DoD Legacy Resource Management Program
Key Invasive Species Projects

Legacy Program Overview

In 1990, Congress established the DoD Legacy Resource Management Program (Legacy) to fund high priority projects that support military readiness while preserving our nation's natural and cultural heritage. Legacy, the DoD Natural Resources Program's (NR Program's) primary funding mechanism, seeks to protect and enhance resources on DoD lands while supporting the military's testing, training, and operational objectives. Legacy funds invasive species projects that support readiness and range sustainment, and help DoD address and adapt to new and emerging threats. For more information on Legacy and the types of projects that typically receive Legacy funding, please visit *www.DoDLegacy.org* or *www.denix.osd.mil/nr/upload/Department-of-Defense-Legacy-Resource-Management-Program-56565.pdf*.

The three principles that guide all of DoD's NR Programs, including Legacy, are stewardship, leadership, and partnership. **Stewardship** initiatives help DoD safeguard its irreplaceable resources for future generations. By embracing a **leadership** role as part of the Program, DoD serves as a model for respectful use of natural and cultural resources. Through **partnerships**, the NR Program strives to access the knowledge and talents of individuals outside of DoD.

Featured Invasive Species Projects

From Fiscal Year (FY) 1991 to FY2014, Legacy funded nearly 140 invasive species-related projects totaling approximately $18.7 million. Projects that spanned several years, or produced long lasting results, are highlighted below. The complete list of invasive species-related projects is available at *www.dodinvasives.org*.

Prioritizing Invasive Plant Species for Eradication, Containment, and Surveillance (Project 13-621)

This project team implemented, in collaboration with the U.S. Fish and Wildlife Service's Landscape Conservation Cooperatives, an approach to rapidly incorporate and prioritize new invasive species information into Integrated Natural Resources Management Plans (INRMPs). The team provided regional landscape-level invasive species threats by integrating climate change and other stressors into INRMPs. Prioritizing threats from invasive plants allowed DoD to mitigate the most significant threats, which consequently reduced the likelihood that DoD would shoulder an increasing portion of the conservation burden.

Early Detection Rapid Response Invasive Species Strike Teams (Projects 12-622, 13-622, 14-622)

Invasive Species Strike Teams partnered with natural resources specialists to eradicate invasive species and restore natural areas on several military installations. The group used Early Detection Rapid Response intervention, leveraged funds and knowledge through Cooperative Invasive Species Management Areas (CISMAs), and provided DoD facilities with new technologies through IPCConnect (an online management tool) to track and report invasive species control efforts.

Strategic Management of Invasive Species and Web Seminar Series (Projects 11-114, 13-625)

This seminar series provided a forum for the exchange of ideas, experiences, and resources for invasive species. Seminar participants learned skills to strengthen their management strategies, develop regional partnerships, educate and provide leadership to other installation personnel and project partners, and advance installation conservation goals. These efforts enabled natural resources managers to develop strategies for combatting invasive species that reduce the economic and ecological costs on military installations, and promote long-term stewardship of military lands.

Great Basin Species-At-Risk and Invasive Species Management (Projects 10-102, 11-102, 12-102)

This project team created the first ever data compilation of multiple year nest activity for each avian focal species (burrowing owls, ferruginous hawks, and golden eagles) across nearly 40,000 square kilometers in the Great Basin. These efforts included extensively analyzing and compiling trends for over 30,000 records across 30 years to develop landscape metrics for each of the focal species. The project team provided detailed maps with invasive cheatgrass cover percentages and invasion risk including landscape repercussions and potential risk factors associated with invasion potential.

Repellent Tools for Invasive Species Control in Military Cargo (Project 10-113)

Brown treesnakes, marine toads, African giant land snails, and house mice commonly contaminate cargo at military installations in the Pacific region. This project team developed a pamphlet on the effective use of repellents, specifically isophorone (a commercially available snake repellent), to distribute to those installations. The pamphlet outlines ways to deter snakes from entering cargo areas, prevent snakes from entering cargo once inside cargo areas, and prompt snakes to exit cargo if already inside. Invasive species cargo control provides cost savings and prevents dispersal into the U.S. and other non-native environments.

Cooperative Invasive Species Management Areas
(Projects 02-1703, 03-1703, 04-1703, 06-334, 07-334, 09-334, 09-437, 10-437, 11-437)

Funds from these projects allowed DoD to participate in CISMAs in Arizona, Florida, and North Carolina to address invasive species on installations in those states. The Department's involvement in those CISMAs established partnerships between federal, state, and local agencies, and facilitated working across boundaries to pool limited resources and prevent invasive species from causing ecological and economic damage. The CISMAs allowed participants to implement regional invasive species management strategies and establish control/eradication efforts.

Tools: Noxious and Nuisance Plant Management Information System
(Projects 981724, 991724, 04-229, 05-229, 07-229, 08-229, 09-229)

The project team developed three computer-based tools: the Noxious and Nuisance Plant Management Information System (PMIS), Aquatic Nuisance Species Information System (ANSIS), and Aquatic Plant Information System (APIS). These tools - designed for use by public land managers, educators, weed managers, and technical personnel - provide information on invasive plant and animal biology, ecology, identification, distribution, and associated management strategies. Stakeholders can use information and outreach materials in these tools to educate installation personnel including commanders, soldiers, and their families about non-native species. These systems help managers control existing invasive species while working to prevent future invasive species introductions on military installations.

Introduction of Invasive Species from Participation in OCONUS [Outside the Continental U.S.] Exercises
(Projects 01-163, 03-123)

The project team evaluated how invasive species introductions occur in the contiguous 48 states via military personnel and equipment transports from outside the contiguous 48 states. The evaluation and analysis of these movements resulted in a list of recommended changes to protocols and procedures to eliminate invasive species movements.

Model Invasive Species Control Project: Yellow Star Thistle
(Projects 01-160, 02-160, 03-160)

The project team developed scientific and administrative guidelines for natural resources and pest management professionals to design and execute long-term, cost-effective strategies to reduce the impacts from the yellow star thistle and other invasive weeds on military installations. The group produced a user's guide to help installation managers design and administer programs to more effectively manage yellow star thistle and related invasive weed species, as measured by military readiness.

Yellow Star Thistle

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Department of Defense Natural Resources Program