SOURCES SOUGHT - REQUEST FOR INFORMATION for

Non-Lethal Weapons Research and Technology Development ID/IQ

1.0 DESCRIPTION

1.1 The Marine Corps Systems Command (MCSC), on behalf of the Joint Non-Lethal Weapons Program (JNLWP), is seeking potential sources that have the capability to conduct non-lethal weapons research and technology development; technical, scientific, and program analyses; systems integration and systems engineering tasks. Potential sources should be able to demonstrate capability to support advancing non-lethal weapons (NLW) technology from Technology Readiness Level (TRL) 2, research to prove feasibility, through TRL 7 with a demonstration of a system prototype in an operational environment (Technology Readiness Assessment (TRA) Guidance Publication, April 2011 http://www.acq.osd.mil/chieftechnologist/publications/docs/TRA2011.pdf). Further, potential sources should be capable of conducting bioeffects research to advance the state of knowledge from Human Effects Readiness Level (HERL) 2 to HERL 7 as defined in Department of Defense Instruction (DoDI) 3200.19 (available at http://www.dtic.mil/whs/directives/corres/pdf/320019p.pdf).

1.2 THIS IS A REQUEST FOR INFORMATION (RFI) ONLY. This RFI is issued solely for information and planning purposes; it does not constitute a Request for Proposal (RFP) or a promise to issue an RFP in the future. This request for information does not commit the Government to contract for any supply or service. Further, MCSC is not at this time seeking proposals and will not accept unsolicited proposals. Respondents are advised that the U.S. Government will not pay for any information or administrative costs incurred in response to this RFI; all costs associated with responding to this RFI will be solely at the interested party's expense. Not responding to this RFI does not preclude participation in any future RFP, if any is issued.

If a solicitation is released, it will be synopsized on the Federal Business Opportunities (FedBizOpps) website, www.fbo.gov, and on the Joint Non-Lethal Weapons Program website, http://jnlwp.defense.gov. **It is the responsibility of the potential offerors to monitor these sites for additional information pertaining to this requirement.**

2.0 BACKGROUND

Non-lethal weapons are defined as "weapons that are 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." The purpose of the Joint Non-Lethal Weapons Program is to provide warfighters a family of non-lethal weapon systems with a range of capabilities across the full spectrum of threats and crises.

A core mission of the JNWLP is identifying and developing technologies into operationally suitable and effective non-lethal solutions. In support of this mission, the JNLWP is seeking a

multiple-source capability for performing research and technology development; technical, scientific, and program analyses; systems integration and systems engineering tasks to meet the Department of Defense's non-lethal weapons mission objectives.

The Government is conducting market research to gauge level of interest and capability with Industry to address anticipated requirements for NLW research and technology development.

2.1 FUNCTIONAL AREAS

Potential sources should be able to conduct research and development resulting in delivery of data, hardware, software, equipment and documentation across the scope of the non-lethal weapons functional areas listed below. It is envisioned that sources provide a broad spectrum of capabilities by including access to performers that may include industry and academia. In general, the types of tasks will include:

- Prototype and component technology development, testing, and demonstration
- Modeling & simulation
- Systems engineering and technology integration
- Technical assessment, independent design and technical reviews, technology scouting, feasibility studies, strategic research and technology development planning
- Bioeffects research
- Data, documentation, and visual media preparation

Individual task/delivery orders will be used to further define the technical objectives, schedule and deliverables, including compliance with appropriate policies, standards, and commercial processes, to meet specific requirements in the following broad non-lethal weapons functional areas:

2.1.1 Human Electromuscular Incapacitation (HEMI): A HEMI stimulus causes muscle tetany which can non-lethally disable individuals. The JNLWP is focusing on developing technology to increase the standoff range and duration of the HEMI effect beyond currently fielded capabilities. Possible tasks include hardware development and bioeffects research to better quantify the effects and risk of injury.

2.1.2 Nanosecond Electrical Pulses: The JNLWP is investigating the feasibly of using nanosecond electrical pulses for non-lethal application. Possible development tasks include hardware development and bioeffects research to better quantify the effects and risk of injury.

2.1.3 Active Denial Technology (ADT): ADT utilizes millimeter waves to cause an intense heating sensation and repel effect on targeted individuals. The JNLWP is focused on developing and integrating into various platforms alternative and improved millimeter wave sources, antenna and other key components. The JNLWP is also interested in bioeffects research to accompany future system configurations.

2.1.4 Human Effects: Human effects research spans the entire breadth of non-lethal weapons stimuli. JNLWP human effects efforts are focused on characterizing non-lethal effects, quantifying risk of injury, studying behavior response, and building, verifying and validating

predictive models and simulations for non-lethal effects and effectiveness.

2.1.5 Blunt Impact Technologies: Blunt impact is used to describe the effect produced by existing rudimentary munitions such as rubber bullets, sting balls and bean bag rounds as well as more sophisticated non-lethal munitions carrying other payloads. While generally effective, blunt impact technologies are limited in range and often have a higher risk of injury as compared to other stimuli. The JNLWP is focused on exploring alternative methods to deliver blunt impact effects at long ranges while minimizing the risk of injury at short ranges.

