EACP Committee

From: Yukilei Sugimura
Sent: Friday, February 14, 2020 2:48 PM
To: EACP Committee
Cc: Adam Radford
Subject: FW: MISC Strategic Plan and CC 20-104
Attachments: MISC Strategic Plan Cover Page.pdf; MISC Strategic Plan.pdf; MISC Work on Target Species_Final.pdf

A copy of these reports were sent to all councilmembers. I am transmitting it to the Committee.

-----Original Message-----
From: Adam Radford <aradford@hawaii.edu>
Sent: Thursday, February 6, 2020 4:09 PM
To: Yukilei Sugimura <Yukilei.Sugimura@mauicounty.us>; Alice L. Lee <Alice.Lee@mauicounty.us>; Keani N. Rawlins <Keani.Rawlins@mauicounty.us>; Tasha A. Kama <Tasha.Kama@mauicounty.us>; Riki Hokama <Riki.Hokama@mauicounty.us>; Kelly King <Kelly.King@mauicounty.us>; Mike J. Molina <Mike.Molina@mauicounty.us>; Tamara A. Paltin <Tamara.Paltin@mauicounty.us>; Shane M. Sinenci <Shane.Sinenci@mauicounty.us>
Subject: MISC Strategic Plan and CC 20-104

Aloha,

Please find attached the Maui Invasive Species Committee's (MISC's) strategic plan per the request of Member Sugimura and in preparation for discussion during tomorrow's Council meeting. Also attached is a summary of how MISC goes through some of our work/decision making. MISC's next strategic planning meeting with our Committee is scheduled for April 30th. You are more than welcome to join us for that meeting to see how the process of prioritization and target species selection works with the Committee.

All the best,

Adam

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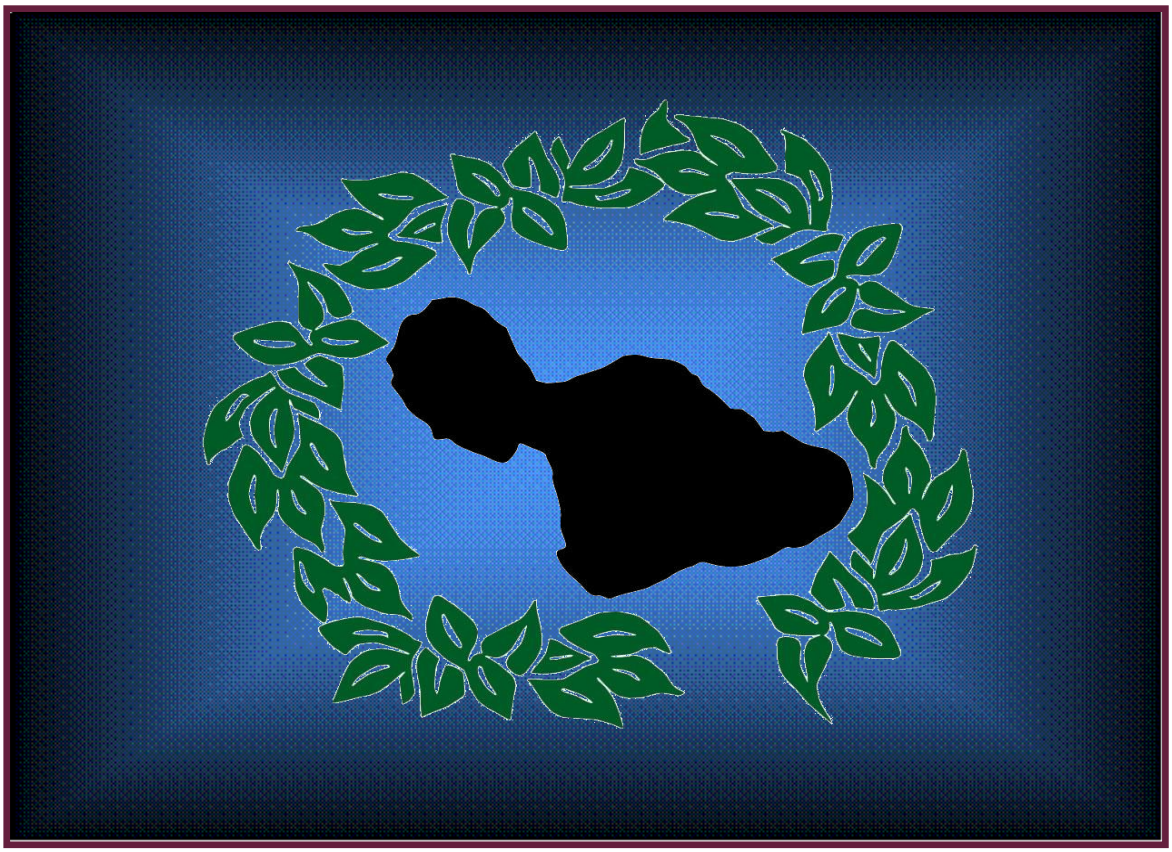
Maui Invasive Species Committee



