



Homeland Security

Science and Technology

The Department of the Interior, Interior Business Center,
Acquisition Services Directorate releases
BROAD AGENCY ANNOUNCEMENT (BAA) 15DHS-001
National Bio- and Agrodefense Facility Transition
Research Project
on behalf of
Department of Homeland Security
Science and Technology (S&T) Directorate

Full Proposals Due: Monday, 07/06/2015
For Questions Regarding This Solicitation Contact:
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1. GENERAL INFORMATION

1.1. Introduction

This solicitation is a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016 to provide for competitive selection of research proposals. A formal Request for Proposals (RFP), solicitation or additional information regarding this announcement will not be issued. This BAA is issued by the Department of the Interior, Interior Business Center (DOI/IBC), Acquisition Services Directorate on behalf of the Department of Homeland Security (DHS) Science & Technology (S&T) Directorate.

DOI/IBC will not issue paper copies of this announcement. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. All proposals will be treated as sensitive competitive information and their contents will be disclosed only for the purpose of evaluation. DOI/IBC reserves the right to select for award and fund all, some, or none of the Full Proposals received in response to this solicitation. No funding for direct reimbursement of proposal development costs will be allowed. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. However, depending on the markings on the proposal, DOI/IBC will adhere to FAR policy on handling source selection information and proprietary proposals. It is the policy of DOI/IBC to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

1.2. Agency Name

Department of the Interior
Interior Business Center
Acquisition Services Directorate
Division III
P.O. Box 1420
Sierra Vista, AZ 85636

1.3. Research Opportunity Title

National Bio- and Agrodefense Facility Transition Research Project

1.4. Program Name

National Bio- and Agrodefense Facility Transition Research Project in the Agricultural Defense Branch, Chemical and Biological Defense Division, Science and Technology Directorate, Department of Homeland Security

1.5. Research Opportunity Number and Title

BAA 15DHS-001 –
National Bio- and Agrodefense Facility Transition Research Project

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1.6. Solicitation and Response Approach

The Department of Homeland Security (DHS) Science & Technology (S&T) Directorate will not issue paper copies of this announcement. DHS S&T reserves the right to select for award and fund all, some, or none of the Full Proposals received in response to this solicitation. No funding for direct reimbursement of proposal development costs will be allowed. Technical and Cost Proposals (or any other material) submitted in response to this BAA will not be returned. However, depending on the markings on the proposal, DHS S&T will adhere to FAR policy on handling source selection information and proprietary proposals. It is the policy of DHS S&T to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation. Offerors are to provide unclassified proposals. Documents containing sensitive information that are not suitable for uncontrolled public dissemination should be marked "For Official Use Only" (FOUO). When transmitted electronically, FOUO proposals should be sent with password protection.

Awards will take the form of contracts. In the event an Offeror or subcontractor is a Federally Funded Research and Development Center (FFRDC), Department of Energy National Laboratory, or other Federally funded entity, DHS S&T will work with the appropriate sponsoring agency to issue an Interagency Agreement pursuant to the Economy Act (31 U.S.C. 1535) or other appropriate authority. Therefore, the applicable laws and regulations governing the legal vehicle used for award will depend on the legal vehicle chosen by DHS S&T. In this regard, Offerors should propose a preferred vehicle type for DHS S&T to consider for award.

A one-phase proposal selection process will be used for this solicitation to minimize the cost and effort for prospective Offerors. No white papers will be solicited under this BAA. The BAA will consist of the solicitation, receipt, and evaluation of a Full Proposal, limited to 20 pages, excluding the Formal Transmittal Letter, Cover Page, Summary of Costs and Related Information, Table of Contents and resumes/biographical information for proposed performers.

1.7. Response Dates

Full Proposals

Due: 06 July, 2015

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1.8. Research Opportunity Description

1.8.1 DHS

National Bio- and Agrodefense Facility (NBAF) Transition Research Project

Structure and Background

The National Bio- and Agrodefense Facility (NBAF) will be a state-of-the-art biocontainment facility for the study of transboundary animal, emerging and diseases that threaten the U.S. animal agriculture and public health. NBAF will provide and strengthen our nation with critical capabilities to conduct research, develop vaccines and other countermeasures, perform diagnostics and train veterinarians in preparedness and response against these diseases. For the past 50 years, the Plum Island Animal Disease Center (PIADC) has served our nation as the primary facility to conduct this research. However, PIADC is nearing the end of its life-cycle and needs to be replaced in order to meet U.S. research requirements and ensure the timely development of countermeasures in the event of an outbreak. NBAF meets that need and will serve as a replacement for the PIADC facility. Strategically, NBAF will boast of new and expanded capabilities, specifically, large animal biosafety level 4 (ABSL-4) containment for the study of high-consequence diseases affecting large livestock and a biotechnology development module to support advanced countermeasure development efforts.

Specifically, NBAF will meet its mission by:

- Providing enhanced capabilities to diagnose foreign animal, emerging and zoonotic diseases in large livestock
- Providing expanded vaccine and countermeasure development capabilities for large livestock
- Replacing and expanding research currently done at the PIADC in New York, and continuing the partnership between the Department and the USDA Agricultural Research Service (ARS) and Animal and Plant Health Inspection Service (APHIS).

NBAF rests on a strategic partnership between DHS and USDA. These agencies set research priorities based on threats to animal agriculture, and conduct risk assessments, gap analysis and other necessary evaluations to protect our nation from threats to our animal agriculture and public health. Within the facility, DHS and USDA will continue the work of PIADC at NBAF to conduct research, diagnostics, vaccine development and testing, and training in preparedness and response for veterinary and animal agricultural specialists.

The NBAF Transition Research projects focus on the promotion of research and development activities related to the mission of the NBAF. As construction of this new facility begins, the U.S. agricultural R&D enterprise must also begin to evolve to ensure that the collaborative nature of the current Plum Island Animal Disease Center (PIADC) is maintained during the transition of research programs from PIADC to NBAF. PIADC is a unique laboratory institution housing the three primary agencies addressing transboundary animal diseases (TAD) and it is through these key

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collaborations that PIADC stands at the center of research for TAD. With the transition and expansion of this unique mission space from PIADC, the new NBAF will become the premier national, international and leading state-of-the-art facility for high containment large livestock research while continuing to leverage the strong interagency, international, academic, and industry collaborations that have been the key to success at PIADC. Therefore, DHS seeks to stimulate new areas of translational research throughout the country related to the NBAF mission of reducing the threat of emerging, zoonotic and transboundary animal diseases to U.S. livestock through the National Bio-and Agrodefense Facility (NBAF) Transition project.

The goal of the NBAF Transition Research project is to solicit and fund innovative research proposals to further efforts to combat new threats and eradicate existing threats by providing critical knowledge; developing and testing in the field new surveillance, screening and diagnostic tools; and exploring novel approaches to vaccination against emerging, zoonotic and transboundary animal diseases. This effort will result in more reliable and accurate information to inform domestic response and global eradication efforts; less laboratory time for results or reliable, highly specific pen-side tools; better guidance for decisions during an outbreak and ultimately a minimization of the threat and potential for economic damage to the U.S. livestock industry and food supply from an outbreak of emerging, zoonotic or transboundary animal disease.

The technical focus areas of this BAA revolve around novel approaches to address emerging, zoonotic, and transboundary animal diseases (see Appendix E for list of APHIS High Consequence Foreign Animal Diseases and Pests, which, along with significant new emerging diseases are the focus of this BAA). Five topic areas have been identified as key areas for collaboration. Proposals should address at least one of the focus areas described below.

FOCUS AREA 1: EVALUATION OF CONTROL AND ERADICATION TOOLS OR METHODS THAT CAN BE INCORPORATED INTO STRATEGIES TO ADDRESS EMERGING AND TRANSBOUNDARY ANIMAL DISEASES

Novel approaches to this issue should look beyond traditional countermeasures to evaluate control and eradication strategies for emerging and transboundary animal diseases. Areas of interest for the NBAF include an analysis of comparative immunology and host pathogen interactions that will enhance understanding of the mechanisms by which pathogens invade and infect host animals and the mechanisms hosts use to defend against pathogens. Research related to host-pathogen interactions is also expected to yield better understanding of the mechanisms of innate immunity. The presence of innate defense systems in a wide variety of organisms, combined with the possibility of identifying additional evolutionarily conserved elements of these systems, presents an important research opportunity to improve our understanding of the common mechanisms and principles of innate immune defenses. Overall, these studies will yield needed mechanistic understanding of host-pathogen dynamics which will in turn improve our understanding of animal resilience to pathogens through breeding or with rationally designed biotherapeutics and new knowledge that will be useful for the development of novel monitoring and surveillance technologies. Identification of genetic variants and common pathways involved in pathogenesis and host responses could be used to predict future disease outbreaks and design disease countermeasures including new diagnostic and vaccine targets for transboundary animal diseases as well as a better understanding of genetic resistance or susceptibility to disease. Specific focus on both the animal and human components of zoonotic disease is also of interest.

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Control strategies for agents including vector-borne pathogens should be evaluated to address the increased incidence and prevalence of emerging, transboundary, and zoonotic disease pathogens. Research should be performed to gain a better understanding of the impact of control strategies on the overarching threat or on the spread and mitigation of an outbreak in the U.S. livestock population. The ecology of infectious diseases, including disease transmission among vectors and natural reservoirs of disease should also be evaluated. A key component to these strategies is gaining and understanding of vector competency and how control strategies should target priority vector species to minimize disease spread. Research will be conducted to understand vector competence, determine the efficacy of the use of repellents for vectors and/or insecticide dipping of agriculture, as well as develop models to understand the effect of vector control for disease transmission. As countermeasures are developed, understanding the social and economic impacts of using these methods for control will be vital to developing policies and plans around their use.

