

**MAUI INVASIVE SPECIES COMMITTEE
MEETING MINUTES
March 22, 2013**

ATTENDANCE: Sky Harrison, Steve Anderson, Pat Bily, Randy Bartlett, Chuck Chimera, Pam Pogue, Natalie Gates, Matt Brown, Lloyd Loope, Fern Duvall, Jeremy Gooding, Mike Ade, Brooke Mahnken, Teya Penniman, Lissa Strohecker, Elizabeth Anderson
Attending via WebEx: Josh Atwood

- The meeting was called to order by Pat Bily (TNC/MISC Chair) at 9:10am.
- Minutes from the January 25, 2013 meeting were approved. They will be posted on the website.
- Introductions were made around the table.

ANNOUNCEMENTS

- Josh: the conveyance tax bill is still moving forward. Surprisingly the language relating to the HISC stayed in. They left the rate increase blank and recommended an increase in the allocation for the NARF from 25% to 30%. The next challenge is getting it heard in the Finance Committee. This bill is still our best hope for an increase in invasive species funding.
- Teya: a number of folks are working on trying to address interisland biosecurity. Mark White, Lloyd and I met recently to strategize. There is also a subcommittee on biosecurity at the HCA. The MCA is looking at putting together a letter to HDOA urging them to consider addressing interisland transport. There will be a forum in the fall put on by HCA, which will focus on LFA and use that as a jumping off point. It is an issue we feel very strongly about.
- Pam: the HWWA meeting will be on Maui this year and I am program chair. It is scheduled for October 23-25. I am pushing to have a second day concurrent session on sources of watershed protection and water conservation. I would like to have watershed programs do presentations on management – what is effective and what works. The audience is heavy on state regulators, council members, etc. On the final day there is a morning session and then field trips. There is an opportunity there as well.

INFORMATION GAPS & PRIORITY SETTING

Overview of Process – PowerPoint Presentation

- MISC works within the framework of its own Strategic Plan to ensure that goals are clear and that progress is measurable. Clarifying our process and further refining it will not only help MISC to be more transparent in our work, but hopefully help inspire staff by having more clear and tangible goals to work towards.
- A more transparent process also helps us improve in the highlighted areas (below) of our strategic plan.

Maui Invasive Species Committee Strategic Plan

Goal 1: Protecting Maui Nui from Invasive Species

- Early Detection / Rapid Response
- Eradication / Control
- Prevention
- Bio-control

Goal 2: Strategies & Actions are Science-Based, Efficient & Effective

- Science-Based
- Efficiency & Effectiveness
- Data Management

Goal 3: Engaging the Public

- Public Understanding & Support
- Industry Participation
- Education

Goal 4: Strengthening our Connections

- Maui Nui
- ISCs, HISC & CGAPS - Statewide Perspective
- Partnerships
- Maui Nui & Statewide Perspective

Goal 5: Adequate & Stable Funding

- Financial Stability
- Fiscal Responsibility

Goal 6: Building a Workforce to Achieve our Vision

- Retention
- Professional Development
- Local Recruitment

Factors for Species Selection

- Committee Process
- Key Considerations:
 - Risk assessment (environmental, agricultural, economic, quality of life)
 - Feasibility of control (extent of the infestation, availability of effective control techniques)
 - Cost of control
 - Priority for resource allocation

Priority Species for Detection & Control

Maui

- *Coccinia grandis*
- *Cortaderia spp.*
- *Cryptostegia grandiflora*
- *Erica lusitanica*
- *Maclura pomifera*
- *Miconia calvescens*
- *Pennisetum setaceum*
- *Pittosporum undulatum*
- *Pittosporum viridiflorum*
- *Morella cerifera*
- *Silybum marianum*
- *Verbascum thapsus*
- *Eleutherodactylus coqui*
- *Chamaeleo calyptratus*
- *Aratinga mitrata*

Lānaʻi

- *Coccinia grandis*
- *Pennisetum setaceum*

Planning for the Work - Considerations

- Vector: how far from a known site you want to look (buffers); wind, wing, other
- Longevity: how far back we need to go to create the buffer and how long we need to survey
- Reproduction: revisit schedule
- Detectability: how likely are we to find the target / how long does it take?
- Access: public or private lands
- Other resource considerations (e.g., helicopters, citric acid)
- Cost per unit of effort: (e.g., acres cleared / protected)
- Different variables help establish ideal operational parameters and assess cost of proposed work
- Dynamic spreadsheet using major variables supports adaptive management approach by tweaking different factors based on committee-driven priorities
- Approach increases transparency for funders
- Process helps set annual goals and objectives for each target species, outlined in species-specific plans
- Plans are reviewed annually to ensure we are on track, and identify any funding needs for the coming year