Strategic Plan
through 2025

MAUI INVASIVE SPECIES COMMITTEE
STRATEGIC PLAN

STRATEGIC PLAN COMPONENTS

MAXIMIZING PROGRAM IMPACT
GOAL 1: PROTECTING MAUI NUI FROM INVASIVE SPECIES
- EARLY DETECTION
- RAPID RESPONSE
- ERADICATION / CONTROL
- PREVENTION
- BIO-CONTROL

MAXIMIZING PROGRAM QUALITY
GOAL 2: STRATEGIES & ACTIONS ARE SCIENCE-BASED, EFFICIENT & EFFECTIVE
- SCIENCE-BASED
- EFFICIENCY & EFFECTIVENESS
- DATA MANAGEMENT

MAXIMIZING OUR VOICE
GOAL 3: ENGAGING THE PUBLIC
- PUBLIC UNDERSTANDING & SUPPORT
- LITTLE FIRE ANT
- INDUSTRY PARTICIPATION
- EDUCATION

STRENGTHENING OUR CONNECTIONS
GOAL 4: MAUI NUI & STATEWIDE PERSPECTIVE
- MOLOKA‘I, LĀNA‘I & KAHO‘OLAWE
- ISCS & CGAPS
- PARTNERSHIPS

CREATING FINANCIAL SUSTAINABILITY
GOAL 5: ADEQUATE & STABLE FUNDING
- FINANCIAL STABILITY
- FISCAL RESPONSIBILITY

BUILDING A WORKFORCE TO ACHIEVE OUR VISION
GOAL 6: REWARDING WORKPLACE
- RETENTION
- PROFESSIONAL DEVELOPMENT
- LOCAL RECRUITMENT

MAXIMIZING PROGRAM IMPACT

GOAL 1: PROTECT MAUI NUI FROM THE HARM OF INVASIVE SPECIES.

Early Detection – Objective 1.1: New terrestrial invasive species are detected at the incipient stage of invasion – when control or eradication is still feasible.

Strategies:

1. Survey Maui's roadsides, nurseries and botanical gardens every three years.
2. Improve staff capacity to identify plant, vertebrate, and invertebrate species. Conduct biennial vertebrate identification training for Maui Nui natural resource workers.
3. Implement "Eyes & Ears" program to expand public's familiarity with target species.

Performance Measures:

1. Public reports about invasive species.
2. Numbers of trained observers familiar with MISC targets and other identified incipient species.
3. Number of miles surveyed; number of new detections.

Rapid Response – Objective 1.2: Clear protocols guide agency responses to detections of new invasive plants, vertebrates, invertebrates and aquatic species.

Strategies:

1. Update and disseminate comprehensive Rapid Response Chart outlining agency responsibilities.
2. Participate in development of a statewide decision-support system for identifying response options and priorities.

Performance Measures:

1. Number of responses to new invaders
2. Key agency personnel have enhanced understanding of responsibilities for responding to invasive species reports.

Eradication & Control – Objective 1.3: Maui Nui's highest priority target species are eradicated or contained.

Strategies:

1. Target species are selected according to threat to native ecosystems, local agriculture, local economy, quality of life, feasibility of control, and cost to control.
2. Annually, control or eradicate highest priority species.
3. Work to update Noxious Weed List to include MISC's target species and other well-known invaders.