Proposal Requirements:

- Successful proposals to this topic area must provide substantive justification of the novelty of the approach, including a description of how the proposed research expands the current consensus on TAD control and eradication strategies.
- Proposed research will provide technical descriptions of the tasks with supporting data and calculations that demonstrate the feasibility of the approach.
- All technical and programmatic risks must be described and characterized in detail for each research milestone.

Research Deliverables:

- All proposals must result in at least one peer reviewed publication resulting from work performed during the period of performance.
- Quarterly progress reports and financial expenditure reports provided to DHS S&T for all work performed.
- Annual presentation in person or via webinar to Federal stakeholders as arranged by DHS S&T.

FOCUS AREA 2: NOVEL SCREENING, SURVEILLANCE, AND DIAGNOSTIC TOOL DEVELOPMENT

Novel technologies for screening, surveillance, and diagnostics are needed to more rapidly identify infected animals, facilitate surveillance of non-infected animals during an outbreak, and facilitate proof of freedom from disease post outbreak. These technologies should be rapid, highly sensitive and specific, and be rapidly deployable in an emergency situation. Technologies at a TRL of 5 or higher (see Appendix C) should meet or exceed the minimum requirements for pathogen detection and commonly available commercial-off-the-shelf COTS technologies. Technologies with TRL below 5 should clearly outline how the technology differs from what is currently available and present a path forward for developing the technology to a TRL 6 -7 for prototyping.

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In addition, novel detection proposals should evaluate technologies in human health for application in the detection of livestock and poultry pathogens. Multiplexed technologies including endemic disease panels are more likely to be used on an ongoing basis.

Proposals should address how the research will approach the validation of detection in endemic regions on “wild-type” agents rather than under controlled laboratory settings and under different environmental conditions.

As NBAF becomes fully operational, it will be integral to the diagnosis of both known transboundary animal diseases and emerging disease in U.S. livestock populations. Novel detection and surveillance technologies will provide early detection and situational awareness of any potential outbreaks, enhance our ability to prove freedom from disease if needed, and augment current disease surveillance being performed throughout the U.S. livestock population.

Proposal Requirements:

- All proposals must include a listing of the final TRL of the proposed technology. See TRL definitions in Appendix C.
- Each proposal must provide the following specifications for each technology. Below final TRL 5, the specifications should outline what is expected from the prototype. For final TRL5 and higher, the specifications should outline improvements over the commercial capability.

Ideal Technical Requirements*	
Cost (system/assay)	<10k; \$10/assay
Time to respond	<60 minutes
Sensitivity	90% or range
Specificity	90% or range
Limit of detection	100 virions or less
Reagent stability (temp and time)	Temp range
Sample Matrices	Blood, saliva, oral fluids, nasal swabs, etc
Multiplex	Ideal technologies will be multiplexed and include endemic ruleouts and lookalikes for TAD’s (indicate highest number possible and number currently capable in proposal)
Operator Skill Level	Low to moderate
Weight, dimensions, power options	<5 lbs; battery capable if field deployable
*This is a list of ideal requirements, the main goal for this focus area is to improve upon currently available technologies/capabilities	

- Technologies at a TRL 5 and higher should provide a commercialization plan, teaming with a commercial partner, to develop and market the technology.

Research Deliverables:

- All proposals must result in at least one peer reviewed publication resulting from work performed during the period of performance.
- Quarterly progress reports and financial expenditure reports provided to DHS S&T for all work performed.
- Annual presentation in person or via webinar to Federal stakeholders as arranged by DHS S&T.
- Proposals must include a commercialization plan (if TRL 5 or higher) and/or a testing and evaluation plan with validation in the NALHN to be delivered to DHS S&T
- For technologies at TRL 5 or below, a prototype must be delivered to DHS S&T
- For technologies at TRL5 or above, a diagnostic or screening test kit must be delivered to DHS S&T

FOCUS AREA 3: MODELS, TOOLS, OR METHODS TO ASSESS EPIDEMIOLOGICAL, SOCIAL, AND ECONOMIC IMPACTS OF NEXT-GENERATION VACCINES AND COUNTERMEASURES

Several models have been used to evaluate the effects of a TAD outbreak on animal populations and the livestock industry; however, some of these models, methods, and tools have been developed using data from the 2001 FMD outbreak in the U.K. The confidence of these data to accurately assess the impact of an FMD outbreak in the United States is lacking. New models, tools, or methods for evaluating the epidemiologic, social, and economic impact of a TAD introduction to the United States are necessary in order to accurately quantify the consequences of an introduction and evaluate the effectiveness of existing, new, and enhanced countermeasures and next-generation vaccines.

As novel countermeasures are developed, a better understanding of the impact of these technologies is required. Such information can be used to help develop scientifically-sound response strategies that are both cost effective, able to be implemented quickly, and useful in curtailing the spread of disease. The development of new models, methods, and tools will help to improve our understanding of the implications for using a next generation vaccine as an adjunct to other control strategies during an outbreak. Among the variables that need to be considered are the thresholds for industry to use the novel and potentially more expensive countermeasures, and the effects of vaccine or diagnostic compliance in the event of an outbreak. In addition, an understanding of the public perception of using novel countermeasures, many of them considered GMO products, in the food supply is needed to further assist with an understanding of the messaging and education that will be required to guarantee food safety and consumer confidence during an outbreak.

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Models are essential to the planning and development of response strategies. Both human and animal health officials use models to determine the optimal investments for mitigating public and animal health threats.

Proposal Requirements:

- All proposals must demonstrate how the model, tool, or method advances the state of the art for understanding TAD spread and the effectiveness of next-generation vaccine and countermeasures.
- Each proposal must demonstrate how it is building upon the capabilities of current models, identify the models, tools, or methods; identify the anticipated resulting readiness level (Appendix D) and clearly demonstrate how it is an improvement or modification to existing models, tools, or methods.
- Specific transition plans should be addressed in the proposal that clearly identify how models and data developed with this funding are shared with the entire modeling community.
- All proposals must clearly assert the intellectual property and/or data rights related the model, tool, method and associated inputs

Research Deliverables:

- Any models, tools, or methods developed with this funding must be fully documented, transparent, and open-source. All software, documentation, and data should be transitioned to DHS S&T and/or open-source repositories online where they are available to DHS and others at the end of the project.
- Models, tools, and methods developed to assess the epidemiologic, social, and economic impact of next-generation vaccines and countermeasures will have a graphical user interface (GUI) that is intuitive and easy-to-use, as well as visualization and graphical analysis tools for viewing, manipulating, and analyzing output in order to allow novice users to quickly get started, as well as allowing power users access to advanced features
- Adjustments to current models, tools, and methods must be submitted to those who maintain the capability for their consideration and use All proposals must result in at least one peer reviewed publication resulting from work performed during the period of performance
- Quarterly progress reports and financial expenditure reports provided to DHS S&T for all work performed.
- Annual presentation in person or via webinar to Federal stakeholders as arranged by DHS S&T

FOCUS AREA 4: NOVEL APPROACHES TO VACCINE PLATFORM DEVELOPMENT FOR EMERGING, ZOO NOTIC, AND TRANSBOUNDARY ANIMAL DISEASES

Vaccine platform development efforts will consider the evaluation and discovery of novel negative markers to develop DIVA diagnostics as companion tests to current novel vaccine candidates. Novel nucleic acid and immunological-based technologies will also be developed for agent serotyping/subtyping, rapid vaccine matching, and monitoring evolutionary changes of TAD viruses in endemic settings. Next generation countermeasures should evaluate other areas

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including the characterization and validation of product claims relevant to current control strategies for commercially available and late-stage experimental vaccines, licensure of immunomodulators to induce early protection and complement next-generation vaccines, and the identification of cross-cutting vaccine platforms to produce a variety of vaccine products, including vaccine platforms suitable to meet response need. Primary sites of viral replication and the basic mechanisms responsible for systemic and persistent infections need to be evaluated and identified. The host responses to infection and the viral mechanisms leading to evasion of host immune responses need to be characterized to assess the mechanism mediating persistent viral infections. Pathway analysis is needed to characterize the mechanisms of induction and repression of innate defense mechanisms (e.g. Interferon). Genetic and immunological characterization of TAD infected and vaccinated animals will help identify genetic and biological determinants of protective immunity.

All vaccine development efforts will need to meet the safety, efficacy, purity, and potency regulatory requirements for veterinary countermeasure development. Research should follow the standard timeline from vaccine candidate development, reagent production, proof-of-concept studies, and lead vaccine candidate down selection. Minimum requirements for these candidates are found in the table below.

Attribute/Parameter	Threshold	Objective
Safety	No local injection site reactions or adverse systemic effects	Safe for use in livestock of all ages and food producing animals
Expectation of Efficacy	Induces antibody titers in 50% of treated animals 2 weeks post-single dose administration	Induces antibody titers in 50% of treated animals 1 week post-single dose administration
Manufacturing	Compatible with current veterinary biological manufacturing processes	Same as threshold
Regulatory	Defined pathway and transition point to commercial/international veterinary industry partner for use by the APHIS National Veterinary Stockpile	Conditional or full license approval by USDA CVB
Cost	<\$5 immunogenic dose	<\$2 per protective dose

Novel vaccine candidates should also demonstrate that they are safe to use in domestic animals, can be easily administered either through standard routes of administration or novel routes, and demonstrated ability to stimulate antibody and cell mediated immunity.

