

**MAUI INVASIVE SPECIES COMMITTEE
BUDGET & MICONIA MEETINGS
FRIDAY, MAY 16, 2003
9:00 AM – 3:30 PM**

ATTENDANCE: Tina Lau, Mele Fong, Mach Fukada, Teya Penniman, Fern Duvall, Pat Bily, Randy Bartlett, Steve Anderson, Melissa Chimera, Elizabeth Anderson, Shannon Wianecki, Erik Barnard, Noel Hashimoto, Jeremy Gooding, Rob Parsons, Lloyd Loope, Alex Michailidis, Creighton Low, Mike Walker

- The meeting was called to order by Randy Bartlett (ML&P/Chair pro tempore) at 9:10 AM
- The minutes from the April 11, 2003 meeting were approved. They will be posted on the web-site.

NEW BUSINESS

PROPOSALS TO FWS FOR ERADICABLE SPECIES FUNDING (T. Penniman)

- MISC submitted two proposals for FWS eradicable species funding. These are short term projects and there is limited funding available. MISC submitted one proposal for plants, with a list of 15 targets, and one proposal for mitred conures. MoMISC also submitted a proposal for parrots. The MoMISC request includes an island-wide survey. There are reports of four parrot-like birds from Molokai, with one report confirmed.
- The proposals were sent out to the MISC List. The turn around time on the request for the proposals was very short so we weren't able to ask for as much input from the Committee. The pot of money was originally \$450,000 and Earl already has \$1 million in requests. Thanks to Fern, Pat, Randy, and Steve for their input and help in pulling things together.
- Pat asked for an update on the conure situation. Fern replied that the MARS permit expired. We granted them an extension, but they never got signatures or returned the permit. The project just basically dissolved and we've had no recent contact from them.

BUDGET / FUNDING

Budget Overview (T. Penniman)

- We are not going to go through the usual budget updates at this meeting. Instead, we want to take this opportunity to look at the big picture. In an ideal situation we should look at a strategic plan, determine what it would cost to do what we need to do, and then go out and find the funding. In this instance, we have the funds that MISC has obtained directly and we have a portion of the pool of funding that comes for all of the ISCs. The ISCs sit down together and decide how to divide up the pool. We need to look at where MoMISC fits into the overall funding pool. Rather than approaching funding from the point of view of what it would take to do the job, we are coming at it from a "this is what we have" point of view.

Federal Funding

- Teya began by noting that we have certainly benefited from the NPS commitment to miconia. We need to get a picture of future federal funding. Jeremy responded that we will definitely receive the NRPP funds, but we still don't have an account. We are spending funds that don't exist yet. If we wait too long, the fiscal year will be over. When we do get the NRPP funds, we will need to scramble and get the money put into the unit. The Exotic Plant Management Team (EPMT) program does go to Hawaii Volcanoes (HAVO) on October 1. Jeremy hopes to stay on Maui and just spend part of his time at HAVO. The details still need to be worked out. If Jeremy stays on Maui, we will keep \$100,000 of the \$300,000 EPMT funding for next fiscal year. Jeremy continued that he doesn't know what we have spent out of base funding this year. There will need to be a new PCSU project established for miconia and we will need a new cooperative agreement.
- Steve noted that he put in a call to see where things are with the Cooperative Conservation Initiative (CCI) and didn't get a reply. They should be dispersing the CCI funding in June. We asked for \$436,000 with

MISC funds as matching. The proposal dropped to \$356,000 when it went through regional review. That is what went forward to Washington. We are fairly confident we will get something out of that proposal and those funds will also need to go into the unit. Ron wants to keep \$100,000 of the CCI funds for another helicopter contract and the rest would be for operating expenses and field staff. There are still some unanswered questions regarding use of these funds outside of park boundaries.

- Teya asked what will happen to the EPMT crew members on October 1. Jeremy replied that he would expect them to be switched over to the NRPP account. Steve added that the NRPP funds are for three years at just under \$300,000 per year. The funding is dedicated for miconia and we have an approved work plan. Federal funds are flowing slowly this year. The EPMT budget is around \$300,000 a year also.
- Fern asked about the funding we received in the past through FWS Environmental Services. Do we still get funding from them? Elizabeth replied that we received \$46,000 in both 2001 and 2002 from FWS. This year the amount was cut to \$23,000. Fern noted that he heard Mike Richardson was going to start coming to the MISC meetings again. He was a conduit for information on these funds in the past. Do we know how the FWS eradicable species funding relates to other FWS funds we get? Lloyd replied that in the past Earl indicated that half the funding he receives would go to the ISCs for eradication projects. He got less funding than he expected so we don't know how things will turn out.