Performance Measures:

1. List of target species selected for work is consistent with prioritization criteria.
2. Decreased numbers of mature plant targets.
3. Decreased numbers of individual vertebrate or invertebrate targets.
4. Decreased number of infested acres by target.
5. Increased percent coverage of infested areas.
6. Decreased volumes of herbicide used or applied on target species.
7. Decreased labor employed on target species.

Prevention – Objective 1.4: Maui Nui has effective prevention programs to keep unwanted invasive species from breaching our harbors, ports and airports.

Strategies:

1. Participate in Mamalu Poepoe project.
2. Develop strategies to support Hawaii Department of Agriculture.
3. Support legislation and development of infrastructure to strengthen the ability of Maui County and Hawaii to improve quarantine measures for imported goods.

Performance Measures:

1. Number of inspectors on Maui increases.
2. Weed Risk Assessment protocols used by industry to help limit importation of high-risk species.

Bio-control – Objective 1.5: MISC supports discovery of effective bio-control agents to address high priority target species that are not easily eradicated by chemical / mechanical means.

Strategies:

1. Support research on and infrastructure for biocontrol
2. Identify top priorities and strategies for biocontrol on Maui.
3. Work with agencies on miconia biocontrol agents.

Performance Measures:

1. Research on bio-control agents for selected targets increases.
2. Increased discovery and/or release of effective new bio-control agents for selected targets.

MAXIMIZING PROGRAM QUALITY

GOAL 2: STRATEGIES AND ACTIONS ARE SCIENCE-BASED, EFFICIENT & EFFECTIVE.

Science-Based – Objective 2.1: Action Plans are based on the most current and reliable science available.

Strategies:

1. Annually review the most current scientific information and best management practices for each target species.
2. Hold periodic meetings to review current knowledge.
3. Publish MISC's operations, experiments, and photographs.

Performance Measures

1. Control methods are responsive to new information.
2. Committee members and staff report continued learning experience.

Efficiency & Effectiveness – Objective 2.2: Survey and control actions are efficient and effective while minimizing non-target impacts.

Strategies

1. Establish concrete action plan for each target species.
2. Annually review current control methodologies and efficacy.
3. Prepare annual and long-term budgets based on estimated cost per target species.

4. Annually review potential for non-target impacts and identify ways to eliminate or reduce impacts.
5. Ensure MISC stays current on research into new and appropriate products and technologies.

Performance Measures

1. Control efficacy increases. Number of repeat visits to control target species decreases.
2. Efficiency of control work is increased. It takes less time to complete the same area or number of properties.
3. Enhanced understanding of control costs for each target species supports decision-making process.
4. Non-target impacts are documented and reviewed.

Data Management – Objective 2.3: Accurate, current and relevant data provide the foundation for MISC's daily operations and long-term strategies.

Strategies:

1. MISC's integrated GIS-database system is consistent with statewide standards.
2. Data collected for each species is reviewed quarterly to ensure that data standards are being met.

Performance Measures:

1. Internal data consistency is enhanced.
2. Tabular and spatial data are fully portable to statewide system in timely fashion.
3. Data collected provide meaningful measures of success.
4. Maps demonstrate progress over time.

MAXIMIZING OUR VOICE

GOAL 3: ENGAGING THE PUBLIC TO PROTECT MAUI NUI.

Public Understanding & Support – Objective 3.1: The public understands and supports efforts to detect and control invasive species in Maui County.

Strategies:

1. Communicate progress, value and relevance of work to decision makers and funders.
2. Increase public awareness of invasive species issues and engage public in efforts through coordinated media campaigns.
3. Implement "Eyes & Ears" program to expand public's familiarity with target species. Special emphasis on outdoor industries, port workers, etc.
4. Continue monthly news article in *Maui News* highlighting target species.

Performance Measures:

1. Funding is maintained or increased.
2. Number of public contacts.
3. Access to private property – recalcitrant issues resolved.
4. Numbers of trained observers familiar with MISC targets.

Little Fire Ant – Objective 3.2: Raise public awareness about LFA. Engage public in detection activities.

Strategies:

1. Educate the public about little fire ants (*Wasmannia auropunctata*) through coordinated media campaign, using development of a website, newspapers, broadcast media, social networking, presentations, etc.
2. Train the public in how to survey for LFA and report findings.
3. Develop program to maintain efforts, recognize volunteers, & celebrate success.