Proposal Requirements:

- Each proposal must clearly outline which of the vaccine attributes (one or more) in the table above will be addressed and how the proposed research will result in a product profile that falls above at least the threshold value.

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- All proposed vaccine technologies must include the engagement of a commercial partner after the platform development is complete.
- Preference will be given to proposals that include leveraged funding or in-kind support and leverage the facilities and laboratories in Kansas and around NBAF.
- All proposed vaccine platforms must have an identified TRL and description of the TRL level post completion of the proposed work.
- All vaccine candidates proposed must be compatible with a differentiating infected from vaccinated animals (DIVA) vaccination strategy. Research not meeting this criterion will not be considered.
- All vaccine candidates proposed must either not be considered select agents or the research proposal must clearly identify justification for requesting a select agent exemption. Research not meeting this criterion will not be considered.

Research Deliverables:

- All proposals must result in at least one peer reviewed publication resulting from work performed during the period of performance.
- Each proposal must result in at least one proof-of-concept study designed to clearly demonstrate progress achieved in improving the product profile in the vaccine attributes identified in the research proposal.
- Quarterly progress reports and financial expenditure reports provided to DHS S&T for all work performed.
- Annual presentation in person or via webinar to Federal stakeholders as arranged by DHS S&T.

TOPIC AREA 5: RESEARCH AND DEVELOPMENT FELLOWSHIPS FOR TRANSBOUNDARY ANIMAL DISEASE PROFESSIONALS

Another key component of the NBAF research transition is the development of the next-generation of research scientists who are experienced in the planning and execution of research activities involving TADs in high and maximum containment. Agricultural biocontainment involves considerations of worker protection and public health, but also emphasizes a reduction of risk of environmental escape of study pathogens. In addition to differences in facility design and procedures associated with agricultural animal handling in these controlled environments, a different approach is required for risk assessment and management controls when accommodating agricultural pathogens, including TADs. The potential impacts of containment loss involve disruption of agricultural industry through clinical disease, production loss and disruption of trade. Fellowships and training courses will be developed to support the intellectual talent needed to meet the mission needs for NBAF. These programs will cultivate the next generation of scientists who will further contribute to the DHS S&T mission through innovation and research that contributes to the defense of U.S. agriculture.

Two to four awards will be made to individual institutions or consortia to support traineeship programs that engage outstanding students to pursue and complete their degrees and/or obtain postdoctoral training in transboundary animal diseases and experience performing research in high and maximum biocontainment (BSL-3, BSL-4 and equivalent agricultural facilities). The intent is to invest in graduate training and relevant international and biocontainment experiential learning for

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a cadre of diverse individuals who demonstrate their potential to successfully complete graduate degree programs in disciplines relevant to the mission of the DHS.

Proposal Requirements:

In order to meet the identified needs of agriculture, the long-term outcome for a program is to train and develop the next generation doctoral students through this fellowship program. Projects are expected to address both of the following program area priorities:

1. Proposal for the development of a Transboundary Animal Disease Curriculum focused on fellows gaining a better understanding of the issues and research requirements associated with non-endemic diseases.
2. Details on how each sponsored fellow will obtain research experience in high and maximum containment facilities, preferably involving animals of veterinary/agricultural significance. This should be demonstrated through letters of support from collaborating laboratories or other documents explaining the collaborative relationship/laboratory commitment.

Proposals must include the potential research areas for the fellows and must clearly demonstrate how the research topic fits into the broader TAD research spectrum

Deliverable Requirements

- All proposals must result in at least one peer reviewed publication resulting from work performed during the period of performance.
- Quarterly progress reports and financial expenditure reports provided to DHS S&T for all work performed.
- Annual presentation in person or via webinar to Federal stakeholders as arranged by DHS S&T.

1.8.2. Proposal Structure

Research awards made under this BAA will consist primarily of translational or early applied research projects. Each project should clearly demonstrate how the objectives and overall project fit into the greater research missions of DHS S&T and USDA to address transboundary animal diseases. All proposed efforts should have clear milestones and deliverables associated with each project. Additional requirements are outlined in each technical focus area. Failure to meet any of the proposal requirements outlined here or in the technical focus areas above may result in the rejection of the proposal.

The cost proposal must clearly outline the full budget of the project and what research the funding will provide. Ideal cost proposals will include a breakdown of the budget by task for the proposed research. DHS has the ability to partially or fully fund any effort when making an award under this BAA. Large scale facilities or equipment (exclusive of standard institution overhead) should not be included in the proposal. Proposals that include infrastructure or capacity development through the improvement of laboratory facilities will not be considered under this BAA.

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All proposed research efforts should be thoroughly explained to justify the feasibility of the approach, including any calculations and assumptions made by the Offerors in the analysis of their proposed solutions. In addition, proposals that show a linkage from human to animal health, and relevant collaborations, are strongly encouraged. Proposals that do not address transboundary animal diseases or go beyond the overall scope of the National Bio- and Agro-defense facility will not be considered, including research for endemic diseases unless they have a clear application to TADs.

Proposals are expected to be collaborative in nature reaching across the entire spectrum of government, industry, academic, and international partners. Offerors to the solicitation should clearly outline how these collaborations will take place and the exact experience that each collaborative team will be providing. The Offerors will be required to explicitly list the personnel who will be working on each effort including all personnel on cooperative agreements, subcontracts and other mechanisms relating to a sub-award from this solicitation. Past performance as a government contractor will be taken into consideration but will not be the final determinant for selection. If Offerors are extending work performed under other DHS projects or projects for other sponsors, the proposal must clearly identify the point of departure and what existing work will be brought forward and what new effort will be performed under this BAA. The final deliverable for an effort should be a final report or a publishable journal article manuscript that can be peer-reviewed, along with standard analytical method(s) and relevant data.

Government laboratories, like Plum Island Animal Disease Center, and researchers at these facilities are considered a national resource and can collaborate with any Offeror on these proposals. While we strongly encourage all offerors to take advantage of this national resource and coordinate any collaborative efforts in advance to ensure sufficient funding and laboratory space is available, no direct awards will be given to Federal scientists at Plum Island Animal Disease Center or any other federal laboratory and no subawards funding scientists at federal laboratories will be considered.

1.9. Government Representatives

Science and Technology:

Michelle Colby, DVM, MS
Branch Chief
Agricultural Defense Branch
Department of Homeland Security
Science and Technology Directorate
Washington, DC 20528

Business:

Department of the Interior
Interior Business Center
Acquisition Services Directorate
Division III

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P.O. Box 1420
Sierra Vista, AZ 85636

2. AWARD INFORMATION

2.1. Available Amount of Funding Expected to be Awarded Through this BAA

Although subject to official fiscal appropriation and availability, it is anticipated that the NBAF Transition Research project will have approximately \$9 Million of FY 2013 three funds for award under this BAA.

2.2. Limitation of Funds

The Government reserves the right to incrementally fund contracts awarded from this BAA as provided by the FAR 52.232-22, "Limitation of Funds." Contracts or other agreements that obligate funds that are awarded will not have an initial period of performance that exceeds 12 months from the receipt of funding by the performer. . However, Offerors can propose a base year effort of up to 12 months plus option year(s). All proposed work must be feasible to complete in a maximum of three years.

2.3. Anticipated Number of Awards

DHS S&T expects to make multiple awards from this Broad Agency Announcement.

2.4. Anticipated Award Types

Award type is anticipated to be in the form of Cost Reimbursement type contracts.

In order to qualify for the award of a cost reimbursement contract, the offeror must have an adequate accounting system in accordance with FAR 16.301-3(a)(1). Evidence of an adequate accounting system would include a written opinion or other statement from the cognizant federal auditor (CFA) or the cognizant federal agency official (CFAO) that the system is approved or has been determined to be adequate. If available, the offeror shall provide the audit report number and date associated with the accounting system review. If the offeror does not have a copy of the report, the offeror may furnish a copy of the audit report number.

2.5. Anticipated Period of Performance for New Awards

The period of performance for research efforts and studies proposed should be for a minimum of 12 months and not to exceed three years. All proposed work must be feasible to complete in a maximum of three years. The period of performance shall commence at the date of award.

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3. ELIGIBILITY INFORMATION

This BAA is open to **ALL NON-FEDERAL** responsible sources.

Offerors may include single entities or teams from academia, private sector organizations, and Federally Funded Research and Development Centers (FFRDCs), including Department of Energy National Laboratories and Centers. Government laboratories are eligible to be listed as collaborators on the proposals; however, a Government agency may not be a principle investigator or an Offeror to this solicitation. There is no competitive advantage to Offerors who list Government laboratories as a collaborator. Any proposal that includes a subaward to an individual federal employee or federal laboratory as a funded contributor to a proposal will not be considered for award under this BAA.

3.1. Federally Funded Research & Development Centers

FFRDCs, including Department of Energy National Laboratories and Centers, are eligible to respond to this BAA as a collaborator of an eligible principal Offeror, so long as they are permitted under a sponsoring agreement between the Government and the specific FFRDC.