Statewide / All ISC Funding / MoMISC Budget

- Teya indicated that an overview of the statewide ISC funding distribution was emailed to the MISC list a couple of days ago. The overview summarizes the total money available for shared funding between the ISCs, how much each ISC is allocated from the shared pool compared to last year's allocation, and how much each ISC is expecting from all sources compared to last year. The final decision regarding the total pool has not been made yet. The bottom-line is that the shared pool funding for all the ISCs goes up this year, except MoMISC. The total funding summary also shows everyone except MoMISC going up.
- Teya noted that we just heard that we will very likely receive \$75,000 in fourth year funding from NFWF. This award hasn't been confirmed yet, but it is likely. The overview needs to be adjusted to reflect the NFWF amount. Steve asked if we know which agencies the NFWF funding is coming from. Elizabeth replied that we won't know until we get the final contract from NFWF. The sources are usually noted on the contract.
- Teya continued that the first question we need to address is if MISC is willing to accept the proposed level of funding from the statewide pool. For the Forest Service portion we put in pre-proposals and prioritized. The overview chart shows what the Forest Service came back with (BIISC = \$150K, MISC = \$100K, KISC = \$100K, OISC = \$50K, and MoMISC = \$10K). Kauai gave \$10,000 to MoMISC. The supplemental budget request is basically shared evenly across the ISCs and the state pass through is also shared pretty evenly. The NAP funding is also divided fairly evenly except for Kauai. They gave \$50K to the Big Island. Is the committee OK with the proposed amounts from the statewide pool?
- Randy replied that his understanding was that anything Maui received we would share with Molokai. All the ISCs have generally agreed upon the amounts allocated from the statewide pool. If this committee is not happy with the agreement, then we would need to negotiate individually with the other ISCs. Melissa asked if we are receiving in excess of what we need. Teya replied that the proposed funding would cover what it currently takes to run MISC at our baseline level. It does not allow for any expansion and we are assuming that the NPS will continue to cover miconia heliops and herbicide.
- Elizabeth summarized the overlapping timelines on some of our existing funds. These timelines complicate the picture of trying to look at a single fiscal year snapshot. Our FY03 OED grant (\$135,000) just came on-line with PCSU/RCUH last month and our FY03 DWS grant (\$225,000) is still not available. At best, the DWS funds will be available for one month of the applicable fiscal year. During FY04 we will primarily be spending FY03 County funds. There is always a significant time lag before the funds become available in the unit. Additionally, at the beginning of this state fiscal year we were told the DLNR accounts would not be able to roll into the next fiscal year as they had in the past. However, those accounts were all just extended for an additional six months.

- Teya reviewed a list of budget related questions that were sent out to the committee prior to the meeting:
 1. Is MISC willing to accept the proposed levels of support from the statewide funding sources?
 2. Alternatively, does MISC want to request an increase or decrease in the amounts proposed?
 3. Does MISC want to propose that the statewide funds include a line item and amount for MoMISC?
 4. If a line item for MoMISC is added, should funds for MoMISC come exclusively from MISC or should support be shared by all ISCs? If support should be shared, should that support be spread out evenly among the ISCs?
 5. Does MISC have a position as to whether pooled funds should be distributed evenly among the ISCs, or according to some other formula? If evenly, should MoMISC become an equal recipient?
 6. What level of support would MISC like to commit to giving to MoMISC for the next fiscal year?
 7. What changes to the proposed (attached) budget would you make if funding is not adequate?