Performance Measures:

1. Outreach events / activities focused on LFA – number of people contacted
2. Media coverage of the issue
3. Number of samples provided by public.
4. Reports via PEST hotline, to MISC, social networking, etc.

Industry Participation – Objective 3.3: The landscape and agricultural industries are supportive partners.

Strategies:

1. Promote use of the HPWRA by the industry.
2. Promote and implement annual award to recognize supportive members of the landscape and agricultural industries.
3. Implement / maintain coqui-free certification program for nurseries.
4. Participate in industry-related events and associations.

Performance Measures:

1. Number of HPWRA requests by industries and agencies.
2. Nurseries, plant providers, and the public participate in frog-free certification program.

Education – Objective 3.4: The students of Maui Nui are engaged with invasive species issues.

Strategies:

1. Conduct educational programs for elementary, high school and college groups.
2. Actively promote implementation of the Hōʻike o Haleakalā curriculum, with emphasis on invasive species activities.
3. Complete the Hōʻike module on invasive species.

Performance Measures:

1. Numbers of presentations to school groups. Number of students reached.
2. Numbers of youth involved in survey and control activities.
3. Number of local youth doing internships at MISC.
4. Successful recruitment of local youth to MISC positions.

STRENGTHENING OUR CONNECTIONS

GOAL 4: MISC MAINTAINS A FOCUS ON MAUI NUI & CONTRIBUTES TO STATEWIDE NETWORK.

Molokaʻi & Kahoʻolawe – Objective 4.1: Support invasive species efforts on all islands of Maui Nui.

Strategies:

1. Provide financial, administrative and data support for MoMISC operations.
2. Provide training opportunities for MoMISC staff.
3. Prioritize actions for MISC work on all islands.
4. Strengthen the relationship with partners on each island.
5. Increase public awareness of MISC's activities on each island.

Performance Measures

1. MISC has a regular presence on each island of Maui Nui.
2. Hours worked in cooperation with partner agencies.

ISCs & CGAPS – Objective 4.2: Support statewide efforts to address invasive species.

Strategies:

1. Provide meaningful participation and/or leadership at meetings of the Invasive Species Committees and the Coordinating Group on Alien Pest Species.
2. Develop and foster inter-island exchange of information, including exchange of staff.
3. Identify and work to address barriers to communication among statewide agencies.

Performance Measures

1. Presence and participation at All-ISCs and CGAPS meetings.

Partnerships – Objective 4.3: Acknowledge and utilize the contributions of our partners.

Strategies:

1. Annually celebrate the strength and contributions of our partners.
2. Identify potentially untapped resources within our partners.

Performance Measures:

1. Enhanced sense of contribution among partners.

CREATING FINANCIAL SUSTAINABILITY

GOAL 5: MISC HAS ADEQUATE AND STABLE FUNDING RESOURCES.

Financial Stability – Objective 5.1: Improve long-term financial stability while maintaining or increasing current level of funding.

Strategies:

1. Maintain positive relationship with current funding agencies by providing meaningful assessment of progress to date.
2. Aggressively seek out diversified sources of funding, including other public, private and nonprofit sources.

3. Evaluate and possibly consolidate shared functions among the ISCs.

Performance Measures

1. Funding from current sources maintained or increased.
2. New sources of funding secured.

Fiscal Responsibility – Objective 5.2: Resources are used efficiently and fiscal accountability is high.

Strategies:

1. Conduct ongoing review of operating budget to identify and implement potential cost-cutting measures.
2. Thoroughly and accurately track expenditures.

Performance Measures

1. Cost-cutting measures are implemented where feasible.
2. Partners and funding agencies report satisfaction with fiscal accounting.

BUILDING A WORKFORCE TO ACHIEVE OUR VISION

GOAL 6: MISC IS A REWARDING WORKPLACE

Retention – Objective 6.1: Improve employee retention.

Strategies:

1. Improve communication among all aspects of program.
2. Ensure salary structure is competitive.

Performance Measures:

1. Duration of employment increases.

Professional Development – Objective 6.2: Provide meaningful opportunities for personal and professional growth.

Strategies:

1. Provide training to augment staff ability and interests.
2. Promote individual responsibility for species-based research and analysis.
3. Provide opportunities for cross-training with partner agencies.
4. Provide opportunities for advancement.