3.2. Nonprofit Organizations, Educational Institutions and Small Business Set Aside

The Government encourages nonprofit organizations, educational institutions, small businesses, small minority disadvantaged business (SDB) concerns, Historically Black Colleges and Universities (HBCU), Minority Institutions (MI) (HBCU/MIs), women-owned businesses (WB), and Historically Underutilized Business (HUB) zone enterprises as well as large businesses, and academic institutions to submit research proposals for consideration and/or to join others in submitting proposals; however, no portion of the BAA will be set-aside for these special entities pursuant to FAR Part 19.502-2, because of the impracticality of reserving discrete or severable areas of research and development in any specific requirement area.

To ensure full consideration in these programs, registration in the <https://baa2.st.dhs.gov/> website, described later in this document, requires the appropriate business type selection as well as accurate up-to-date information.

3.3. Organizational Conflict of Interest

Organizational Conflict of Interest issues will be evaluated on a case-by-case basis; as outlined below. Offers who have existing contract(s) to provide scientific, engineering, technical and/or administrative support directly to the DHS S&T will receive particular scrutiny.

(a) Determination. The Government has determined that this effort may result in an actual or potential conflict of interest, or may provide one or more Offerors with the potential to attain an unfair competitive advantage.

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(b) Process. If any such conflict of interest is found to exist, the Contracting Officer may (1) disqualify the Offeror, or (2) determine that it is otherwise in the best interest of the United States to contract with the Offeror and include the appropriate provisions to mitigate or avoid such conflict in the contract awarded. After discussion with the Offeror, the Contracting Officer may determine that the actual conflict cannot be avoided, neutralized, mitigated, or otherwise resolved to the satisfaction of the Government, and the Offeror may be found ineligible for award.

(c) Disclosure: The Offeror must represent, as part of its proposal and to the best of its knowledge that: (1) It is not aware of any facts which create any actual or potential organizational conflicts of interest relating to the award of this contract; or (2) It has included information in its proposal, providing all current information bearing on the existence of any actual or potential organizational conflicts of interest, and has included the mitigation plan in accordance with paragraph (d) of this provision.

(d) Mitigation/Waiver. If an Offeror with a potential or actual conflict of interest or unfair competitive advantage believes it can be mitigated, neutralized, or avoided, the Offeror shall submit a mitigation plan to the Contracting Officer for review. Award of a contract where an actual or potential conflict of interest exists shall not occur before Government approval of the mitigation plan.

(e) Other Relevant Information: In addition to the mitigation plan, the Contracting Officer may require further relevant information from the Offeror. The Contracting Officer will use all information submitted by the Offeror, and any other relevant information known to DHS, to determine whether an award to the Offeror may take place, and whether the mitigation plan adequately neutralizes or mitigates the conflict.

(f) Corporation Change. The successful Offeror shall inform the Contracting Officer within thirty (30) calendar days of the effective date of any corporate mergers, acquisitions, and/or divestures that may affect this provision.

(g) Flow-down. The contractor shall insert the substance of this clause in each first tier subcontract that exceeds the simplified acquisition threshold.

4. APPLICATION AND SUBMISSION INFORMATION

4.1. BAA Package Download.

This BAA package may be downloaded in its entirety from the Federal Business Opportunities website <https://www.fbo.gov> or from <https://baa2.st.dhs.gov>.

Registration is not required to download the BAA package; however, a registration in <https://baa2.st.dhs.gov/> is required to upload a response to the BAA.

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4.2. Application and Submission Process

Submissions will not be accepted from organizations that have not registered. The application process will only include the submission of a full proposal. There will be no White Paper submission phase for this BAA. Any organization that wishes to participate in this solicitation must register at: <https://baa2.st.dhs.gov/>.

(a) Submitting a Response to this BAA:

To begin the process, go to <https://baa.st.dhs.gov/>, and select BAA15DHS-002 from the list on the left side of the screen. Select the “Submit Proposal” link, and buttons for registration and submission will appear. Select the appropriate registration button and fill in the required fields. Once the registration process is complete, registrants should receive a control identification number via e-mail. This control number is needed to begin the Proposal submission process.

Full Proposals shall be delivered via upload in accordance with instructions provided during registration.

The proposal submissions will be protected from unauthorized disclosure in accordance with FAR 15.207, applicable law, and DHS regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

The DHS BAA website at <https://baa2.st.dhs.gov> offers electronic access to BAA solicitations, frequently asked questions (FAQs), answers to FAQs, abstracts of previously funded projects, and hyperlinks to other useful information.

For step-by-step instructions for registering your company and submitting your proposal, please refer to the “Registrations and Submissions Training Guide” which can be accessed by clicking the link at the top right corner of the Frequently Asked Questions (FAQs) page at https://baa2.st.dhs.gov/portal/public/Menu.action?page=baa_faq.

IMPORTANT: Before submitting a proposal for the first time, you must first register your company and user account in the system. It is recommended that the Business Official or an authorized representative designed by the Business Official be the first person to register for your company. Your company’s Taxpayer Identification Number (TIN) is required during registration. (If your company is registered, other new users may register and associate their information with the company’s existing record. When registration is completed, users can submit and manage their proposals.

NOTE: User registration is not sufficient for registering the proposal. To register your proposal, you must log on with your credentials. Click the “Start New Proposal” button. When the Start the New Proposal page displays, pick the solicitation and topic, and then enter the title of the Proposal that you are submitting. When you have entered the title, click the “Add Proposal to Activity Worksheet” button. The Proposal Activity worksheet page lists your proposal in the Proposals in progress section of the page. Your proposal is registered at this point. Repeat this step before the proposal registration deadline for every proposal you wish to register.

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After you have completed the Coversheets and uploaded your proposal document, you must click on the “Submit Proposal” button to submit the Proposal; simply uploading the document is not sufficient. After you have uploaded your Full Proposal documents, you must click on the “Submit Proposal” button to submit the Full Proposal; simply uploading the documents is not sufficient.

4.3. Format and Content of Full Proposals

Full Proposals

The due date for receipt of Full Proposals is 4:30 P.M. (Local Eastern Time) on July 6, 2015. Full Proposals WILL NOT BE ACCEPTED after the published due date. Full Proposals submitted for this BAA shall remain valid for no less than 180 days. It is anticipated that negotiations for award will commence on or about July 06, 2015. As soon as the final proposal evaluation process is complete, the Offeror will be notified via e-mail of its selection or non-selection for an award. Full Proposals exceeding the page limit will not be evaluated.

Full Proposal Format: Volume 1 - Technical Proposal; and Volume 2 - Cost Proposal

Full proposals will consist of two volumes: a Technical Proposal volume and a Cost Proposal volume.

- Paper Size – 8.5-by-11-inch paper
- Margins – 1 inch
- Spacing – Single- or double-spaced
- Font – Times New Roman, 12 point. Text embedded within graphics or tables in the body of the Project Description Form should be legible and not smaller than 8 point.
- Number of Pages –
 - Volume 1 (Technical Proposal): No more than 20 single-sided pages. Full proposals exceeding the page limit will not be evaluated. The Official Transmittal Letter, as well as the cover page, table of contents and resumes/biographical information about potential performers in the Full Proposal are not subject to the page limitation.
 - Volume 2: (Cost Proposal): No more than 20 pages.
- Copies – A proposal shall consist of one electronic file for the Technical Proposal volume and one electronic file for the Cost Proposal volume. Electronic files will be in portable document format (PDF), readable by IBM-compatible PCs. Each file size must be no more than 10 MB.

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Full Proposal Content

Volume 1: Technical Proposal

Volume I of the Full Proposal shall be in the form of a Technical Proposal volume. Responsiveness to the order and content of sections listed in Volume I is important to assure thorough and fair evaluation of proposals. Nonconforming proposals may be rejected without review. In particular, the Technical Proposal must cover the following points in more detail:

- **Official Transmittal Letter:** This is an official transmittal letter with authorizing official signature. For an electronic submission, the letter can be scanned into the electronic proposal. The letter of transmittal shall state whether this proposal has been submitted to another government agency, other than DHS S&T, and if so, which one and when.
- **Cover Page:** This should include the words “Technical Proposal” and the following:
 - 1) BAA number;
 - 2) Title of Proposal;
 - 3) Identity of prime Offeror and complete list of subcontractors, if applicable;
 - 4) Technical contact (name, address, phone/fax, electronic mail address);
 - 5) Administrative/business contact (name, address, phone/fax, electronic mail address); and,
 - 6) Duration of effort
- **Table of Contents**
- **Executive Summary:** Summarize the Proposal and the expected benefits of the solution.
- **Proposal:** Describe the proposed work and the associated technical and management issues.
- **Performance Goals:** Describe the overall methodology and how it will meet the objectives specified in the each of the technical descriptions of the focus areas in Section 1.8.1.
- **Detailed Technical Approach:** Describe the proposed technical issues and methodology to address the stated program objectives.
- **Statement of Work (SOW), Schedule, and Milestones:** Provide an integrated display for the proposed research, showing each task with major milestones. Include a proposed schedule for the effort (estimated dates of tasks, milestones and deliverables). Describe how each task will be performed and identify sub-tasks, if appropriate. Include a section clearly marked as the SOW you propose to undertake. It is anticipated that the proposed SOW will be incorporated as an attachment to the resultant award instrument. To this end, such proposals must include a severable self-standing SOW without any proprietary restrictions, which can be attached to the contract or agreement award.

