

Special Notice N00014-15-R-SN13
Special Program Announcement for 2015/16 Office of Naval Research
Research Opportunity:
Department of Defense Explosive Ordnance Disposal Science and Technology

I. INTRODUCTION

This announcement describes the research thrust "Department of Defense Explosive Ordnance Disposal (DoD EOD) Science and Technology (S&T) program to be launched under the BAA entitled, "Long Range Broad Agency Announcement (BAA) for Navy and Marine Corps Science and Technology" which can be found at <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Broad-AgencyAnnouncements.aspx>.

The research opportunity described in this announcement currently falls under the following sections of the FY15 Long Range BAA, ONR BAA15-00I: Section I, entitled "General Information", sub-section F, entitled "Research Opportunity Description". The "Ocean Battlespace Sensing (Code 32)" item, paragraph 1, subparagraph b, entitled "Ocean Engineering and Maritime Sensing." This subparagraph contains a link to the appropriate section of our webpage with a description of the DoD EOD S&T Program (<http://www.onr.navy.mil/Science-Technology/Departments/Code-32/All-Programs/Ocean-Systems-321/Ocean-Engineering-Marine-Systems/Ocean-Engineering-Research.aspx>).

The purpose of this announcement is to (1) focus attention of the scientific & technology community on the areas of interest, (2) encourage dialogue amongst those interested in these areas with ONR, and (3) provide a planned timetable for the submission of white papers and proposals.

II. TOPIC DESCRIPTION

The Office of Naval Research is interested in receiving white papers and full proposals for the DoD EOD S&T program which is managed in the Ocean Battlespace Sensing S&T Department (Code 32).

The EOD mission is to detect/locate, access, diagnose/identify, render safe/neutralize, recover, exploit, and dispose of unexploded ordnance including conventional, unconventional, improvised, chemical, biological, or nuclear. The EOD mission also includes responding to evolving threats posed by Improvised Explosive Devices (IEDs) and Weapons of Mass Destruction (WMD). Countering these threats requires EOD forces to have a broad range of unique tools and equipment that support movement of U.S. and allied forces and helps ensure the safety of personnel and infrastructure involved.

An IED is a device placed in an improvised manner incorporating destructive, lethal, noxious, pyrotechnic, or incendiary chemicals to destroy, incapacitate, harass, or distract. It can include military stores, but normally is devised from non-military components.

ONR has a need to develop and demonstrate emerging technologies for dismounted DoD EOD missions to detect/locate, diagnose/identify, and render safe/neutralize unexploded ordnance and IEDs. White papers and full proposals for exploratory development are sought in the following specific areas:

- **Diagnosis of Buried Unexploded Ordnance and Buried IEDs.** Technologies are sought to diagnose buried ordnance and IEDs down to at least 12 inches. The technologies should not require contact with the ordnance or IED to diagnose in place. Diagnosis of the ordnance or IED includes determination of main charge warhead fill (explosive, inert fill, chemical, biological), or status of on-board power source(s), or status of electrically charged components (charged, discharged). The technology, in a tactical form, cannot exceed 20 pounds which includes the power source. The technology must also function without representative targets or target fills present for calibration.
- **Detection and Location of Non-metallic Buried Ordnance and Buried IEDs.** Technologies are sought to detect ordnance and IEDs buried down to a depth of at least 12 inches. The technologies should focus on dismounted DoD EOD operations. The ordnance and IEDs can be constructed of the following materials:
 - Plastic
 - Rubber
 - Wood
 - Carbon Fiber

Detections are required in all types of soil conditions, including ferrous, non-ferrous, wet, and hard/compact soils, asphalt, concrete, and clay/mud walls. Consideration should also be given to ordnance and IEDs imbedded in man-made materials and structures. The maximum weight of the technology in a tactical form cannot exceed 4.5 pounds which includes the power source. The technology form factor should enable compact storage (8" x 6" x 3"), and use of conventional military power sources. The technology must also be compatible in close proximity with radio-frequency emitting devices and electronic countermeasures with no performance degradation.

- **Remote Standoff Neutralization of Ordnance and IEDs.** Technologies are sought to neutralize explosive ordnance and IEDs on land and underwater. The technology must neutralize the ordnance or IED by either rapidly consuming its explosive fill in place, or by physically separating the firing train from the explosive fill without causing any component to function or causing a sympathetic reaction of its energetics. The approach should maximize standoff distance from the target and maintain effectiveness. The approach, if applicable, should maximize use of current EOD disrupters and add no more than 1 pound to an existing EOD tool or EOD tool payload.

Nominally, Budget Activity 2 (BA 2) applied research funds will be used. The overall S&T effort is envisioned to be conducted at the TRL 3-6 stage. Achievement of TRL 5 is anticipated at the end of 36 months, and TRL 6 is expected by end of 60 months.

III. No events are planned

IV. WHITE PAPER SUBMISSION

There are distinct but related areas in this special notice. Interested parties are welcome to propose against one or more areas; however, separate White Papers and Proposals are required for each area.