Performance Measures

1. More training occurs.
2. More staff movement within MISC.

Local Recruitment – Objective 6.3: Enhance recruitment of workforce from local communities.

Strategies

1. Increase career networking with local high schools, UH Maui College
2. Expand on internship program by exploring opportunities such as the UH-HIP program, AmeriCorps, and YCC.
3. Strengthen MISC's relationship with the University of Hawaii by exploring possible joint research possibilities.

Performance Measures

1. Percentage of crew members hired from local communities increases.
2. Number of internships increases.

MAUI INVASIVE SPECIES COMMITTEE: WORK ON TARGET SPECIES

MISC and MoMISC work to contain or eradicate a suite of invasive plants, vertebrates, invertebrates and plant diseases. At any one time, the projects may be working on more than 50 different target species. This summary focuses on work by MISC, but the same principles apply to work on Molokai.

DECISION MAKERS

Decision making about work on target species benefits from input by highly-trained staff and input/review by MISC Committee members. Most management staff have been with MISC for more than a dozen years; educational backgrounds include advanced degrees and extensive experience beyond MISC in natural resource management.

Committee members include professional staff from Hawai‘i Department of Land and Natural Resources, Hawai‘i Department of Agriculture, University of Hawai‘i – College of Tropical Agriculture and Human Resources, National Park Service – Haleakalā National Park, The Nature Conservancy, Hawai‘i Invasive Species Council, and other agencies. MISC is a project of the University of Hawai‘i – Pacific Cooperative Studies Unit, and benefits from overall review by PCSU Leader, David Duffy, Ph.D. Collectively, the Committee provides invaluable subject-matter expertise.

KEY COMPONENTS

MISC's work is science-based and data driven. There are four main components to work on any target species:

- Target Species Selection
- Goals / Objectives / Strategies
- Control Efforts / Data Collection
- Evaluation of Progress

The following outlines basic protocols and considerations for each component.

TARGET SPECIES SELECTION

Key factors considered in determining whether to add a new target species include:

- **Risk**: how much threat does the potential target pose to Maui's environment, agriculture, economy and/or quality of life.

  Relevant information for a risk assessment includes: a literature review to determine a species' invasiveness or economic impacts (e.g., Hawai‘i Weed Risk Assessment score); information from other locations in Hawai‘i (e.g., little fire ant invasion on Big Island); and/or interviews with local experts about status of a species.
- **Feasibility/Cost to Control**: how widespread is the species; availability of effective control techniques; potential non-target impacts; and biological characteristics, e.g., windborne seeds, seed longevity, fecundity, etc.

An assessment may require literature reviews or expert interviews, but delimitation surveys are especially important to determine the extent of the known infestation before making a commitment to take on a new target species.

GOALS / OBJECTIVES / STRATEGIES

Goals: For target species, there are three possible goals: **island-wide eradication**, **local eradication**, and **containment**. Wherever feasible, the goal is island-wide eradication. Local eradication may be appropriate when a target species has a very limited population in one portion of the island (e.g., East Maui only, or West Maui only). A containment strategy exists where the threat is severe, but resources simply aren't adequate at present to attempt eradication.

Objectives: In general, the objectives are to detect all known locations of a target species within the area of concern and remove them. It is not usually possible to eradicate a species within a single year; limitations include: the infested area is too large to cover (thousands of acres); the presence of extensive seedbanks (seeds will emerge after removal of live plants); or the inability to detect all individuals (plants or animals not visible during survey due to vegetation cover or cryptic coloration). Therefore, grant objectives typically focus on conducting survey and control operations over a specified geographical area and/or number of acres within a given timeframe.

Specific objectives also vary for each target species and may depend on: type of species (plant, vertebrate, invertebrate); extent of infestation; nature of the infested area (wildland, residential, commercial); and means of control (hand control, herbicides, ground, aerial).

Strategies:

- Define management units for survey and control operations so that progress can be effectively measured over time.
- Determine the reproductive cycle of the target species, so that repeat visits can be scheduled to detect and remove individuals before they reproduce again.
- Establish effective ground and/or aerial survey methods and ensure that all staff are properly trained to detect the target species.
- Conduct ground and/or air operations to remove detected individuals.
- Record all relevant data about survey efforts and control of target species.