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- **Deliverables:** Provide a brief summary of all deliverables proposed under this effort, including data, and reports consistent with the objectives of the work; along with suggested due dates (calendar days after the effective date of award). This section shall be severable, i.e., it will begin on a new page and the following section shall begin on a new page. It is anticipated that the proposed detailed list and description of all deliverables will be incorporated as an attachment to the resultant award instrument. To this end, such proposals must include a severable self-standing detailed list and description of all deliverables without any proprietary restrictions, which can be attached to the contract or agreement award.
- **Management Plan:** Provide a brief summary of the management plan, including an explicit description of what role each participant or team member will play in the project, and their past experience in technical areas related to this proposal.
- **Facilities:** List the location(s) where the work will be performed, and the facilities to be used. Describe any specialized or unique facilities which directly affect the effort.
- **Government-Furnished Resources:** Provide a brief summary of required information and data which must be provided by the Government to support the proposed work, if any.
- **Cost Summary:** Summarize the projected total costs for each task, including a summary of subcontracts, man hours, and consumables.
- **Resumes for Key Personnel:** In Appendix A, provide resumes and *curriculum vitae* (CVs) for each of the key personnel. These resumes do not count toward the 20-page limit.
- **Other DHS Support:** As an appendix, provide a list of any current or pending awards or proposals with DHS S&T. This section will not count towards the 20-page limit.
- **Assertion of Data Rights:** Due to the nature of this research and development project, the Government will need to evaluate the deliverable in a field prototype evaluation scenario with Government personnel, such as United States Department of Agriculture. Therefore, include here a summary of any assertions to any technical data or computer software that will be developed or delivered under any resultant award. This includes any assertions to pre-existing results, prototypes, or systems supporting and/or necessary for the use of the research, results, and/or prototype. Any rights asserted in other parts of the proposal that would impact the rights in this section must be cross-referenced. If less than unlimited rights in any data delivered under the resultant award are asserted, the Offeror must explain how these rights in the data will affect its ability to deliver research data, subsystems, and toolkits for integration as set forth below. Additionally, the Offeror must explain how the program goals are achievable in light of these proprietary and/or restrictive limitations. If there are no claims of proprietary rights in pre-existing data, this section shall consist of a statement to that effect.

Proposals submitted in response to this solicitation shall identify all technical data or computer software that the Offeror asserts will be furnished to the Government with restrictions on access, use, modification, reproduction, release, performance, display, or disclosure. Offeror's pre-award

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identification shall be submitted as an attachment to its offer and shall contain the following information:

Statement of Assertion. Include the following statement: “The Offeror asserts for itself, or the persons identified below, that the Government's rights to access, use, modify, reproduce, release, perform, display, or disclose only the following technical data or computer software should be restricted.”

Identification of the technical data or computer software to be furnished with restrictions. For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such item, component, or process as specifically as possible (e.g., by referencing specific sections of the proposal or specific technology or components). For computer software or computer software documentation, identify the software or documentation by specific name or module or item number.

Detailed description of the asserted restrictions. For each of the technical data or computer software identified above in paragraph (2), identify the following information:

(i) Asserted rights. Identify the asserted rights for the technical data or computer software.

(ii) Copies of negotiated, commercial, and other non-standard licenses. Offeror shall attach to its offer for each listed item copies of all proposed negotiated license(s), Offeror's standard commercial license(s), and any other asserted restrictions other than Government purpose rights; limited rights; restricted rights; rights under prior government contracts, including SBIR data rights for which the protection period has not expired; or government's minimum rights.

(iii) Specific basis for assertion. Identify the specific basis for the assertion. For example:

(A) Development at private expense, either exclusively or partially. For technical data, development refers to development of the item, component, or process to which the data pertains. For computer software, development refers to the development of the software. Indicate whether development was accomplished exclusively or partially at private expense.

(B) Rights under a prior government contract, including SBIR data rights for which the protection period has not expired.

(C) Standard commercial license customarily provided to the public.

(D) Negotiated license rights.

(iv) Entity asserting restrictions. Identify the corporation, partnership, individual, or other person, as appropriate, asserting the restrictions.

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Previously delivered technical data or computer software. The Offeror shall identify the technical data or computer software that are identical or substantially similar to technical data or computer software that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The Offeror need not identify commercial technical data or computer software delivered subject to a standard commercial license.

Estimated Cost of Development. The estimated cost of development for that technical data or computer software to be delivered with less than Unlimited Rights.

Supplemental information. When requested by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate the Offeror's assertions. Sufficient information must include, but is not limited to, the following:

- (1) The contract number under which the data or software were produced;
- (2) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and
- (3) Identification of the expiration date for any limitations on the Government's rights to access, use, modify, reproduce, release, perform, display, or disclose the data or software, when applicable.

Ineligibility for award. An Offeror's failure to submit or complete the identifications and assertions required by this provision with its offer may render the offer ineligible for award.

This section must be severable, i.e., it will begin on a new page and the following section shall begin on a new page. It is anticipated that the proposed Assertion of Data Rights will be incorporated as an attachment to the resultant award instrument. To this end, proposals must include a severable self-standing Assertion of Data Rights without any proprietary restrictions, which can be attached to the contract or agreement award.

VOLUME 2: Cost Proposal

The Cost Proposal shall consist of a cover page and two parts, Part 1 and Part 2. Part 1 will provide a detailed cost breakdown of all costs by cost category and Part 2 will provide a Cost breakdown by task/sub-task using the same task numbers in the Statement of Work.

Cover Page: The use of the SF 1411 is optional. The words "Cost Proposal" should appear on the cover page in addition to the following information:

- BAA number;
- Title of Proposal;
- Identity of prime Offeror and complete list of subcontractors, if applicable;
- Technical contact (name, address, phone/fax, electronic mail address)

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- Administrative/business contact (name, address, phone/fax, electronic mail address) and;
- Duration of effort

Part 1: Detailed breakdown of all costs by cost category. The Offeror should provide a total estimated price for major demonstrations and other activities associated with the program, including cost sharing, if any. The Offeror should state whether any Independent Research and Development (IR&D) program is or will be dedicated to this effort, or if IR&D is being pursued to benefit related programs as well. Any cost sharing estimates should include the type of cost share, i.e. cash or in-kind. If in-kind is proposed, the Offeror should provide a discussion of how the cost share was valued.

- **Direct Labor** – Individual labor category or person, with associated labor hours and *unburdened* direct labor rates;
- **Indirect Costs** – Fringe Benefits, Overhead, G&A, COM, etc. (*Must show base amount and rate*)
- **Travel** – Number of trips, destinations, durations, etc.
- **Subcontract** – A cost proposal *as detailed as the Offeror's cost proposal* will be required to be submitted by the subcontractor. The subcontractor's cost proposal can be provided in a sealed envelope with the Offeror's cost proposal or will be requested from the subcontractor at a later date;
- **Consultant** – Provide consultant agreement or other document which verifies the proposed loaded daily/hourly rate;
- **Materials**--Materials should be specifically itemized with costs or estimated costs. Where possible, indicate purchasing method, (Competition, engineering estimate, market survey, etc.)
- **Other Directs Costs**, particularly any proposed items of equipment or facilities. Equipment and facilities generally must be furnished by the contractor/recipient. Justifications must be provided when Government funding for such items is sought.
- **Fee/Profit** including fee percentage.

Part 2: Cost breakdown by task/sub-task using the same task numbers in the Statement of Work.

Part 3: Full Proposal (Phase 2) Summary of Costs and Related Information Form (See Section 8.4 – Attachment D of this BAA). Please complete this form and provide it as an attachment to the Cost Proposal. Certified cost and/or pricing data may be required.

The Cost Proposal should be consistent with your proposed SOW. Activities such as demonstrations required to reduce the various technical risks should be identified in the SOW and reflected in the Cost Proposal. The Offeror should provide a total estimated price for the major Research, Development, Test, and Evaluation (RDT&E) activities associated with the program.

For the Cost Proposal, the DHS BAA website system has a web form where the Offeror may enter data regarding the cost proposal. The system does not allow the Full Proposal to be submitted without completing this Cost Proposal web form. Offerors may choose to not enter information in the Cost Proposal web form since the Cost Proposal cover page, Part 1, and Part 2 will be uploaded

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separately. However, Offerors will still need to go to the last page of the Cost Proposal web form and hit the confirmation button noting that the Offeror has reviewed the empty web form and is submitting the web form blank.

4.4. Protection of Information Uploaded to BAA Website:

All data uploaded to <https://baa2.st.dhs.gov/> is protected from public view or download. All submissions will be considered proprietary/source selection sensitive and protected accordingly. Documents may only be reviewed by the registrant, authorized Government representatives, and assigned evaluators.

4.5. Significant Dates and Times

DHS S&T plans to review Full Proposals in accordance with the “Anticipated Schedule of Events” set forth in the table in this section, using the evaluation criteria described in Section 5.1. A Review Panel will evaluate the Full Proposals using the criteria specified under the evaluation criteria set forth in Section 5.1. Following that review, Offerors will be notified whether or not their proposal has been selected for negotiation. It is anticipated that multiple awards may be made under this BAA.

The Government reserves the right to fund none, some, or all of the proposals received. It is the intention upon completion of proposal evaluation to notify Offerors of an initiation of negotiation for awards or rejection of their proposal. Awards will be made based on the evaluation, funds availability, and other programmatic considerations. If requested, feedback will be provided via teleconference for those Full Proposals that are not selected.

