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FY 2007 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: Feb 2006

BUDGET ACTIVITY: 03
PROGRAM ELEMENT: 0603651M
PROGRAM ELEMENT TITLE: JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT

COST: (Dollars in Thousands)

Project Number & Title	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
Total PE	5,809	2,358	1,405	10,865	10,879	11,097	11,320

3022 JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT	5,809	2,358	1,405	10,865	10,879	11,097	11,320
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A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program funds the research and development of next-generation Non-Lethal Weapons (NLWs) and includes performing analysis, technical development efforts, and modeling and simulation necessary to ensure optimum weaponizing and use of these NLWs. Next-generation NLW systems focus on long-range localized Non-Lethal (NL) effects to identified threat individuals (or groups of individuals) and/or their threat weapons systems operating in complicated environments such as urban areas, crowds, buildings, vehicles, boats and also in close proximity to high-value civilian establishments. This program transitioned from Program Element (PE) 0603114N, Power Projection Advanced Technology by order of the Under Secretary of Defense for Acquisition, Technology, and Logistics, USD(AT&L) to establish a separate PE for Joint Non-Lethal Weapons Technology Development and to establish the Marine Corps as the executive agent for DoD Joint Non-Lethal Weapons RDT&E.

Due to the number of efforts in this PE, the programs described herein are representative of the work included in this PE.

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B. PROGRAM CHANGE SUMMARY:

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
FY 2006 President's Budget Submission	5,809	2,394	1,397
Congressional Undistributed Reductions/Rescissions	0	-36	0
Rate Adjustments	0	0	8
FY 2007 President's Budget Submission	5,809	2,358	1,405

PROGRAM CHANGE SUMMARY EXPLANATION:

Technical: Not applicable.

Schedule: Not applicable.

C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

D. ACQUISITION STRATEGY:

Not applicable.

E. PERFORMANCE METRICS:

The primary objective of this Program Element is the development of technologies that lead to the next-generation of Non-Lethal Weapons. The program consists of a collection of projects that range from studies and analyses to the development and evaluation of feasibility demonstration models. Individual project metrics reflect the technical goals of each specific project. Typical metrics include both the effectiveness of the technology, human effects and effectiveness, and potential for compliance with policy and legislation. Overarching considerations include the advancement of related Technology Readiness Levels and Human Effects Readiness Levels, the degree to which project investments are leveraged with other performers, reduction in life cycle cost upon application of the technology, and the identification of opportunities to transition technology to higher categories of development.

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PROJECT NUMBER: 3022

PROGRAM ELEMENT TITLE: JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT

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COST: (Dollars in Thousands)

Project Number & Title	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
3022 JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT	5,809	2,358	1,405	10,865	10,879	11,097	11,320

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project funds the research and development of next-generation NLWs and includes performing analysis, technical development efforts, and modeling and simulation necessary to ensure optimum weaponizing and use of these NLWs. Next-generation NLW systems focus on long-range localized NL effects to identified threat individuals (or groups of individuals) and/or their threat weapons systems operating in complicated environments such as urban areas, crowds, buildings, vehicles, boats and also in close proximity to high-value civilian establishments.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2005	FY 2006	FY 2007
JOINT NON-LETHAL WEAPONS	5,809	2,358	1,405

FY 2005 Accomplishments:

- Initiated effort to conduct feasibility assessments and demonstrations of promising non-lethal technologies and system concepts. Initial efforts will assess the general utility, effect, and effectiveness of technologies for incapacitating personnel, clearing facilities, stopping vehicles and vessels, and denying enemy access to protected areas.
- Initiated design of a man-transportable laser weapons system that can be used for non-lethal counter-personnel or non-lethal counter-material applications through ultra-high precision engagement of selected targets with minimal collateral damage.

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FY 2006 Plans:

- Continue all efforts of FY 2005.
- Initiate research to define the optimum approaches, technologies and tactics necessary to clear a facility/building with and without entry. The goal is to develop the next generation clear-a-space device or system that can effectively incapacitate or force evacuation of a facility with minimal collateral effects or injury to occupants and delivered to the target(s) at range.
- Initiate investigation of technology suitable for long-range, non-lethal vehicle or vessel stopping with reversible effects, and minimal collateral effects. The technology will be suitable for applications in complex operational environments such as within crowds, within urban environments, within buildings and vehicles, for non-lethal precision strike (extended duration incapacitation/treat neutralization), and for joint force protection applications.
- Initiate fabrication of a man-transportable laser weapons system.

FY 2007 Plans:

- Continue all efforts of FY 2006.
- Initiate research to develop an understanding of the complex relationships between individual, group and crowd dynamics to understand the macro effects of NLWs. Specifically, investigate factors that cause crowds to move to violent behavior, and what non-lethal technologies will be effective in controlling or mitigating violent crowd behavior.
- Initiate effort to examine and optimize non-lethal effects and effectiveness of various non-lethal stimuli, to include light, acoustics, electrical, high power laser, high power microwave and active denial technology. Research would include human effects analysis with respect to existing non-lethal stimuli and other emerging system stimuli to characterize behaviors and their operational relevance.

C. OTHER PROGRAM FUNDING SUMMARY:

NAVY RELATED RDT&E:

PE 0602651M Joint Non-Lethal Weapons Applied Research

PE 0603851M Nonlethal Weapons

D. ACQUISITION STRATEGY:

Not applicable.

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