TEAM STRUCTURE & WORKFLOW

Diversified effort: MISC staff comprise a unique variety of backgrounds, skillsets, and experience which compliments how field work is carried out. In addition to existing in a perpetual state of readiness for rapid response and early detection when new invasive species introductions occur (snakes, etc.), MISC remains focused on current biological invasions critical to the health and wellbeing of the island and its residents. To do this effectively MISC employs a diversified field leadership structure with a coordinator for each of the primary project focus areas (coqui, little fire ant, plants) to plan and organize the work to be done and crew leaders to direct those in the field in carrying out all related tasks. Management staff all serve in support of these operations to ensure that field staff have the time, tools, and supervision necessary to be successful. The MISC Operations Manager and Project Safety Coordinator supports and supervises MISC project coordinators to ensure all elements of their projects are carried out in a manner as safe, effective, and efficient as possible.

Expertise on the ground and in the air: MISC works in all terrestrial habitats and elevation gradients found on Maui from the coast up to the summit of Haleakalā. MISC field crews are experienced in working in nearly all forms of adverse conditions that may be encountered on Maui. They are capable of spending multiple days in the field working independently to survey known infestation areas and collect critical data on the status and changes observed as well as the type and scope of control efforts used to eliminate invasive species. Because ground access in many areas where MISC works is difficult or impossible helicopters are utilized to carry MISC personnel and equipment to these remote areas while also serving as a primary access tool for control options (heli-spray technology, ballistic herbicide delivery). All staff receive extensive training in how to work around helicopters through the U.S. Dept. of Interior's standardized curriculum. Qualified field staff also receive training from a certified rappel instructor in rappel techniques and anchoring to be utilized when teams must access high angle areas to control invasive species. To keep up with the demands and challenges of difficult access to invasive species sites MISC and its partner agencies continuously leverages creativity and the latest technologies to improve effectiveness and safety when controlling and collecting data on invasive species in these areas.

Daily workflow: Field staff and management staff perform the various types of MISC invasive species work throughout nearly all hours of the day, with plant and little fire ant operations occurring during daylight hours and coqui control operations occurring during evening hours when the species is most active and detectable. Management assists throughout the range of these two schedule windows. Crews receive weekly briefings and daily task instruction then prepare necessary equipment before heading out into their target location areas. Risk analyses are performed and utilized when necessary for 'go, no-go' determinations and work either commences or is diverted to a lower risk area/task. Field crews will collect data (outlined below) about the invasion status of the area, terrain, and control effort applied before finishing work. Once field operations end for the day crews return to base to debrief, upload and process data collected, and re-organize / clean equipment.

CONTROL EFFORTS / DATA COLLECTION

Data-driven Operations: MISC uses an intensive data collection approach to track effort and progress on survey and control operations. Information collected varies by taxon (plant, vertebrate or invertebrate), but some fields are common across all target species.
Common data collection fields include:

- Taxon name (genus & species)
- Date and time of operation
- Personnel involved
- Location (geospatial where feasible, using GPS units, or later digitized if not)
- Action: survey (ground or air), treatment (hand pull or capture, herbicide or pesticide)
- Amount of herbicide / pesticide used
- Number of individuals detected or controlled
- Reproductive status (mature, immature)

Process: Staff records data either during an operation or immediately after it has concluded. For example, ground crews run GPS track lines as they cover survey areas on the ground; GPS flight lines simultaneously track all aerial operations and "spotters" take GPS points for every plant or

group of plants controlled. Staff may record tabular data on field forms and later input that data into the appropriate database. The following outlines different database systems used by MISC.

Database Systems: MISC has the following database structure for tracking effort and progress by species. "Tabular data" includes all fields except geospatial locations.