Anticipated Schedule of Events*

Anticipated Schedule of Events *		
Event	Due Date	Time (E.S.T.)
BAA Posted to Website	29 May, 2015	N/A
Deadline for Submission of Full Proposal Questions	29 June, 2015	4:30 PM
Full Proposal Website Registration deadline - Full Proposal Due Date	06 July, 2015	4:30 PM
Notification of Selection for Award Negotiations	31 July, 2015	N/A
Contract Award	TBD	N/A
Kickoff Meetings	TBD	TBD

* These dates are estimates as of the date of this announcement

4.6. Submission of Late Full Proposals

Full Proposals **WILL NOT BE ACCEPTED** after the published due dates.

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4.7. Further Assistance Needed for this BAA

The applicable electronic address for all correspondence for this BAA is:
Russell_K_Choate@ibc.doi.gov.

For technical assistance with using the <https://baa2.st.dhs.gov/> website, submit questions to the administrators at dhsbaa@reisis.com, phone (703) 480-7676.

4.8. BAA Contractual and Technical Questions.

All contractual and technical questions regarding this BAA including the published requirements and instructions must be directed to the Contracting Officer at Russell_K_Choate@ibc.doi.gov. The program and technical staff will not acknowledge, forward, or respond to any inquiries received in any other manner concerning this BAA. Contractual questions and answers will be posted periodically under the Frequently Asked Questions (FAQs) section on the <https://fbo.gov> and <https://baa2.st.dhs.gov> websites.

5. EVALUATION INFORMATION

5.1. Evaluation Criteria

The evaluation of Full Proposals will be accomplished through an independent technical review using the following criteria, which are listed. All evaluation factors other than cost or price, when combined are significantly more important than cost or price.

Criterion I: Scientific Merit: The Offeror must demonstrate understanding of the proposed research and scientific challenges described elsewhere within the announcement. The research approach should be scientifically sound, practical and technically defensible. The research must contribute to scientific knowledge in the topic area and the research must enumerate potential benefits of the proposed research. The proposal shall demonstrate an awareness of the state-of-the-art. The proposal should be well-prepared with supportive information that is self-explanatory.

Criterion II: Sound Technical Approach: The proposed scientific/technical concept and methodology is clearly described and sound and includes a demonstrated understanding of related technology. The technical approach is innovative and/or has advantages over other solutions, if successfully implemented. Of importance is how the proposed technology will meet or exceed the performance requirements for this program. All critical scientific and technical issues clearly identified, and the planned development approach and risk mitigation efforts are clearly defined and feasible.

Criterion III: Sound Management Approach: Presentation of a sound managerial approach to the proposed work, including a demonstrated understanding of the issues and challenges associated with achieving the goals of the topic, and a strategy to address those issues and challenges. A successful team will possess multidisciplinary expertise to address the

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complexity of the effort and will propose collaborative research projects across multiple research institutions.

Criterion IV: Capability to Perform and History of Past Performance: Demonstration of a capability to perform the proposed work, including history of previous performance in developing related solutions and technologies. Proposals that utilize industry-academic partnering or utilize industry-Government partnering which enhances the development of novel S&T advances will be given favorable consideration. Specific considerations will include:

- Offeror's knowledge of the state-of-the-art in human or veterinary medicine and ability to work across domains to solve a research question
- Offerors build a collaborative team that reaches across multiple domains including academia, industry, etc.
- Offeror's team is sufficiently complete: key personnel are identified with the required range of competencies to execute this effort and the team includes appropriate experience
- Offeror has experience in working with TADs

Criterion V: Cost Realism: Presentation of accurate, well-founded, and reasonable estimates of all costs related to performance of the proposed effort, including an appropriate allocation of labor resources. Members of the Evaluation panel will be looking for overall best value to the government.

Evaluation of Full Proposals will be based on an assessment of the overall best value to the government based on the aforementioned criteria. Awards will be made based upon Full Proposal evaluation, funds availability, and other programmatic considerations, including awards to lesser rated proposals where orthogonal or alternative approaches and technologies are deemed to be more technically advantageous.

NOTE: DHS S&T reserves the right to select for award and fund all, some, or none of the Full Proposals received in response to this announcement.

5.2. Evaluation Panel

S&T's policy is to ensure an impartial, equitable, and comprehensive evaluation of all proposals and to select the source (or combination of sources) whose offer is most advantageous to the government. All properly submitted Full Proposals that conform to the BAA requirements will be evaluated by a review panel comprised of DHS S&T staff and other Government personnel. All Government personnel are bound by public law to protect proprietary information. Further, Contractor personnel will be used to handle the submissions administratively and may serve as non-voting technical advisors. Contractor personnel who will have access to any proprietary data will be bound by appropriate non-disclosure agreements to protect proprietary and source-selection information and shall certify that they have no financial interest in any submissions evaluated. They will not be permitted to release any source-selection information to third parties, including others in their organization. Contractors will serve as non-voting members of the SSEB. Submissions and information received in response to this BAA constitute permission to disclose that information to certified evaluators under these conditions.

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6. AWARD ADMINISTRATION INFORMATION

6.1. Comments or Concerns about Solicitation

If Offerors have any comments or concerns about this solicitation, the DHS S&T Contracting Officer can be contacted by mail at:

Russell Choate
Department of the Interior
Interior Business Center
Acquisition Services Directorate
Division III
P.O. Box 1420
Sierra Vista, AZ 85636
Russell_K_Choate@ibc.doi.gov

7. OTHER INFORMATION

7.1. Government Property, Government Furnished Equipment (GFE) and Facilities

The Government may provide government-furnished equipment (GFE), resources (GFR), information (GFI), or services (GFS) under the terms of each negotiated contract or agreement. GFE, GFR, GFI, or GFS requested by an Offeror must be factored into the Offeror's project cost. Each Offeror must provide a very specific description of any equipment or hardware it needs to acquire to perform the work. This description should indicate whether or not each particular piece of equipment or hardware will be included as part of a deliverable item under the resulting award.

In addition, this description should identify the component, nomenclature, and configuration of the equipment or hardware that it proposes to purchase for this effort. The Government wants to have the contractor purchase the equipment or hardware for deliverable items under its contract. It will evaluate case-by-case the purchase, on a direct reimbursement basis, of special test equipment or other equipment, not included in a deliverable item will be evaluated for allowability on a case-by-case basis. Maximum use of Government integration, test, and experiment facilities is encouraged in each of the Offeror's proposals.

Government research facilities may be available, and should be considered as potential GFE. These facilities and resources are of high value, and some are in constant demand by multiple programs. The use of these facilities and resources will be negotiated as the program unfolds. Offerors should explain which of these facilities they recommend and why.

If any prototype, instrument or device that is produced during the period of performance of a funded project, a sample shall be delivered to DHS S&T CBD before the end of the period of performance for demonstration purposes. More specific information about the provision of a sample(s) will be incorporated in the Statement of Work.

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7.2. SAFETY Act

As part of the Homeland Security Act of 2002, Congress enacted the Support Anti- Terrorism by Fostering Effective Technologies Act of 2002 (the "SAFETY Act"). The SAFETY Act puts limitations on the potential liability of firms that develop and provide qualified anti-terrorism technologies. DHS S&T, acting through its Office of SAFETY Act Implementation (OSAI), encourages the development and deployment of anti-terrorism technologies by making available the SAFETY Act's system of "risk management" and "liability management." Offerors submitting proposals in response to this BAA are encouraged to submit SAFETY Act applications for their existing technologies. They are invited to contact OSAI for more information, at 1-866-788-9318 or helpdesk@safetyact.gov. They also can visit OSAI's Web site at www.safetyact.gov.

7.3. Biological Weapons Convention (BWC) Compliance Documentation

Those Offerors whose full proposals are selected for funding, will be provided two forms which will need to be completed and expeditiously returned to the Agricultural Screening Tools project Office. Blank forms will be provided with the letter confirming selection of the proposal. These forms consist of the following:

- BWC Treaty Compliance Project Summary Form
- Biological Weapons Convention (BWC) Checklist

7.4. Export Control Considerations

International Traffic in Arms Regulations (ITAR) may apply to one or more of the topics in this BAA. Foreign nationals must meet the requirements for participation set by those regulations, if required.

7.5. Security Classification

No Classified Project Description Forms or Full Proposals (or portions of proposals) will be accepted.

7.6. Information for Full Proposal Respondents

This BAA seeks to solicit sound scientific studies and techniques to address the National Bio- and Agrodefense Research Assessment project objectives set forth in Section 1.8.2. It will not be construed as an obligation on the part of the Government to acquire any products or services. No entitlement to payment of direct or indirect costs or charges by the Government will arise as a result of submission of responses to this BAA and the Government's use of such information. Respondents to this BAA may be requested to provide additional information based on their submittals. Unnecessarily elaborate responses containing extensive marketing materials are not desired.

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7.7. Subcontracting Plan

Successful contract proposals that exceed \$650,000.00, submitted by all but small business concerns, will be required to submit a Small Business Subcontracting Plan in accordance with FAR 52.219-9, prior to award.

7.8. Additional Deliverables

Performers should define additional program-specific deliverables as appropriate for the proposed approach. The Government may describe additional deliverables at the time full proposals are requested.

It is desired, whenever possible, that final reports be in a format that is publishable in appropriate scientific journals so that peer review can be conducted.

7.9. Reporting

The following *minimum* deliverables will be required under traditional procurement Contracts awarded to those Offerors whose Full Proposals are selected for award. See topic area requirements for additional requirements.