- Teya questioned whether the shared funds should be split out by island, by county, by level of threat, or by landmass. Tina suggested that MoMISC likes being included under MISC because of the extra administrative and budget support she receives. It is difficult to know what system would be best as far as funding allocation. Melissa noted that the distribution should be on a case-by-case basis taking into account the capacity of each ISC. Randy continued that since MISC receives substantial funding from Maui County it is good to have MoMISC included under MISC so our focus is not just Maui Island. Fern suggested that the statewide allocation should really be issue driven. What is the funding for? The distribution should be goal based. Within DLNR we have the same issue. The Maui District is the only district that has three islands. We are not silent about the fact that we have three islands. We split our funds between the three, but we make sure that issue is out there. If Molokai has a lot of needs, then the allotment to Maui should reflect that. The allocation should be issue driven. Teya agreed that it would be a logical approach, but it would take a lot of time. Fern continued that every ISC has an action plan and each ISC would need to be very clear about their need, manpower, etc.

- Randy proposed that since it looks like we are covered and have some surplus for FY04, we should vote to accept the allocated amounts. We should look forward with an eye to changing our approach to how funds are divvied up for next year.

- Pat asked if any surplus would then go to MoMISC in addition to the in-kind services from MISC. Randy replied that at least part of it would.

- Teya added that what the ISCs formally agreed on was the FWS and USFS funds. One thing that has not been addressed is funding for the Hana crew. That crew costs approximately \$210,000 a year. That is an important piece of information we need to have out there. We have not put them into our budget and the issue has not been adequately addressed at the statewide level. We need to be sure this doesn't get glossed over. Jeremy interjected that the hope is that the NRPP source will cover the Hana crew, but he can't guarantee that yet. Hopefully the NPS will be able to cover them.

- Teya noted that another possibility for gaining funding for MoMISC is to ask the other ISCs to chip in a small amount (\$5,000 each). Kauai has already contributed.

- Steve cautioned that we really shouldn't look at this as a surplus when we have the Hana crew issue out there. In reality we should be presenting a deficit. Erik agreed that we certainly don't have a surplus if we were to go out and do what we need to do. Steve continued that our past action plans have not really been based on need but on what we had.

- Teya summarized that MoMISC has presented an FY04 budget of ~\$80,000. They will have about \$8,000 carryover in their HCF account at the beginning of the fiscal year. With \$10,000 from KISC and a goal of \$10,000 total from the other two ISCs, we still need to come up with just over \$50,000 to meet MoMISC's request. MoMISC has not gone out individually to NFWF in the past. NFWF may be a real possibility in the upcoming year. The next round of grants through NFWF wouldn't come on-line until next spring. In the past, MoMISC received a total of \$15,000 from MISC. That money is completely spent down. Can we make a decision on how much to allocate for the upcoming fiscal year?

- Randy suggested that we are putting the cart before the horse. We need to decide what we are going to do with the Hana crew. It is not fair to add on one end and then cut an existing crew on the other end. Jeremy countered that he doesn't believe the Hana crew is in danger of being cut. We just can't guarantee that yet. We need to get the NRPP funding in. Steve added that the NRPP proposal was based on effort "in addition to" MISC and Hana crew, not just supporting the status quo. Randy stressed that we don't want to cut people we have and then add more staff at MoMISC. MoMISC could definitely use the extra support, but we need to deal with what we have. It is bad to cut people who have been in the program.
- Fern asked where the Hana crew fits into the overall strategy. Will there be a severe program impact if the funding for the crew isn't there? Where do they fit in and has the picture changed? Has the need remained the same under the Incident Command structure? Jeremy summarized that currently the Hana crew salaries and supplies are all paid through EPMT/MISC. When there are disciplinary problems or issues, Glenn is still in the loop. Otherwise they are completely under EPMT/MISC management. Pat asked how they fit into the current strategy and methodology. Are they helping to meet our goals? Can we assess their rate of productivity? All jobs should be looked at relative to productivity and increased efficiency. Pat was on Molokai this week and could really see the need there. Asking for one more person on Molokai is humble. A very small cut for miconia could allow Molokai to do so much more. Jeremy noted that as long as there is a need and a valid function we should keep the Hana crew. We should not keep them just for the sake of keeping them. Randy asked how the quality of their work is. Jeremy replied that he is pretty happy with what he is seeing and hearing. Erik added that the need is there. There is more work than they can do. There may be some personality issues that need to be addressed, but the work is there. Teya concluded that it sounds likely we will have the funds for them through the NPS. For now we don't need to take money out of our base budget to cover them, but we do need to maintain the flexibility.
- Randy noted that the other aspect that we need to be aware of is that we get almost half of our funding from the county and their goal is primarily to address miconia. It is politically important to have that presence out there. If we kick off positions in Hana, we will lose county support.
- Tina commented that she can see that a substantial portion of MISC's FY04 funding needs to go to miconia. Her priority is making sure that the one position she has doesn't get cut and then working forward to get new positions. The project can be refocused on what we have now. Randy agreed that we don't want to lose any positions and we need to support Lori. Jeremy commented that the MoMISC request is a drop in the bucket compared to what we spend in Hana each day.
- Tina added that TNC will cover basic office expenses, etc. for MoMISC. Lloyd asked how much miconia outreach is being done on Molokai. Tina replied that right now the focus is mostly on fieldwork. We need to refocus on prevention this upcoming year.
- Teya suggested that to keep MoMISC at their current baseline it looks like they need about \$50,000. If we are able to get \$10,000 from the other ISCs that leaves a \$22,000 need that MISC should be able to cover. If we don't get the other \$10,000, we can revisit that amount.
- Alex asked about the possibility of applying for FWS habitat restoration money to help support the Hana crew. Hana Ranch is applying for these funds. Can we jump on this bandwagon? Randy indicated that those funds require a cooperating private landowner.
- Randy noted that at the next regular MISC meeting he would like to discuss the idea of MISC forming our own non-profit. With state and county funding limited, we need to look at other funding sources. We may be able to work off of the UH Foundation if there isn't too much overhead. Non-profit status could open up new funding sources for us. We also need to look at working directly with the county rather than going through Tri-Isle. That alone could save us \$40,000.
- Rob mentioned that Randy, Teya, and Anders all deserve a big pat on the back for being there day in and day out during recent county budget hearings and public meetings.