- **Plants – Ground survey & control**
  - *Tabular data*: Recorded on paper forms; entered into APCAM database
  - *Spatial data*: GPS units record locations of area surveyed and plants controlled, where feasible (poor GPS coverage in many areas for miconia limits recording each location for plants controlled); information uploaded into ArcGIS system
- **Plants – Aerial survey & control**
  - *Tabular data*: Recorded on electronic tablets during aerial missions; entered into APCAM database and included in ArcGIS system
  - *Spatial data*: GPS units record areas surveyed and locations of plants controlled
- **Coqui Frogs**
  - *Tabular data:* Recorded on paper forms; entered into coqui database. Also recorded on preprogrammed Smartphones using AirTable.
  - *Spatial data:* Recorded on Smartphones; uploaded into ArcGIS system.
- **Little Fire Ants (LFA)**
  - *Tabular data*: Recorded on paper forms; uploaded into LFA database
  - *Spatial data*: GPS units record the location of every baited vial placed during surveys; uploaded into ArcGIS system.
- **Other Species**
  - Data recording for work on other species may include development of a separate database (e.g., banana bunchy top virus) or use an Excel spreadsheet. The complexity depends on the nature and scope of the problem.
- **Timelog:**
  - Relevant databases record the amount of time spent at each site surveying for or controlling target species. Such information is important for analysing how much time it takes to "clear" a particular site. However, this approach fails to capture all the time spent on a partiuclar species, which may include prep work, such as mixing citric acid for an evening's work at multiple sites, decontaminating gear and vehicles, planning meetings, etc. Such information is captured in the MISC "Timelog" database, which records daily the total amount of time each staff member spent on a particular species or on other activities.

Data Entry & Validation: One full-time and one part-time staff work to ensure that data are timely entered and accurate. Regular reviews, including standardized reports that compare previous quarter's results, help to identify outliers or questionable data. Field supervisors review recent data to determine crew efficiency and make decisions about future operations. These processes help ensure that errors or omissions can be caught early.

EVALUATION OF PROGRESS

Regular evaluation of progress, toward the overall goals of island-wide eradication, local eradication, or containment, is imperative to ensure that use of available resources is efficient,

cost-effective, environmentally-friendly, and safe. MISC holds regular species-based operational and review meetings to ensure that projects are on track and to make adjustments to strategies. MISC's evaluation and adaptation processes include:

- **Periodic progress reports**: Typically required by funders, preparation of reports provide an opportunity to review effort (acres surveyed, target species controlled) compared to what was proposed. If a large discrepancy exists (e.g., fewer acres surveyed or more targets controlled), further analysis may be required. Such variations may occur due to weather (reduced acreage due to heavy clouds reducing flight time) or discovery of a new infestation (leading to more individual targets controlled).
- **Annual summaries**: Annual reviews provide the opportunity to identify trends over time. Typical variables examined include: number of infested TMKs; number of mature plants (a better measure of success than total plants controlled); number of new reports; and percent of infested sites visited. Such reviews include graphical representation of trends.
- **Operational meetings:** These may be limited to MISC staff (day-to-day operational decisions) or may include MISC committee members (longer-term, bigger picture review). The inter-agency **miconia** operations committee has met quarterly for more than a decade and has included representatives from Haleakalā National Park, UH-CTAHR, and The Nature Conservancy. Operational meetings on **pampas grass** include representatives from West Maui Mountains Watershed Partnership, East Maui Watershed Partnership, Puʻu Kukui Watershed Preserve, and The Nature Conservancy. Meetings focused on **little fire ants** have included representatives from Hawaiʻi Department of Agriculture, the Hawaiʻi Ant Lab, U.S. Fish & Wildlife Service, and, at times, County of Maui. Operational strategies are adapted to reflect latest information.
- **MISC review meetings:** The MISC Committee meets at least quarterly. Meetings typically include an in-depth review of one major target species or activity, for example, little fire ants, miconia, coqui frogs, early detection activities, or outreach and education. During these meetings, staff presents information about strategy, efforts, status and challenges and seeks input from Committee members.
- **Professional presentations:** MISC staff and Committee members have presented results at professional meetings, including: Hawaiʻi Conservation Conference; Society of Foresters; Island Invasives: Eradication and Management; Western Society of Weed Management; IUCN World Conservation Congress; International Conference on Ecology and Management of Alien Plant Invasions, and others. Such presentations require a rigorous analysis of data.
- **Peer-reviewed publications:** MISC staff and partners have published numerous articles and technical reports in peer-reviewed journals and publications. Going through the peer review process helps ensure that MISC is up to date on current research and that its methods and analyses meet the hightest scientific standards.