Monthly Project Status Reports

Reports of project status will be solicited on a monthly basis from all performers. These reports will be electronically submitted to the Program Manager within fifteen days after the last day of each month. The Monthly Project Status Report should be in a standardized format to collect the following information:

Static Information (Information that does not change monthly over the project):

- Project Title
- DHS Project Control #
- Period of Performance
- Principal Investigator's Name, Telephone Number, E-mail and Unclassified/Secure Facsimile Number(s)
- Performer's Financial Contact Name and Telephone Number

Monthly Update Information To Be Provided in Bulleted or Short Narrative Format:

- Activity During the Past Reporting Period (month)
- Progress Achieved Against Deliverable(s) During Reporting Period
- Progress Achieved Against Project Milestones and Tasks During Reporting Period
- Deliverables Submitted This Period
- Milestones Reached/Achieved This Period
- Other Noteworthy Accomplishments (Meetings, Presentations, Publications, etc.)
- Topics of Concern/Slippage (Technical, Schedule and/or Cost)
- Recovery Plan (if needed)

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- Explicit Plans for Next Month
- Project Budget Information (Amount Spent During Reporting Period, Cumulative Amount Spent Since Project Inception, and Amount of Funding Remaining)

Performers are requested to provide monthly update information only in those sections of the form that are applicable to the activities performed during the reporting period. If there is no updated information to report in a section, it can be marked “N/A” for Not Applicable, or left blank.

The following deliverables, primarily in contractor format, are anticipated as necessary. However, specific deliverables should be proposed by each Offeror and finalized with the contracting agent:

- Monthly Progress Status Reports
- Presentation Material
- Other Documents or Reports
- Final Report (suitable for publishing and peer review)

7.10. Project Conferences, Meetings and Reviews

The NBAF Transition Research project will schedule monthly telephone conferences in which all performers are encouraged to participate. Matters of general interest to the performers are provided on agendas that are e-mailed to the performers along with dial-in instructions for access to a toll-free telephone bridge. Those issues that are relevant only to one performer or proprietary in nature are discussed in separate telephone conferences between the performer and the NBAF Transition Research project office staff.

Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress towards the deliverables and major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, Offerors should assume that one of these one-day meetings will be at or near DHS S&T, Washington D.C., and one other meeting will be held at the contractor’s facility or a near-by government facility.

7.11. Certificate of Current Cost or Pricing Data

Successful contract proposals that exceed \$700,000.00 may require the submission of a Certificate of Current Cost or Pricing Data in accordance with FAR 15.403-4(b)(2), prior to award.

7.12. Test and Evaluation Facilities

Department of Homeland Security Science & Technology Directorate may make available appropriate test and evaluation facilities to support this program. Offerors should provide any specific requirements needed for test and evaluation of their proposed concept in their proposals.

7.13. Hazardous Materials

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Depending on the topic, Offeror may choose to or be required to utilize hazardous materials during the course of the project development effort. If the government provides hazardous samples as part of the developmental and operational testing, information on the samples will be provided to the successful Offerors requiring such samples.

Hazardous material, as used here, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract). If the successful Offerors choose to use their own hazardous samples, Offerors must meet the requirements for the identification and material safety as follows:

HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SECURITY DATA

- (a) "Hazardous material," as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).
- (b) The Offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material (*If none, insert "None"*) Identification No.

- (c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.
- (d) The apparently successful Offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful Offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful Offeror being considered nonresponsible and ineligible for award.
- (e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

- (f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.
- (g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.
- (h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:
 - (1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to—
 - (i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;
 - (ii) Obtain medical treatment for those affected by the material; and
 - (iii) Have others use, duplicate, and disclose the data for the Government for these purposes.
 - (2) To use, duplicate, and disclose data furnished under this clause, in accordance with paragraph (h) (1) of this clause, in precedence over any other clause of this contract providing for rights in data.
 - (3) The Government is not precluded from using similar or identical data acquired from other sources.
- (i) Except as provided in paragraph (i)(2), the Contractor shall prepare and submit a sufficient number of Material Safety Data Sheets (MSDS's), meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous materials identified in paragraph (b) of this clause.
 - (1) For items shipped to consignees, the Contractor shall include a copy of the MSDS's with the packing list or other suitable shipping document which accompanies each shipment. Alternatively, the Contractor is permitted to transmit MSDS's to consignees in advance of receipt of shipments by consignees, if authorized in writing by the Contracting Officer.
 - (2) For items shipped to consignees identified by mailing address as agency depots, distribution centers or customer supply centers, the Contractor shall provide one copy of the MSDS's in or on each shipping container. If affixed to the outside of each container, the MSDS's must be placed in a weather resistant envelope.

7.14 AQD GREENING CLAUSE

A) Almost every service requires the use of some sort of product. While providing services pursuant to the Requirements Document in this contract, if your services necessitate the acquisition of any products, the contractor shall use its best efforts to comply with Executive Order 13514, and to acquire the environmentally preferable products that meet the requirements of clauses at FAR 52.223-2, Affirmative Procurement of Biobased Products under Service and Construction Contracts, 52.223-15, Energy Efficiency in Energy Consuming Products, and 52.223-17 Affirmative Procurement of EPA-Designated Items in Service and Construction Contracts.

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B) Additionally, the contractor shall use its best efforts to reduce the generation of paper documents through the use of double-sided printing, double sided copying, and the use and purchase of 30% post consumer content white paper to meet the intent of FAR 52.204-4 Printed or Copied Double-Sided on Postconsumer Fiber Content Paper.

8. APPENDICES

8.1. Appendix A – List of Acronyms

8.2 Appendix B – “Full Proposal Summary of Costs and Related Information”

8.3 Appendix C – Technology Readiness Levels

8.4 Appendix D – Model Readiness Levels

8.5 Appendix E – High Consequence Foreign Animal Diseases and Pests

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8.1. Appendix A – List of Acronyms

BAA	Broad Agency Announcement
CA	Cooperative Agreement
CBD	Chemical and Biological Division
DHS	Department of Homeland Security
DOE	Department of Energy
FAQs	Frequently Asked Questions
FAR	Federal Acquisition Regulations
FBI	Federal Bureau of Investigation
FedBizOps	Federal Business Opportunities (www.fbo.gov)
FOUO	For Official Use Only
FFRDC	Federally Funded Research and Development Center
G&A	General and Administrative
GFE	Government-Furnished Equipment
GFI	Government-Furnished Information
GFR	Government-Furnished Resources
GFS	Government-Furnished Services
HBCU	Historically Black Colleges and Universities
HSPD	Homeland Security Presidential Directive
HUB	Historically Underutilized Businesses
IA	Interagency Agreement
IR&D	Independent Research and Development
MI	Minority Institutions
NTAs	Non-traditional Agents
OSAI	Office of SAFETY Act Implementation (DHS)
OTs	Other Transactions
PDF	Portable Document Format
PL	Public Law
RFP	Request for Proposal
RDT&E	Research, Development, Test and Evaluation
S&T	Science and Technology
SAFETY Act	Support Anti-Terrorism by Fostering Effective Technologies Act 20
SDB	Small Disadvantaged Businesses
APHIS	Animal and Plant Health Inspection Service
ARS	Agricultural Research Service
BSL	Biosafety Laboratory
COTS	Commercial Off-the-Shelf
CVB	Center for Veterinary Biologics
DIVA	Differentiate between Infected and Vaccinated Animals
FMD	Foot-and-Mouth Disease
GMO	Genetically Modified Organism
GUI	Graphical User Interface
MRL	Model Readiness Level
NAHLN	National Animal Health Laboratory Network
NBAF	National Bio- and Agrodefense Facility
NVSL	National Veterinary Services Laboratories

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BAA Specific Acronyms

PIADC	Plum Island Animal Disease Center
TAD	Transboundary Animal Disease
TRL	Technology Readiness Level
USDA	U.S. Department of Agriculture

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8.2. Appendix B- Full Proposal Summary of Costs and Related Information Form

Full Proposal (Phase 2) Summary of Costs and Related Information

(Add additional rows, as required. Submit as attachment to Cost Proposal)

TASK INFORMATION

Project Title:

Total Cost of Base Year Effort: \$

Total Cost of Base + Option Year Efforts: \$

Base Year Fixed Fee (Amount & % of cost): \$ (%)

Base Year Period of Performance (mos): months

Option Years Proposed (if any):

TASK INFORMATION

Base Year Tasks: (Add additional rows, if needed)

Task #1: (Amount & Task Title) \$

Task #2: (Amount & Task Title) \$

Task #3: (Amount & Task Title) \$

Task #n: (Amount & Task Title) \$

Base Year Total (Amount) \$

Option Year #1 Tasks (If any):

Task #1: (Amount & Task Title) \$

Task #2: (Amount & Task Title) \$

Task #3: (Amount & Task Title) \$

Task #n: (Amount & Task Title) \$

Option Year #1 Total: \$

Option Year #n Tasks (If any):

Task #1: (Amount & Task Title) \$

Task #2: (Amount & Task Title) \$

Task #3: (Amount & Task Title) \$

Task #n: (Amount & Task Title) \$

Option Year #2 Total: \$

LABOR HOURS AND COSTS

Total Number of Base Year Labor Hours: hrs.

Total Cost of Base Year Direct Labor: \$

Average Cost of Base Year Labor Hours: \$ per hr.

