifier

### B

<b>BDU</b>	battle dress uniform
<b>BIIL</b>	basic-issue items list

### C

<b>Cal</b>	caliber
<b>CEP</b>	circular error probable
<b>chem</b>	chemical
<b>CINC</b>	commander in chief
<b>CJCS</b>	Chairman of the Joint Chiefs of Staff
<b>cm</b>	centimeter
<b>CMC</b>	Commandant of the Marine Corps
<b>COTS</b>	commercial off-the-shelf
<b>CPU</b>	central processing unit
<b>CS</b>	riot control agent (tear gas)

### D

<b>3-D</b>	three-dimensional
<b>DA</b>	Department of the Army
<b>dB</b>	decibel
<b>DC</b>	direct current
<b>demo</b>	demonstration
<b>DM</b>	designated marksmen
<b>DOD</b>	Department of Defense
<b>DODD</b>	Department of Defense Directive

### F

<b>FB</b>	flash back
<b>FDA</b>	Food and Drug Administration
<b>FM</b>	Field Manual

<b>FMFM</b>	Fleet Marine Force Manual
<b>fps</b>	feet per second
<b>FS</b>	fin stabilized
<b>FSE</b>	fire support element
<b>ft</b>	foot
<b>G</b>	
<b>g</b>	gram
<b>G-1</b>	Army or Marine Corps component manpower or personnel staff officer (Army division or higher staff, Marine Corps brigade or higher staff)
<b>G-2</b>	Army or Marine Corps component intelligence staff officer (Army division or higher staff, Marine Corps brigade or higher staff)
<b>G-3</b>	Army or Marine Corps component operations staff officer (Army division or higher staff, Marine Corps brigade or higher staff)
<b>G-4</b>	Army or Marine Corps component logistics staff officer (Army division or higher staff, Marine Corps brigade or higher staff)
<b>ga</b>	gauge
<b>GCE</b>	ground combat element
<b>GOTS</b>	government off-the-shelf
<b>H</b>	
<b>hr</b>	hours
<b>I</b>	
<b>ID</b>	identify
<b>IFF</b>	identification, friend or foe
<b>info</b>	information
<b>intel</b>	intelligence
<b>IO</b>	International Organization
<b>in</b>	inch
<b>in<sup>2</sup></b>	square inch
<b>IPB</b>	intelligence preparation of the battlefield
<b>IR</b>	infrared
<b>ITT</b>	interrogator-translator team
<b>J</b>	
<b>JAG</b>	Judge Advocate General
<b>JCRG</b>	joint concepts requirements group
<b>K</b>	
<b>K-9</b>	dog

## L

<b>LBE</b>	load bearing equipment
<b>LEA</b>	Law Enforcement Agency
<b>LFORM</b>	landing force operational reserve materiel
<b>LHA</b>	amphibious assault ship, general purpose
<b>LHD</b>	amphibious assault ship, multipurpose
<b>LP/OP</b>	listening post/observation post
<b>LVOSS</b>	light visual optical screening system

## M

<b>m</b>	meter
<b>MAGTF</b>	Marine air ground task force
<b>max</b>	maximum
<b>MCCDC</b>	Marine Corps Combat Development Command
<b>MCO</b>	Marine Corps Order
<b>MCPDS</b>	Marine Corps Doctrinal Publication System
<b>MEF</b>	Marine expeditionary force
<b>METT-T</b>	mission, enemy, terrain, and weather, troops and support available time available
<b>MEU</b>	Marine expeditionary unit
<b>MK</b>	mark
<b>mm</b>	millimeter
<b>MOOTW</b>	military operations other than war
<b>MOS</b>	military occupational specialty
<b>MOUT</b>	military operations on urbanized terrain
<b>MSDS</b>	material safety data sheet
<b>MTT</b>	mobile training team
<b>N/A</b>	not applicable
<b>MTTP</b>	multiservice tactics, techniques, and procedures

## N

<b>N/A</b>	not applicable
<b>NCA</b>	National Command Authorities
<b>NCO</b>	noncommissioned officer
<b>NDC</b>	US Naval Doctrine Command
<b>NIWIC</b>	Nonlethal Individual Weapons Instructor Course
<b>NL</b>	nonlethal
<b>NLW</b>	nonlethal weapons
<b>No</b>	number
<b>NWP</b>	Naval Warfare Publication

## O

<b>OC</b>	oleoresin capsicum
<b>OP</b>	observation post
<b>OPR</b>	office(s) of primary responsibility
<b>ops</b>	operations
<b>OSD</b>	Office of the Secretary of Defense
<b>oz</b>	ounces

## **P**

<b>PAO</b>	Public Affairs Office
<b>PASGT</b>	personnel armor system for ground troops
<b>PAX</b>	passenger(s)
<b>PE</b>	practical exercise
<b>plt</b>	platoon
<b>POI</b>	program of instruction
<b>POW</b>	prisoner of war
<b>PSYOP</b>	psychological operations
<b>PVC</b>	polyvinyl chloride