MICONIA CALVESCENS

OVERVIEW OF CURRENT MICONIA OPERATIONS (J. Gooding)

- Our function for the next few hours is to flush out problems and solutions for the Maui miconia operation. We currently have a staff of seven working in the Hana area daily. There are three crewmembers and a crew leader from the former Hana crew and we have an EPMT crew leader plus two crewmembers.

Hana Base-yard

- The State has been very generous and accommodating in allowing us to use the existing state base-yard. The entire operation is currently based out of that base-yard. We hope to have water at the base-yard by next week. The water will be coming from a neighbor's pasture where we are already paying for land and utilities for our overnight field camp.
- We have one yurt up and one to put up still. Before the yurts are ready for use by the MISC crew we need to get them outfitted with bunks, etc.

Merged Hana Crew

- Overall the merger has gone very smoothly. Kerri is doing a great job of coordinating and leading both crews. There are some moderate personality issues that will likely resolve themselves in time.

Staffing

- The EPMT crew is short two field workers at the moment. Bessie has resigned in order to return to school and Erica is going to work for Art. There will be a recruitment opening next week to replace Bessie. The replacement will be duty stationed in Hana. We will wait to replace Erica until we have a better handle on the budget.

Ground Operations

- We have not been focusing exclusively on the periphery. We needed to show accomplishments. We can call Hana Ranch "done." The area has been swept with field crews and there has been helicopter follow-up. We did not cover all of Hana Ranch property, but basically hit everything makai of the eucalyptus line. Now we will be moving upslope to the Moomoonui and Haneoo area. This area is biologically significant and really is an isolated outlier. There were some misses in the area, mostly due to closed canopy and the presence of inkberry, which has the same color bark as miconia.
- We are using tight sweep lines wherever possible. The Hana operation is still using low-volume basal application rather than the thin-line technique that MISC uses. We didn't want to cause too much change at once for the existing crew. They will begin using the thin-line basal application soon.
- The NPS operation won't be doing work on private land.

Helicopter Operations

- With more intensive surveys by helicopter we have found more problematic areas that we suspected. We have been moving back and forth between core and outlying areas.
- With the helicopter we are finding we need to hit an area and then move on, especially in high-density areas. In target-rich areas we are finding it is best to keep moving and not worry about the misses. This means multiple revisits. We do try to hit everything that is seeding. We are still having a problem with visibility of the dye. We are still looking for a visible dye with saturation that lasts. We've tried everything. The red isn't compatible with Garlon 3A and we aren't using Garlon 4 because it gums everything up. We have shifted to 3A because we can operate without equipment failures. Pat asked if we have varied the concentration on the blue dye or tried the water-soluble packets? You can make a super concentrate with them. Jeremy replied that we could try that. Erik noted that the problem is the visibility of blue dye on a green miconia leaf.

