

**Division of Forestry and Wildlife  
Department of Land and Natural Resources  
State of Hawai'i**



**THE HAWAI'I INVASIVE SPECIES COUNCIL**  
**Summary of the Report to the 25th Legislature**  
**2009 Regular Session**

The 2003 State Legislature authorized the creation of the Hawai'i Invasive Species Council under Act 85, SLH 2003, and stated:  
*“ ... the silent invasion of Hawai'i by alien invasive species is the single greatest threat to Hawai'i's economy, natural environment, and the health and lifestyle of Hawai'i's people and visitors.”*

In 2006, Act 85, amended by Act 109, SLH 2006, became permanent law in Chapter 194, HRS.

## Purpose

HISC provides the institutional framework for leadership and coordination for a statewide invasive species prevention and control program. HISC is administered by DLNR, and chaired by HDOA and DLNR.



HISC members include:

- Department of Land and Natural Resources (DLNR)
- Hawai'i Department of Agriculture (HDOA)
- Department Business, Economic Development, and Tourism (DBEDT)
- Department of Health (DOH)
- Department of Transportation (DOT)
- University of Hawai'i (UH)

## HISC Program Areas

*HISC Strategy 2008-2013* guides the work of the Council. Its Working Groups head up the following areas:

- Prevention (Chair: HDOA)
- Response & Control (Chair: DLNR)
- Research & Technology (Chair: UH)
- Public Outreach (Chair: DOT)

*HISC Strategy 2008-2013* can be found at <http://www.hawaiiinvasivespecies.org/hisc/strategicplan.html>

## HISC Accomplishments

Accomplishments within the four HISC program areas, Prevention, Response and Control, Research and Technology, Public Outreach and Resources, as accomplished by the working groups established by the *HISC Strategy 2008-2013*.

### Prevention

The lead agency and chair is HDOA. Goals include 1) Review risks of pest/invasive species entry into the State and 2) Implement measures and improve Hawai'i's capacity to prevent the entry of new pests/invasive species with shared resources and shared responsibilities of all agencies.

- Implementation of a Weed Risk Assessment system screening for plants led to the adoption of voluntary Codes of Conduct by Lyon Arboretum and Nursery Growers Association.
- DLNR's Division of Aquatic Resources implemented a hull fouling and ballast water prevention and early detection program.
- DOH implemented a \$375,000 project to undertake West Nile Virus (WNV) surveillance, analysis, and improved response capabilities.
- HDOA passed an emergency rule to prevent movement of bees and bee products inter-island or on-islands to prevent the movement of the varroa mite which affects beehive health. HISC provides staff funding.

- DOA continued risk assessments that were funded in 2007 with intensive inspections of incoming cargo at the Honolulu International Airport and maritime ports.

### **Response & Control (Established Pests)**

- **Invasive Species Committees of Hawai‘i (ISCs)** are island-based partnerships of government agencies, non-government organizations, and private businesses working to protect our Islands from the most threatening invasive pests, a total of 34 active targets. Each ISC partnership has a paid staff and field crew to implement rapid response and control plans.
- ISC field crews survey for and remove all miconia plants from Kaua‘i and O‘ahu; no seeding trees have been found in the past year. Crews on Maui and the Big Island work to contain larger populations of miconia. On Moloka‘i, crews have eradicated pampas grass and fountain grass.
- ISC field crews have eradicated coqui frogs on O‘ahu and target a small population on Kaua‘i. Maui and Big Island crews continue to contain coqui populations in an effort to keep pristine natural areas free of coqui frogs, and to control frogs around residential areas. Moloka‘i crews have kept coqui frogs from establishing.
- **DAR** implemented recently adopted Hawai‘i Administrative Rules, Chapter 13-76, relating to Non-Indigenous Aquatic Species to stem the unintentional introduction of alien aquatic species within the ballast water of ocean-going vessels, an internationally recognized threat to native ecosystems.

### **Research & Technology**

- Since 2005, HISC has awarded \$1.98 million to support innovative research and technology development for improved management of invasive species, including control of ants, coqui frogs, brown treesnake, nettle caterpillar, among others.

### **Public Outreach**

Invasive species public information management occurs for each program area and on each island using print, broadcast and electronic delivery systems, as well as engagement with the community via booths at public events and public presentations.

- The HISC Public Outreach Working Group generated, or participated in outreach efforts, that generated print, broadcast and electronic media mentions. Most print and broadcast articles also have corresponding Web site postings which maximize information delivery systems. Logged media mentions total 70.
- Invasive species educational programs and community events implemented by staff total 58. Education materials produced include refrigerator magnets, key rings, pens, posters, brochures, displays, print and electronic newsletters, and a monthly statewide emailed newsletter *HISC eNews* which communicates informational material to a permission-based audience list. Logged education materials produced total 66.
- Various public events provide opportunities for engaging the public on invasive species issues with presentations and displays. Logged estimates of people reached through talks and displays total 31,258.
- The official Web site, [hawaiiinvasivespecies.org](http://hawaiiinvasivespecies.org), (design partially funded by the HISC POWG and USFWS) became fully operational in September 2007. Logged Web site “hits” total 10,596.

### **Meetings and Themes**

HISC working group meetings are interagency groups that meet to discuss issues related to invasive species management. Agenda and minutes are posted at: <http://www.hawaiiinvasivespecies.org/hisc/>

## ***HISC Resolutions***

- HISC supported a statewide outreach effort to distribute information and address community concerns with respect to the *Tectococcus* biocontrol Environmental Assessment process.
- HISC issued a statement of support for scientifically researched, regulated and approved biocontrol as a tool for combating invasive species.
- HISC approved a recommendation that state agencies conducting planting operations request Hawai'i Pacific Weed Risk Assessment (HPWRA) scores, when available, as one of the tools to assist decision makers in determining whether to plant a species.
- Adopted the *HISC Strategy 2008-2013*.  
The strategy is available at: <http://www.hawaiiinvasivespecies.org/hisc/strategicplan.html>
- Agreed to remove the HISC Interagency Working Group.