## **R**

<b>RCA</b>	riot control agent
<b>RD</b>	round
<b>recon</b>	reconnaissance
<b>ROE</b>	rules of engagement
<b>RP</b>	rubber pellet

## **S**

<b>S1</b>	battalion or brigade manpower or personnel staff officer (Army; Marine Corps battalion or regiment)
<b>S2</b>	battalion or brigade intelligence staff officer (Army; Marine Corps battalion or regiment)
<b>S3</b>	battalion or brigade operations staff officer (Army; Marine Corps battalion or regiment)
<b>S4</b>	battalion or brigade logistics staff officer (Army; Marine Corps battalion or regiment)
<b>SJA</b>	staff judge advocate
<b>SNCO</b>	senior noncommissioned officer
<b>SOC</b>	special operations capable
<b>SOP</b>	standing operating procedure(s)
<b>SOTG</b>	special operations training groups
<b>SO</b>	special operations
<b>spec</b>	specification

## **T**

<b>T/E</b>	table of equipment
<b>T/O</b>	table of organization
<b>T/O &amp; E</b>	table of organization and equipment (USMC)
<b>TAC SOP</b>	tactical standing operating procedure
<b>TBD</b>	to be determined
<b>TC</b>	training circular
<b>TM</b>	team
<b>TO&amp;E</b>	table of organization and equipment (USA)
<b>TTP</b>	tactics, techniques, and procedures

## U

<b>US</b>	United States
<b>USA</b>	United States Army
<b>USAF</b>	United States Air Force
<b>USMC</b>	United States Marine Corps
<b>USN</b>	United States Navy

## V

<b>VCR</b>	video cassette recorder
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## Y

<b>yd</b>	yard
<b>00</b>	double zero

## PART II- TERMS AND DEFINITIONS

**Air Force specialty code (AFSC).** Primary job of a US Air Force officer or enlisted person. Analogous to the Army and Marine Corps military occupational skill (MOS).

**amphibious ready group (ARG).** Three to 4 US Navy amphibious ships carrying a Marine Expeditionary Unit, its attachments, and all equipment, vehicles, and aircraft for a 6-month deployment at sea. Usually formed around an LHA or LHD amphibious assault ship.

**battalion landing team (BLT).** In an amphibious operation, an infantry battalion normally reinforced by necessary combat and service elements; the basic unit for planning an assault landing. (Joint Pub 1-02) NOTE: Consists of Marine Corps rifle battalion and attachments formed as centerpiece of Marine Expeditionary Unit's Ground Combat Element. Approximately 1000 Marines.

**commercial off the shelf (COTS).** Describes items procured for military use through civilian contractors.

**designated marksman (DM).** A rifleman stationed in an overwatch position above friendly forces, armed with a standard infantry weapon appropriate to his service which is mounted with a high-powered scope and loaded with lethal ammunition. The designated marksman uses his vantage point to identify agitators to forces below, eliminate lethal threats, and monitor the battlefield.

**Fleet Marine Force (FMF).** A balanced force of combined arms comprising land, air, and service elements of the US Marine Corps. A Fleet Marine Force is an integral part of a US Fleet and has the status of a type command. Note: It can include deployable Marine Corps units of any type.

**government off the shelf (GOTS).** Analogous to COTS, but describing items already procured by the US government and ready for issue to military units.

**ground combat element (GCE).** The Marine Corps Marine Air-Ground Task Force element that is task organized to conduct ground operations. The GCE is constructed around an infantry unit and varies in size from a reinforced infantry battalion to one or more reinforced Marine division(s). The GCE also includes appropriate combat support and combat service support units. Normally, there is only one GCE in a MAGTF. NOTE: It is part of a Marine Corps Marine air-ground task force comprising infantry units, attachments, and staff.

**intelligence preparation of the battlespace (IPB).** An analytical methodology employed to reduce uncertainties concerning the enemy, environment, and terrain for all types of operations. Intelligence preparation of the battlespace builds an extensive data base for each potential area in which a unit may be required to operate. The data base is then analyzed in detail to determine the impact of the enemy, environment, and terrain on operations and presents it in graphic form. Intelligence preparation of the battlespace is a continuing process. Also called IPB. *Note: Intense intelligence analysis of battlefield conditions, enemy posture and intentions, weather, and other pertinent information, conducted by an S-2 or similar intelligence officer. May include detailed analysis of crowd motivations and possible actions.*

**interrogator-translator team (ITT).** Marine Corps unit, usually working as a small detachment to a larger infantry unit, highly trained in interrogation techniques and fluent in adversary native language.