2.1.6 Non-Lethal Directed Energy Weapons – Radio Frequency / High Power Microwaves: Advanced RF/HPM technologies enable smaller, lighter and more capable non-lethal directed energy weapons. The JNLWP is focused on analyses, feasibility studies and advanced technology development of RF component technologies for a wide range of non-lethal mission applications.

2.1.7 Non-Lethal Laser Technology: Lasers can be used for a variety of non-lethal weapons effects including optical distraction, thermal repel, and laser induced plasma effects. The JNLWP is focused on identifying and developing technology to improve system effectiveness and reduce risk of significant injury. The JNLWP is interested in investigating new laser sources and enabling components that will make the fielding of a non-lethal laser weapons system more practical. The tasks may include conceptualization, feasibility assessments, development, demonstration and prototyping of novel technologies.

2.1.8 Vehicle/Vessel Stopping Technologies: Non-lethal vehicle and vessel stopping technologies may include directed energy, electrical, mechanical, or other means to stop a potential threat vehicle or vessel underway. The JNLWP is focused on developing, prototyping and integrating operationally suitable systems and component technologies capable of stopping a vehicle or vessel at relevant ranges in checkpoint, pursuit and/or convoy scenarios.

2.1.9 New/Advanced Non-Lethal Materials, Payloads, and Payload Delivery Systems: New/advanced non-lethal payloads have the potential to provide for more effective and operationally suitable non-lethal weapons, devices and munitions. The JNLWP is focused on identifying and characterizing innovative materials to improve the range, efficiency, cost, effectiveness and safety of emerging and existing non-lethal capabilities. The JNLWP is interested in conceptualization, feasibility assessment, development and demonstration of new payloads and delivery methods to provide non-lethal counter-personnel and counter-materiel effects.

2.1.10 Independent Technical Reviews: Independent technical reviews are invaluable to the JNLWP. Such reviews provide for expert feedback and validation of JNLWP technical research and development plans, which supports effective, efficient and technically sound project execution. The JNLWP seeks facilitators and subject matter experts to organize, conduct, contribute to and report on independent technical reviews of JNLWP research and development plans spanning technologies and human effects from blunt impact to directed energy.

3.0 RFI QUESTIONS

3.1 For <u>each functional area</u> listed in section 2.1, MCSC requests your response to the questions

below. If you have no capability in a particular area, please indicate that in your response (e.g., "We have no capability in functional area 2.1.3"). Please do not include marketing materials in your response.

3.1.1 What related work have you done in the past five years that specifically addresses a functional area? Please include specific customers, a description of the work, contract numbers, dollar value, etc.

3.1.2 Describe the organization within your company (either individually or as a team) responsible for research and development related to a functional area. Please include number of personnel and the general backgrounds of those personnel (however, please do not provide resumes of current employees). An example response may be "5 physicists, 3 biomedical researchers with experience in HEMI bioeffects, etc."

3.1.3 Describe facilities available within your company (either individually or as a team) that would support the capability to address a specific functional area. Please include the type of facility (e.g. laboratory, test range, etc.) and any unique test equipment that may be used. For bioeffects research capabilities involving animal and/or human subject research please indicate whether institutional controls (i.e., Institutional Review Board and/or Institutional Animal Care and Use Committee) are in place to support that research.

3.2 Please list any Government Wide Acquisition Contract /Multi Agency contract the company may have (e.g., GSA Schedule, SeaPort-e).

4.0 RFI RESPONSES

Potential sources are requested to respond to this RFI by submitting responses via email to wesley.burgei@usmc.mil and Alicia.owsiak@usmc.mil by 27 August, 2012.

The submissions should provide administrative information to include the following:

- Company, name, title, mailing address, phone number, fax number, and e-mail of designated point of contact.

- Business type (large business, small business, small disadvantaged business, 8(a)- certified small disadvantaged business, HUBZone small business, woman-owned small business, very small business, veteran-owned small business, service-disabled veteran-owned small business) based upon North American Industry Classification System (NAICS) code 541712, Research and Development in the Physical, Engineering, and Life Sciences (except for Biotechnology). Please refer to Federal Acquisition Regulation FAR 19 for detailed information on Small Business Size Standards. The FAR is available at http://www.arnet.gov.

- Responses shall NOT include classified information and shall clearly mark any proprietary information. Please limit responses to 25 pages or less**,** including all appendices and attachments.

5.0 SUMMARY

THIS IS A REQUEST FOR INFORMATION (RFI) ONLY to identify sources that can provide Non-Lethal Weapons Research and Technology Development. The information provided in the RFI is subject to change and is not binding on the Government.

MCSC has not made a commitment to procure any of the items discussed, and release of this RFI should not be construed as such a commitment or as authorization to incur cost for which reimbursement would be required or sought. All submissions become Government property and will not be returned.

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