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Fringe Burden (Amount & %):	\$	(%)
Overhead (Amount & %):	\$	(%)
G&A (Amount & %):	\$	(%)
Consultant(s) Fees Amount:	\$	

MATERIALS COSTS

Total Cost of Materials for Base Year:	\$
Types of Materials:	
Shipping Costs:	\$

SUBCONTRACTING COSTS (If any):

Cost of Base Year Subcontract Effort:	\$
---------------------------------------	----

TRAVEL COSTS

Total Cost of Base Year Travel:	\$
Cost & Description of Trip #1 (# of travelers, duration & Locations)	\$
Cost & Description of Trip #2 (# of travelers, duration & Locations)	\$

8.3. Appendix C - Technology Readiness Levels

	Level	TRL Definitions	DHS TRL Description
Research and Development	1	Basic principles observed and reported	Scientific research begins the first steps toward applied research and development. Examples include paper studies of a technology's basic properties, exploration of a technical phenomenon, and definition of a technical concept. This level represents the origin of technology readiness.
	2	Technology concept and/or application formulated	Once basic principles are observed and proven repeatable, practical applications can be formulated. Applications are speculative and there may be no proof or detailed analysis to support the assumptions. Examples are limited to analytic studies, device phenomenology, and experimentation
	3	Analytical and experimental critical function and/or characteristic proof of concept	Active research and development is initiated. This includes analytical and laboratory studies to physically validate analytical predications of separate elements of the technology. Examples include components that are not yet integrated.
Testing and Demonstration	4	Component and/or breadboard validation in laboratory environment	Basic technological components are integrated to establish that they will work together. Examples include integration of modules and components in the laboratory.
	5	Component and/or breadboard validation in laboratory environment	The basic technological components are integrated with reasonably realistic supporting elements so it can be tested in simulated environment. Examples include —high-fidelity laboratory integration of components and software
	6	System/Subsystem model or prototype in a relevant environment	Representative model or prototype system is tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness. Examples include testing a prototype in a high-fidelity laboratory environment or in a simulated operational environment
	7	System/subsystem model or prototype demonstration in a relevant environment	Prototype near, or at, planned operational system level. Represents a major step up from TRL 6, requiring demonstration of an actual system prototype in an operational environment.
Production and Deployment	8	Actual system completed and qualified through test and demonstration	Technology had been proven to work in its final form and under expected operational deployment conditions. In almost all cases, this TRL represents completion of system development. Examples include test and evaluation of the system in its intended system configuration and operational requirement.
	9	Actual system proven through successful mission operations	Actual application of the technology in its final form and under mission conditions, in accordance with the user's Concept of Operations.

[http://www.homelandsecurity.org/docs/reports/DHS ST RL Calculator report20091020.pdf](http://www.homelandsecurity.org/docs/reports/DHS_ST_RL_Calculator_report20091020.pdf)

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8.4. Appendix D - Model Readiness Levels

MRL 1 – Conceptual model development and validation

- Develop a feasibility study based on gaps and needs.
- Complete documentation (requirements document) of the conceptual model, which includes assumptions, simplifications, and limitations as well as the stakeholders that should be involved in the processes involved in each MRL.
- Develop an analysis of user requirements.
- Develop objective and threshold operational requirements.

MRL 2 – Model/software structure formulated, coded, and independently reviewed

- Identify data requirements.
- Demonstrate performance of components.
- Complete initial coding of individual functions/models.
- Demonstrate integrated functionality of technology in simplified environment.
- Verify individual component functions through testing.
- Demonstrate integration of modules/functions in a lab environment.
- Provide software documentation.
- Complete analysis of data requirements and formats.
- Demonstrate performance characteristics during in-house or beta-testing to determine if the model is performing as expected.
- Determine if modules/functions have been debugged. This should happen at every MRL starting at MRL 2.

MRL 3 – Model/software parameterized using realistic data and independently reviewed

- Simulate and validate all system specifications within a lab environment.
- Test the model in a simulated operational environment.
- Conduct an independent review of the model parameterization/fitting process.
- Identify available datasets for model parameterization.
- Assess the quality of the data used for parameterization and determine if it is appropriate for use.
- Verify and validate the model through the assessment of available outbreak data and peer review beginning at MRL 3-5.

MRL 4 – Model/software tested in an operational environment

- Complete the operational testing of technology/system in relevant environment.
- Demonstrate a fully integrated prototype in actual or simulated operational environment.
- Conduct and document thorough sensitivity and uncertainty analysis.
- Conduct a formal model comparison study, if applicable. This may also be applicable at other MRLs.
- Determine if the model functionality handles realistic problems.

MRL 5 – Actual system completed and qualified through test and demonstration in the environment it was designed for

- Deploy the technology/system in the intended operational environment.

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- Complete operational test and evaluation.

MRL 6 – Actual system proven through successful mission operations, maintenance phase

- Determine if the model performed successfully in its intended operational environment (predictive ability, useful in preparedness, etc.)
- Develop an operational and maintenance plan for maintenance of the model based on performance.
- Establish and implement operational maintenance and review.

Table 1. Model Readiness Levels and their correlation to Technology Readiness Levels

Model Readiness Level		Technology Readiness Level		
1	Conceptual model development and validation	Research & Development	1	Basic principles observed and reported
2	Model/software structure formulated, coded and independently reviewed		2	Technology concept and/or application formulated
3	Model/software parameterized using realistic data and independently reviewed		3	Analytical and experimental critical function and/or characteristic proof of concept
4	Model/software tested in an operational environment		4	Component and/or breadboard validation in laboratory environment
5	Actual system completed and qualified through test and demonstration in the environment it was designed for	Testing & Demonstration	5	Component and/or breadboard validation in relevant environment
			6	System/subsystem model or prototype demonstration in a relevant environment
			7	System prototype demonstration in an operational environment
6	Actual system proven through successful mission operations / maintenance phase	Production & Deployment	8	Actual system completed and qualified through test and demonstration
			9	Actual system proven through successful mission operations

8.5. Appendix E - High Consequence Foreign Animal Diseases and Pests

APHIS

Factsheet

Veterinary Services

July 2013

High-Consequence Foreign Animal Diseases and Pests

In carrying out our safeguarding mission, the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) works to ensure the continued health and welfare of our Nation's livestock and poultry populations. One important aspect of this work is emergency preparedness—making sure we are ready to respond effectively when faced with a foreign animal disease outbreak or pest infestation. As part of these efforts, APHIS' animal health officials identify "high-consequence" foreign animal diseases and pests. These are serious diseases and pests that do not currently exist in the United States. If introduced here, they pose a severe threat to U.S. animal health and, in some cases, the economy and human health as well.

The list divides diseases and pests into tiers according to risk level, as described below.

Tier 1

Tier 1 diseases are those of national concern. They pose the most significant threat to animal agriculture in the United States, as they have the highest risks and consequences. This category includes:

- African swine fever*
- classical swine fever*
- foot-and-mouth disease*
- avian influenza (any strain that is highly pathogenic or has zoonotic significance)*
- virulent Newcastle disease*

Tier 2

Tier 2 diseases are transmitted primarily by pests. How quickly these diseases spread and APHIS' ability to control or eradicate an outbreak depends largely on whether these pests are present in the environment and whether they can transmit the disease between

animals. This category includes:

- heartwater
- New World screwworm
- Rift Valley fever*
- Venezuelan equine encephalitis*

Tier 3

Tier 3 diseases and pests pose less risk and fewer consequences than those in Tiers 1 and 2, but still rise to the level of inclusion because of their potential negative impact on animal or human health. This category includes:

- African horse sickness
- contagious bovine pleuropneumonia and contagious caprine pleuropneumonia
- glanders and melioidiosis
- henipaviruses (Hendra and Nipah)*
- rinderpest* and peste des petits ruminants*
- tropical bont tick

What the List Means

These high-consequence foreign animal diseases and pests are of primary importance to APHIS' emergency preparedness officials, guiding many of our program priorities. For example, the list will help inform decisions on how we procure countermeasures to address a disease outbreak and, potentially, funding for research and response activities. The diseases marked with an asterisk are those APHIS has identified as biological threats that need to be considered in program priorities and countermeasure stockpile requirements.

How We Developed the List

APHIS developed this list after carefully considering all foreign animal diseases and pests that could negatively affect livestock or poultry. We also took into account disease agents that are identified in the agricultural select agent program, as well as those that can severely threaten public health or animal health (zoonotic diseases) or the safety of animal products. We did not include diseases and pests that are endemic, or common, in the United States or any disease APHIS

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already manages through one of our animal health programs (e.g., brucellosis, bovine tuberculosis, scrapie, etc.).

When developing the list, another overall issue we considered was a disease's potential for introduction into the United States. The eight criteria below also helped guide our decisions on whether or not to designate an animal disease or pest as one of high, negative consequence.

- 1) high epidemic/epizootic potential, or the ability to rapidly spread and infect a large number of animals
- 2) high economic impact
- 3) large impact on trade, both domestic and international
- 4) high animal morbidity and mortality, or the capability to cause disease and death respectively
- 5) high potential to infect multiple species
- 6) inability to detect the disease rapidly
- 7) ability to vaccinate for the disease
- 8) high zoonotic (can be transmitted from animals to people) potential

APHIS animal health officials will review and update this list periodically. In doing so, we will seek broad input from stakeholders to inform our decisions.

Learn More

If you have any questions about the list of high-consequence animal diseases and pests, please call APHIS Veterinary Services at (301) 851-3595. To learn more about animal health emergency management, go to www.aphis.usda.gov/animal_health/emergency_management.

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