**joint acquisitions group (JAG).** Multiservice group formed, along with JCRG, in March 1996 in Washington, D.C. Tasked with identifying emerging NLT and coordinating and prioritizing procurement efforts in a joint arena.

**joint concepts requirements group (JCRG).** Works closely with JAG, but primarily tasked with identifying Nonlethal Technology requirements for active forces of all services.

**landing forces operational reserve material (LFORM).** Storage of Marine Corps and associated units' ammunition aboard US Navy shipping.

**low-intensity conflict (LIC).** Political-military confrontation between contending states or groups below conventional war and above the routine, peaceful competition among states. It frequently involves protracted struggles of competing principles and ideologies. Low intensity conflict ranges from subversion to the use of armed force. It is waged by a combination of means employing political, economic, informational, and military instruments. Low intensity conflicts are often localized, generally in the Third World, but contain regional and global security implications. *Note: Also known as small wars or "brushfire wars", low-intensity conflict are rebellions, insurrections and the like characterized by adversaries dedicated to a cause but lacking command and control structure and modern equipment.*

**Marine Expeditionary Force (MEF).** The largest of the Marine air-ground task forces, is normally built around a division/wing team, but can include several divisions and aircraft wings, together with an appropriate combat service support organization.

The Marine expeditionary force is capable of conducting a wide range of amphibious assault operations and sustained operations ashore. It can be tailored for a wide variety of combat missions in any geographic environment. *Note: It is the largest deployable Marine Corps unit, comprising nearly 1/3 of active Marine Corps deployable forces. Approximately 50,000 Marines and Sailors.*

**maritime interception operation (MIO).** Means by which an exclusion zone at sea is enforced. Involves the visit of merchant ships, by armed boarding parties if necessary, bound to, through, or out of a defined area, to examine each ship's papers and cargo and to search for evidence of contraband. The provisions must be established by a sanctioning body and must be applied to ships of all nationalities.

**maritime prepositioning force (MPF).** A task organization of units under one commander formed for the purpose of introducing a MAGTF and its associated equipment and supplies into a secure area. The maritime prepositioning force is composed of a command element, a maritime prepositioning ships squadron, a MAGTF, and a Navy support element.

**military occupational specialty (MOS).** Primary job of military officer or enlisted personnel.

**military operations on urbanized terrain (MOUT).** All military actions planned and conducted on a topographical complex and its adjacent natural terrain where man-made construction is the dominant feature. It includes combat-in-cities, which is that portion of MOUT involving house-to-house and street-by-street fighting in towns and cities.

**military operations other than war (MOOTW).** Operations that encompass the use of military capabilities across the range of military operations short of war. These military actions can be applied to complement any combination of the other instruments of national power and occur before, during, and after war.

**military police (MP).** Marine Corps and Army police forces designated by specific MOS.

**mobile training team (MTT).** A team consisting of one or more US military or civilian personnel sent on temporary duty, often to a foreign nation, to give instruction. The mission of the team is to train indigenous personnel to operate, maintain, and employ weapons and support systems, or to develop a self-training capability in a particular skill. The National Command Authorities may direct a team to train either military or civilian indigenous personnel, depending upon host nation requests.

**nonlethal antimateriel (NLAM).** Similar to NLT, but encompassing weapons and ordnance designed to incapacitate materiel and vehicles rather than humans.

**nonlethal weapons (NLW).** Weapons explicitly designed and primarily employed so as to incapacitate personnel or materiel, while minimizing fatalities, permanent injury to personnel, and undesired damage to property and the environment.

**nonlethal technology (NLT).** Synonymous with NLW, but also encompassing more advanced technology which is not yet available for use by military forces.

**oleoresin capsicum (OC).** Also known as “pepper spray”, OC is made completely from organic materials and is FDA-approved for sale over-the-counter in the United States. Causes severe and immediate burning sensation to mucous membranes when sprayed into face, nose, and eyes.

**rules of engagement (ROE).** Directives issued by competent military authority which delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered. Also called ROE.

**table of equipment (T/E).** Total list of equipment of all types authorized for a Marine Corps unit.

**table of organization (T/O).** Total manpower authorized for specific unit, organized by billet and rank. TO& E is a US Army term which encompasses T/O and T/E.

**tactical psychological operations team (TPT).** US Army unit specifically trained and employed to conduct psychological operations against adversary forces, to include dissemination of pamphlets, native language broadcasts by audio and visual means, and interaction with local media.

**visit, board, search, and seizure (VBSS).** US Navy mission analogous to MIO, in which hostile vessels on the high seas are stopped, boarded, taken over by friendly forces, inspected for violations of international law or sanction violations, and if necessary, seized.



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**FM 90-40  
MCRP 3-15.8  
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6 OCTOBER 1998**

**BY ORDER OF THE SECRETARY OF THE AIR FORCE**

**RONALD E. KEYS  
Major General, USAF  
Commander  
Headquarters Air Force Doctrine Center**

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