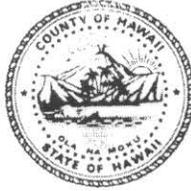


William P. Kenoi  
*Mayor*



Clayton S. Honma  
*Director*

James M. Komata  
*Deputy Director*

## County of Hawai'i

### DEPARTMENT OF PARKS AND RECREATION

101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
(808) 961-8311 • Fax (808) 961-8411

June 3, 2016

Joshua Atwood, Ph.D.  
Invasive Species Coordinator  
Department of Land and Natural Resources (DLNR)  
Division of Forestry and Wildlife (DOFAW)  
1151 Punchbowl Street, Room 325  
Honolulu, HI 96813

Dear Dr. Attwood:

Attached is the Final Report for the County of Hawaii-FY15 HISC LFA Project Proposal. This report provides an introduction of the Little Fire Ant Program, the application methods used, problems that were encountered and the effects of these treatments at the various parks.

This program has successfully assisted Hawai'i County in reducing the little fire ants at various county parks. The County plans to continue this program through its Vector Control crew.

If there are any questions, please contact Business Manager Reid Sewake at (808) 961-8560.

Sincerely,

CLAYTON HONMA  
DIRECTOR

Enc.

## Final Report for HISC -FY15 LFA project

### Introduction

On August 16, 2014, a three-person crew was hired under contract through the Parks and Recreation Maintenance Division to control and maintain Little Fire Ants (LFA) or *Wasmannia auropunctata* in Hawai'i County Parks island-wide. This project was funded through the following granting agencies: Hawaii Invasive Species Council (HISC), Department of Agriculture, and Hawaii Tourism Authority. The scope of this project addressed the spread of LFA within infested county parks, testing different types of pesticides for controlling and eradicating LFA, developing model strategies to control and maintain the threat of LFA that other counties can implement and work in close collaboration with other agencies to find the most effective protocols to control LFA in county parks. The following report will give a general summary of the effectiveness of the project and how the scope of the project was achieved.

### Scope of project

Surveys were the first step in addressing the spread of LFA. Surveys were used to properly identify, locate, and assess the level of risk in each park. The data gathered was valuable in planning and making well-informed management decisions. Maps were created along with quantifying data which helped determine the best application methods and accurately determine which areas would need applications. This would reduce the amount of product applied by appropriately using the products purchased. 40% of the time during this pilot project was spent monitoring, surveying, maintaining records, etc.

The next step in addressing the spread of LFA within county parks was the application of pesticide products. Low toxicity, target-specific, granular baits were used. Foragers bring baits back to the nest where ants who ingest it will die. Another low toxicity, target-specific bait is formulated as a gel bait. It consists of the pesticide and a number of other inert ingredients. It acts in the same way as the granular baits. A different type of bait in use is an insect growth regulator which stops the queen from properly producing offspring. It does not kill ants, rather reduces numbers in the future. There are a few types of on-contact, broad-spectrum pesticides in use. Insects that come into contact with these products will die. 40% of the time during this pilot project was spent applying, practicing safe application methods and guidelines, maintaining equipment, calibrations, making schedules, notifying public of park closures, and other related duties.

The crew continues to look for new products that will increase effectiveness in controlling LFA, especially near water. Communication with Hawaii Ant Lab resulted in a new attractant to be used which proved to increase the number of foraging ants locating and taking baits. It is this type of collaboration which completes the scope of the project in which the crew was to test different pesticides and work in close collaboration with other agencies. It is through communication with other agencies such as College of Tropical Agriculture and Human Resources, Hawaii Ant Lab, Department of Agriculture, UH Hilo Entomology Department, private pesticide vendors and various other agencies that have enhanced management processes. 10% of the time during this pilot project was spent collaborating with other agencies and looking for new products.

Another scope of this project was to develop model strategies that other counties could implement. Throughout the duration of the project, management strategies and protocols continued to change. It was found that not all management practices could be followed in every park, thus protocols per park were streamlined. These practices continue to be documented, thus other counties in need could easily receive this information. 10% of the time during this pilot project was spent in record keeping, report writing, analysis of management strategies, etc.

### Results

In general all parks have shown a reduction in the number of foraging ants found. Most parks are remaining stable at 0-15%. Some parks have been reduced from 99% to 0%. However, there is a trend that shows there are higher amounts of foragers found at beach parks, due to the inability to apply near the water and fruiting trees. Ants cannot be controlled in these areas, thus increased percentages. Another trend found throughout all parks is finding fire ants at borders. Even if numbers were reduced to 0% in a park, it is still very plausible to see ants return due to the inability to treat outside the county's jurisdiction. One park

maintained 0% for 6 months, until ants returned. However, this demonstrates the need for continued management of LFA throughout county parks.

All in all, the project's scopes were reached. LFA in county parks have been reduced. Difficulties are being addressed and due diligence is being performed to counter any difficulties. Funds from the grants are being utilized and applications and surveys continue. The battle against the Little Fire Ant has been set through the dedication of those in the county and participating funding agencies. A solid start for a solid management program in the future.