## ***Approved Budget FY09***

In FY 2009, the Legislature allocated \$1 million in General Funds and \$3 million from the Natural Area Reserve Special Fund for HISC programs, which generated more than a 1:1 in federal and other match.

Although these are difficult economic times, we must continue to protect our environment and natural resources, agriculture and visitor industry, and the health of Hawai'i's people. We look forward to working with the 2009 Legislature in these challenging times. We thank you for your support.

## ***Support of Innovative Projects and Addressing Gaps***

HISC has preferentially supported with its funds innovative projects that target gaps in capacity, rather than the simple augmentation of existing invasive species management capacity.

## ***Unaddressed Organizational and Resource Needs***

- Better laws and rules to support effective enforcement action to prevent the arrival, establishment and spread of invasive species.
- Comprehensive prevention and detection measures for both terrestrial and marine invaders not yet present in Hawai'i.
- Better small mammal control to protect native birds.
- Better pig and ungulate control in high value native forest areas
- Biocontrol for widespread pests.
- More control methods to address newly naturalizing pests already present in Hawai'i.
- Public support.

### ***Modern Biosecurity System***

To conduct an adequate level of inspection on important goods, new facilities and staff are needed at ports and airports on all islands. Many invasive species not yet present in Hawai'i pose a serious threat should they arrive and become established. Species, such as the red imported fire ant, brown treesnake, WNV, avian influenza, and many others, have the potential to seriously impact the economy, natural environment, and the health and lifestyle of Hawai'i's people and visitors.

## **Biocontrol**

Biocontrol is the importation of a natural enemy from the native habitat of a pest for the purpose of controlling the pest. This practice is based on the principle that specialized insects or diseases that keep a plant in balance in its native range can be used, after careful testing to check their safety, to help restore ecological balance in Hawai'i, without causing harm to other species.

## **Restoration and Site Management to Protect Watersheds and Biodiversity**

Invasive species control in pristine and near pristine sites and watersheds requires "boots on the ground" to protect biodiversity values. Invasive plants negatively impact aquifer replenishment, and surface water, with native forest providing up to 30% more water than invasive strawberry guava forests. Ungulates, including pigs, deer, sheep, antelope and goats, are managed in key areas to protect biodiversity, watershed values and to mitigate vectored diseases.

## **Rodent and Predator Control to Protect Native Biodiversity**

With adequate control of rodents and predators uninhabited islets could become excellent refuges from multitude of invasive species that plague the main islands, these islets are the last refuge for many rare coastal species, including 22 species of seabirds. On the main islands predator proof fences and control programs could protect native flora and fauna from local extirpation.

## **Brown Treesnake**

The shift of a military base from Okinawa to Guam has increased the risk of introducing brown treesnakes to Hawai'i. Complete inspections are needed in Guam and Hawai'i to ensure the brown treesnake is not accidentally introduced to Hawai'i, and this again underscores the need for new joint inspection facilities at ports.

## **Invasive Species Committees**

ISCs focus on the objectives of early detection, containment and eradication of priority high risk invasive species for which these objectives are feasible.

## **West Nile Virus**

HISC has funded DOH to undertake early detection work for WNV for the last five years. WNV has yet to arrive in Hawai'i, but it could arrive and it has the potential to infect people and devastate bird fauna. Two aspects need to be funded are: annual early detection efforts and an emergency fund in case the disease is detected.

## **Some Agricultural Pest Control Needs**

Staff from the Hawai'i Agricultural Resource Center identified the need control key pests of agriculture, such as fruit flies, birds that prey on seed crops, fireweed in pastures and Napier grass in cane fields.

## **State Noxious/Invasive Plant Program (SNIPP) DOT**

SNIPP is a statewide effort to maintain and control noxious/invasive plant species at a manageable level along Hawai'i's state roads, protect conservation, scenic and native habitat areas and early detection of high priority invasive species. Roads act as vectors for many invasive species and some may have conservation, aesthetic and safety impacts.

## **Emergency Response Fund**

WNV, avian influenza, red imported fire ant, and brown treesnake, as well as any number of less famous invasive species, diseases or pests, could warrant a full and rapid response in the event that they are detected in Hawai'i. In the case of red imported fire ant and brown treesnake the costs to Hawai'i, should those species establish, have been estimated in the hundreds of millions of dollars in direct and indirect costs.

Resource Shortfalls for Invasive Species Management (in millions)	Annual	Set Up Costs (infrastructure)
Modern Biosecurity System	\$4.0	\$54.0
Biocontrol	\$3.1	\$10.0
Restoration/Site Management to Protect Watersheds and Biodiversity	\$10.5	\$10.4
Rodent and Predator Control To Protect Native Biodiversity	\$4.0	\$20.5
Brown Treesnake	\$10.0	
Invasive Species Committees	\$3.2	
West Nile Virus	\$0.4	\$3.0
Some Agricultural Pest Control Needs	\$3.2	
State Noxious/Invasive Plant Program (SNIPP) DOT	\$6.0	
Emergency Response Fund		\$3.0
	<b>\$44.4</b>	<b>\$100.9</b>



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Prepared by

THE STATE OF HAWAI‘I  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF FORESTRY AND WILDLIFE

In response to §194-2, Hawai‘i Revised Statutes  
and  
Section 28 of Act 213, Session Laws of Hawai‘i, 2007