Elements of a Plan

- Species description
 - Goals and objectives
 - Definitions and explanations
 - History of effort / status
 - How we do the work
 - Assumptions and limitations
- Teya: MISC has been in operation since 1999 and we have worked to become more rigorous in our evaluation of target species. Our primary focus is on protecting natural areas although we do look at other elements such as quality of life, agriculture, etc. We are working to tighten up our operations and have more rigorous guidelines and parameters for each species we work on. We want to evaluate the best way to go about controlling each species in an ideal world, but we don't have unlimited resources. Adam: the focus of this meeting will be on Maui and Lanai. Molokai is really a separate entity. We want to discuss laying out the ideal-world parameters for the work we do. What would be the ideal guideline for each species? We also want to provide our staff with clear goals and objectives for the near and long term, and benchmarks to evaluate progress. We are ready to go to the next level of clearly defining and having a transparent process for both staff and funders. Historically we have operated on broad landscape projects with a management unit perspective. We are looking at changing to more of a buffer-based approach rather than a large land area approach and going back to where we have found species in the past. We want to focus on the highest probability areas. Teya: management units help to show change over time. The buffers are more feasible with limited resources.
 - Adam: we have a plan developed for pampas grass. It will serve as a reference for funders and for crew out doing the work. Our goal is to have species-specific plans for everything we are working on in the near future. We have been discussing buffers for some time and at a number of meetings. They are based on field observations. It helps that we have been working on many of these species for a long time and as a result we have a robust data set. We applied the new buffer strategy on pampas grass this past year and we found three new populations. We are surveying a larger area. The new locations are in residential areas. We are looking at a hybrid approach with management units vs. a buffer strategy especially in more remote areas.
 - Sky: I just want to remind everyone that when we tried to standardize a recording structure by species we came up with metrics that all the ISCs could use. Teya: that is a good point. With buffers we don't have clearly repeatable units, but we get a very clear goal for the year as to what amount of area we want to cover. Steve: are we looking at a known infestation point in a buffer? Brooke: in lieu of a management unit we are looking at areas where surveys overlap year after year and that is the derived repeatable unit. It is the biology and location of the plant that is most important. It is where you found plants in the past that is important. Pat: management units are a matter of discipline. Brooke: if you don't have enough funding, at least you went to where the plants were. Adam: the planning worksheet is based on our conservative ideal situation.

PLANTS

- **Arundo** – Brooke: our stated objective is to control this species near waterways and high value wetlands. What are the high value wetlands we are concerned about? Teya: we backed off on arundo awhile back and we are not controlling it island-wide. Pat: what is the proximity to protected wetlands? Mike: the Spreckelsville population is frequently dozed and it gets moved around. The Kahului Beach Road site could move around to the Waihee side. The other population that we were working on in Hookipa is gone. Chuck: this is a major biofuel crop on the mainland. If it is proposed in the future, it could be an issue. Brooke: is there a distance from these areas that we should be concerned if it is found? Would anyone propose that if a plant is found within a certain distance of these high value areas we should survey/control? Lloyd: this is one of the only species we have seriously cut back on. Jeremy: I'd recommend we evaluate it on a case by case basis. If it is getting close to Kealia, the FWS will be very concerned. The existing sites are 3 km from Kanaha. Pat: for the Kula populations the vector would be rain events like we've had recently. There is too much competition in the upcountry sites. The chances of it spreading from upcountry to the high value areas is very unlikely. Teya: we have no plan to do buffer surveys. We will continue with early detection and then evaluate on a case by case basis.
- **Cat's claw** – Adam: this is a geographically localized effort. It is widespread on the north shore of Maui. We are working on a site in Ulupalakua. Steve: this one probably has longer than a 20+ year seed longevity. Brooke: what are we protecting in Ulupalakua? Adam: this is a really low effort plant. Mike: we are working toward seed bank elimination. If we don't go, it is there. It is all seed bank regrowth. Pat: this one can be justified because of the low labor cost. You have the opportunity to keep a very small population contained. The potential for it to spread is high. We could get long-range dispersal down the south slope. Steve: what about pre-emergent? Jeremy: Milestone might do a few months. Pat: having a presence is good. Chuck: it is a foot in the door with the ranch.
- **Osage orange** – Mike: we treated a hedge. This is a really horrible plant – it has major thorns. There is just a female plant and no male present. We are treating root sucker growth. It is diminishing. The site is under a mango canopy so we couldn't use strong chemicals. The owner lets us know if it pops up. Teya: for a number of these species we may not have ever done a full delimiting survey. We could create the buffers, but we need to be logical. If this is only a female plant and it was planted, do we need to do buffer surveys? Adam: a 20 foot buffer is minor. Pat: could there be other sites that we don't know about? Chuck: Forest and Kim detected this one on roadside surveys.
- **Wax myrtle** – this one should be changed to bird dispersed. It is also dioecious. Mike: there has been no fruit and no seedlings found. Adam: we should change the buffer to 100m. Dispersal is only 20m since we are only talking about East Maui. Randy: on West Maui Hank did control work. Chuck: I think it is an early detection plant for WMMWP. Brooke: PKW might have points. Teya: we need to follow-up with WMMWP & PKW on the West Maui situation. Pam: when there is a situation with overlap from East to West Maui it really strengthens partnership opportunities. The Council likes leverage building.
- **Pampas grass** – Pam: is there a possibility of HBT for pampas? Jeremy: the labeling for the product used on pampas will expire, soon. It works, but it takes a long time. We will not be pursuing renewal at this time. We need to look at different chemical cocktails. Teya: HBT would be a great thing in steep areas on West Maui. Brooke: pampas grass is on target for eradication.
- **Rubber vine** – Adam: this is another low resource use species. We have four sites with permission issues. *ACTION ITEM: deal with permission issues.*
- **Nassella** – there is one site and we have done initial suppression. The owner is controlling it and we are monitoring.