White Papers will be evaluated by the Government to determine whether the technology advancement proposed appears to be of particular value to the Department of the Navy. Initial Government evaluations and feedback will be issued via e-mail notification from the Technical Point of Contact. The purpose of the White Paper is to give entities a sense of whether or not their concepts are of interest to this program and will result in either encouragement or discouragement of a Full Proposal submission. It should be noted that encouragement of a Full Proposal is simply an indication of interest and does not guarantee a subsequent award. White papers should not exceed 6 single-sided pages, exclusive of cover page, references, and resume(s) of principal investigator(s), and should be in 12-point Times New Roman font with margins not less than one inch. White papers shall be in Adobe PDF format (preferred) or in Microsoft Word format compatible with MS Office 2010. The cover page, resumes, bibliographies, project schedule, and table of contents are excluded in the page count.

For white papers proposing efforts that are considered of particular value, but either exceed available budgets or contain certain tasks or applications that are not desired, ONR may suggest a full proposal with reduced effort to fit within expected available budgets or an effort that refocuses the tasks or application of the technology to maximize the benefit to the DoD EOD S&T program.

The cover page should be labeled "White Paper for Department of Defense Explosive Ordnance Disposal Science and Technology", followed by the area that it targets. The cover page should also include the following information: title of the proposed effort, topic number as listed in this special notice, technical point of contact, telephone number, and email address.

The body of the white paper should include the following information:

- (1) Principal Investigator(s);
- (2) Relevance of the proposed effort to the research areas described in Section II;
- (3) Technical objective of the proposed effort;
- (4) Technical approach that will be pursued to meet the objective;
- (5) A summary of recent relevant technical breakthroughs; and
- (6) A funding plan showing requested funding per fiscal year.

Resume(s) of the principal investigator(s), not to exceed 1 page per principal investigator, should also be included after the body of the white paper.

White papers shall be submitted via email to ONR.NCR.321OE.list.OceanEngineering-and-MarineSy@navy.mil. If the submission exceeds 10Mb in size, please submit via upload to the secure site: <https://onroutside.onr.navy.mil/ASPProcessor/annual321oe/>. It is the responsibility of the submitting individual to ensure he/she receives an email confirming receipt from the Technical Point of Contact (listed below).

White Papers should be submitted in accordance with the schedule in Section VI. White papers received after the submittal date will not receive consideration. Finally, interested parties are not required to submit a White Paper and may submit only a Full Proposal. However, White Paper submission is strongly encouraged as it affords ONR an opportunity to provide constructive feedback to the Full Proposal formulation process.

V. FULL PROPOSAL SUBMISSION AND AWARD INFORMATION

Full proposals should be submitted to the ONR Long Range BAA 15-001 in accordance with the schedule in Section VI. Full proposals received after the submittal date will not be considered.

ONR anticipates that grants and/or contracts will be issued for this effort.

Full proposals should be submitted in accordance with the requirements of the FY15 Long Range BAA, ONR BAA15-001 and prepared using the templates and guidance posted on the ONR website. The Technical Content shall be single spaced and not exceed 20 pages. The cover page, resumes, bibliographies, project schedule, and table of contents are excluded in the page count. All proposals will be evaluated in accordance with ONR BAA15-001.

Submissions for contracts should be submitted via email to ONR.NCR.321OE.list.OceanEngineering-and-MarineSy@navy.mil. If the submission exceeds 10Mb in size, please submit via upload to the secure site: <https://onroutside.onr.navy.mil/ASPProcessor/annual321oe/>. In either case, it is the responsibility of the submitting individual to ensure he/she receives an email confirming receipt from the Technical Point of Contact (listed below).

Submissions for grants should be submitted via grants.gov (as instructed in the aforementioned Long Range BAA). For SF424 preparation, the following shall be used:

Block 4a, Federal Identifier: N00014

Block 4b, Agency Routing Number: Brian Almquist, Code 32

ONR plans to fund multiple awards. A typical award for a given area is \$2.5M for the entire 5-year period; however, awards as small as \$75k per year or as large as \$700k per year are acceptable.

VI. SIGNIFICANT DATES AND TIMES

Event	Date	Time
White Paper Submission Deadline	24 Aug 2015	1400 Eastern Time
White Paper Evaluation Feedback	21 Sep 2015	
Full Proposal Submission Deadline	26 Oct 2015	1400 Eastern Time
Full Proposal Selection Notification	30 Nov 2015	
Notional Award Start Date (for planning purposes)	01 Apr 2016	

Note: These are approximate dates.

VII. POINTS OF CONTACT

Technical Point of Contact:

Brian Almquist
Program Officer
Mine Warfare & Ocean Engineering Programs
Brian.Almquist@navy.mil

Alternate Technical Point of Contact:

Kenneth Poe
ONR EOD S&T Liaison
NSWC-IHEODTD
Kenneth.R.Poe@navy.mil

Business Point of Contact:

Chris Williamson
Contracting Officer, Code 253
Chris.R.Williamson@navy.mil

VIII. SUBMISSION OF QUESTIONS

Any questions regarding this announcement must be provided to the Technical Points of Contact and/or the Business Point of Contact listed in Section VII above. All questions shall be submitted in writing by electronic mail.

Answers to questions submitted in response to this Special Notice will be addressed in the form of an Amendment and will be posted to the following web pages:

- Federal Business Opportunities (FEDBIZOPPS) Webpage- <https://www.fbo.gov/>
- Grants.gov Webpage- <http://www.grants.gov/>
- ONR Special Notice Webpage- <http://www.onr.navy.mil/Contracts-Grants/FundingOpportunities/Special-Notices.aspx>

Questions regarding White Papers or Full Proposals should be submitted NLT two weeks before the dates recommended for receipt of White Papers and/or Full Proposals. Questions after these dates may not be answered.