

**STRATEGIC ENVIRONMENTAL RESEARCH AND DEVELOPMENT PROGRAM  
STATEMENT OF NEED FOR FY07  
SUSTAINABLE INFRASTRUCTURE NEW START**

**IDENTIFICATION AND CONTROL OF  
NON-NATIVE INVASIVE SPECIES TRANSPORT DURING DEPARTMENT OF  
DEFENSE ACTIVITIES**

**1. OBJECTIVE OF PROPOSED WORK**

The objective of this Statement of Need (SON) is to develop methods to identify and control the spread of non-native invasive species (NIS) that may be inadvertently transported by DoD vehicles, equipment, and/or personnel. A better understanding of the role that DoD vehicular, equipment, and personnel transport activities play in the introduction and spread of NIS is required. Research should focus on the extent to which military vehicles and equipment are able to transport invasive species within military installations as well as between installations. Research on cost effective methods to remove invasive species from vehicles, equipment and personal gear prior to and upon return from deployment is also of interest. Vehicles of interest include, but are not limited to, trucks, personnel carriers, tanks, amphibious vehicles, and aircraft. Proposals which address non-native invasive species carried in ship ballast waters or on shiphulls will not be considered.

Proposals responding to this SON must address the following objectives:

- Identify transportation vectors for the introduction and spread of NIS.
- Determine the most significant transport vectors both within the continental United States (CONUS) (between and within installations) and outside CONUS (OCONUS) (both departing for and returning from overseas deployments).

Proposals may but are not required to address the following objective:

- Develop and/or improve methods of identifying and removing to prevent the introduction of NIS on vehicles, equipment, and personal gear removal prior to transportation.

The methods identified for NIS removal, destruction, or containment should be as general as possible in order that a few methods can be used for several or many NIS and should not produce any hazardous waste streams.

**2. EXPECTED PAYOFFS OF PROPOSED WORK**

The identification of significant pathways for NIS transport and subsequent development of more targeted and improved methods for NIS reduction prior to transport will help DoD better comply with Executive Order 13112 as well as with DoD's stewardship goals. Preventing the introduction and spread of NIS has significant management and cost savings benefit by precluding the potential for future long-term expensive NIS control or eradication and compliance obligations, including the potential for loss of training lands due to impacts to threatened and endangered species (TES).

### **3. BACKGROUND**

During war, peace-keeping missions, and regular training activities, it is necessary for troops and their equipment to deploy to regions across the globe. For military personnel to train as they will need to fight, it is often necessary to transport both troops and vehicles to installations across the country. Each and every time troops deploy, there is a high likelihood that plant, animal, and pathogen "hitch hikers" may also tag along. Current inspection and wash facilities do not catch and eliminate all of these unwanted organisms.

Vehicular and personnel transport activities on military lands frequently result in the transport and spread of NIS such as ants, grasses, and shrubs. The case of the brown tree snake is the most high profile example of this phenomenon, but far from the only one. For example, in Hawaii, expanded off-road use associated with expanded and new military training poses a significant potential threat to 22 endangered snails, 4 endangered birds, and more than 80 threatened and endangered plants that reside on military reservations in Hawaii. NIS are the second leading cause for species endangerment, following direct habitat destruction, and the spread of NIS poses a significant threat to military training lands.

Transport of personnel and equipment both within the country (e.g., Fort Drum to Fort Bliss) and internationally can result in the inadvertent transport of NIS. Currently, USDA has responsibility for inspection for cargo and materiel entering U.S. ports. Of the total amount entering the country, USDA inspects only a fraction. In addition, they do not inspect interstate cargo. Thus, the responsibility for controlling the transport of NIS on DoD materiel lies with DoD. The Armed Forces Pest Management Board Technical Guide 31 [<http://www.afpmb.org/pubs/tims/tim31.htm>] provides guidance for current DoD wash down procedures.

Finally, Executive Order (EO) 13112, signed by President Clinton in February of 1999, requires federal agencies "to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause." In response to EO 11312, the National Invasives Species Council has developed a management plan and other reports [<http://www.invasivespecies.gov/>] that are relevant to NIS pathways identification, early detection, and prevention.

### **4. COST AND DURATION OF PROPOSED WORK**

The cost and time to meet the requirements of this SON are at the discretion of the proposer. The proposer should incorporate the appropriate time schedule and cost requirements to accomplish the

scope of work proposed. SERDP staff will evaluate the cost and duration of the project plan in light of the scope of work proposed. SERDP projects normally run from 2 to 4 years in length and vary considerably in cost consistent with the scope of the effort. Proposers are encouraged to and may submit smaller proposals that offer technical or cost advantages that only address one or more portions of the SON.

Proposers with innovative approaches to the SON, that entail high technical risk and/or have minimal supporting data, may submit a pre-proposal for a limited amount of funding (less than \$100,000 for a single year) to develop the data necessary to provide for risk reduction and/or a proof of concept. Such proposals, if successful, may be eligible for follow-on funding. These pre-proposals are due on January 5, 2006, the same date as pre-proposals (for BAA responders) or on the date requested by the federal member's organization (for federal responders).

The government reserves the right to fund more than one proposal either to meet this requirement fully or to pursue more than one innovative approach.

## **5. POINT OF CONTACT**

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For proposal submission instructions and additional solicitation information, visit the Funding & Opportunities page on the SERDP web site: <http://www.serdp.org/funding>