- **Fountain grass** – Adam: this is one that has Lanai information, too. Some of our greatest success stories are on Lanai. Teya: we should make a map for Riki Hookama showing our work on Lanai. Randy: you could do a district map for each Council member showing work you are doing in their land, what species, the cost, etc. *ACTION ITEM: maps & summaries for Council members.*
- **Milk thistle** – Fern: I am wondering if this gets reintroduced a lot. We may not know where else it might be since it is used medicinally. A good newspaper article would be on herbal invasives. Mike: this has been a steady decline. There were tons the first year and now we only find one or two.
- **Acacias** – these don't take much time.
- **Miconia** – Jeremy: we are falling behind on a number of populations. We have been refining the effectiveness of HBT. The spray ball is more efficient in dense populations and HBT is more effective in less dense areas. Overall with the effort in HBT we have reduced total herbicide use, reduced time on target, and increased mortality. With HBT we are using less than 1% of the label rate on herbicide and we are seeing a 60% reduction in targets each time out. We need to define how long we can walk away. The infestation in the park is due in the near future. There are inaccessible drainages with historic plant points. We are trying to predict our risk factors. What is our confidence level that we are getting everything when we go in? Brooke: a three year revisit interval is too long based on the probability of missed plants. Jeremy: we try to get in once a month with aircraft in high value areas. Steve: we just put HBT in to the NPS IPM Coordinator. We haven't been able to use it in the park because it hasn't been approved.
- Jeremy: we acknowledge that a three year ground reentry is not enough. We would like to be at 18 months. The limiting factor is funding. With the ground crew we have, it is taking three years to cycle through. We would need another crew. Teya: we estimated that it would take \$350,000/year over a number of years to put another crew on the ground. Adam: our miconia ground work has historically been guided by a management unit approach. We know now that we need to focus more on a buffer approach. Mike: we are on schedule with a three year interval, but it isn't enough. Limiting the amount of area that needs to be covered would help. We know where the plants are. Brooke: a 500m buffer will result in covering more area than we are currently covering with the management units. Adam: we are looking at 100m buffers for ground and 20m in remote areas (e.g., airdropping a crew), which is a rare situation. The current proposal for air is 200m buffers and 500m for outliers. The best case revisit interval for aerial would be three months and for ground one year, but this is not realistic given our current resources. Pam: if you increase your revisit frequency, you would need more funding.
- Jeremy: we haven't touched the Hana core in three years because we haven't had the resources. Steve: the high value areas with big buffers should have a more frequent revisit frequency. Fern: the outliers that need priority would be along roads, EMI, etc. Brooke: I like Fern's idea. Areas near roads, etc. are important. We need to make sure there are no seeding plants by the highway. Pat: what is the status of biocontrol? Teya: we need to move forward.
- **Verbascum** – this should be should be corrected in the table to be island wide. Lloyd: do we need a state rule change for mullein? It is a noxious weed. Mike: we can't even go to see if it is there. We don't know where it is. Chuck: the biggest vector is people. Elizabeth: It should be a PR priority. *ACTION ITEM: Ulupalakua mullein.*
- **Mullein and Spanish heath** – should be listed as wind dispersed on the chart.
- **Morella cerifera** – *ACTION ITEM: we need the West Maui points.*
- *ACTION ITEM: access issues to follow up on = rubber vine, mullein, pampas.*

ANIMALS

- ***Coqui*** – Teya: we are clear on coqui. We go back until nothing is heard for a year.
- ***Veiled Chameleons*** – Adam: there have been no veiled chameleons found or turned in since 2008. We are on a one year revisit cycle. Adam: the question is – are they eradicated? When do you stop looking? They are certainly below detectable levels. MISC is planning to put out a paper in conjunction with USGS by September. USGS will help us add some statistical rigor to our analysis. Maintaining the annual presence in the community is important. Fern: it is very profitable to sell them and they are easy to keep in captivity. Jacksons are short-lived so people don't get as much money for them.
- ***Conures*** – Adam: we need to get ramped up again. Darrell is one of the primary people on this project and he has been out since November due to the accident. There are around 30 birds left. Teya: I met with a falconer from Oregon about the prospect of using falcons. He has a lot of interesting ideas.
- ***BBTV*** – Adam: we are refining our BBTV strategy and playing around with an interactive buffering strategy.

NEXT MISC MEETING: May 24, 2013 – PR & Outreach and Follow-up on Proritization