Future Targeted Areas

- We need to clean out Waihoi Valley. We need to confirm on the ground what we've done in the air. We also need to look at the north boundary of the Hana core. That area has been somewhat ignored to date.
- We are seeing a trend. There is a dramatic reduction in the number of targets mauka of Hana Ranch. We don't have scientific data, but this observation suggests that what we are doing is working.
- Keanae is quite a problem. We found miconia on the north wall where we hadn't seen anything in about a year. Pat added that we should look further out in Kailua.

RESULTS - JANUARY 2003 – PRESENT (M. Walker)

Aerial

- We are using management units for both aerial and ground operations. We have covered massive acreage via aerial operations since January. Total coverage is over 17,000 acres, but with overlap included the total is 29,000 acres. A total of 14,853 plants have been controlled via aerial spray operations, of which 345 were flowering/seeding. Last year we only covered 11,000 acres for the entire year. In just three months we have covered three times that amount already. Steve asked if we have the footprint of the overlap. Mike replied that it isn't readily available, but he could come up with it. Jeremy noted that for helicopter operations we buffer by 50 meters for coverage. On thick areas that distance should probably be less, but in other areas you can see 100 meters on either side. The 50-meter buffer is just an average. Pat asked how high the flight lines are. Mike responded that they are 100 to 150 feet.
- Lloyd asked if we have any feel for what might be missed with the flights? Mike replied that right now we don't, but we want to try to find that number by going in on the ground and setting up some plots.
- Mach asked how many new outliers have been found. Mike replied that there has been nothing since Waihoi. Erik added that there were new discoveries in the Twin Falls area. Jeremy continued that we are not finding much that is new, but we are filling in areas we knew could be problematic. A couple of dots in some areas have turned into many dots. We need to keep looking farther and farther out. Pat asked if there are plans to expand the units west into the unpopulated areas. Jeremy replied that we have plans to look in those areas. We may not need to draw lines. The management units have really served us for guiding and systematics. Mike made a book of maps that we are using for briefings.
- Tina asked if the outliers are really bird dispersed. Jeremy indicated that the ground crews are convinced that the dispersal is via pig trails. This may be because they stay on pig trails. Hunters and dogs also contribute. There is one significant gap in our current search pattern resulting from our buffers for houses and residential areas. We are missing significant areas, but we need to maintain those distances until we finish our compliance process.
- Jeremy continued that although we are getting a lot of seeders, there will be a huge increase in apparent work in the next two years because we are opening up the canopy. Our biggest challenge will be not to spray them immediately but to let them compete with each other for awhile and not waste herbicide. It will be hard to train people to do that. Teya added that it also really underscores the need for a big helicopter budget for many years. Jeremy added that hopefully after five years we will see it taper off.

Ground

- Mike indicated that we don't have a solid handle on the ground data. This is an issue we will discuss later in the meeting. We need more fluidity. The EPMT/Hana crews have covered 340 acres on the ground since January.
- MISC has been working mostly in Nahiku in relatively dense areas. We are working in sub-canopy areas with thick hau and trying to find the outer perimeter of the Nahiku population. MISC's main goal is to work on private land as much as possible since the aerial and federal operations can't do that.
- Fern asked if all the areas have an equal amount of effort per unit area. Erik responded that effort is definitely not represented on the map. Fern suggested that it would be important to correlate effort to finds.

Representing effort in data collection can be important later. For example, with the pouli the criticism has been that you will find them if you are looking where they are. Mike replied that we do collect man-hour data.

- Pat noted that the private property issue is a big one in terms of the outliers further west. Pat has no success getting access out there. The TMK records are outdated and the owners have changed on many of the properties. We may have to go out with a lot of letters. We need ideas on how to get to the landowners. Mach suggested we should talk to Bob Yonahara as he deals with similar issues.

DATA MANAGEMENT (Mike Walker)

Current Challenges

- The addition of the crew in Hana and the fact that they are 48 miles away has created some issues with getting data to flow efficiently and in a timely manner. I have been slack on enforcing data transfer. This should be an easy thing to remedy with Kerri out there now.
- The GPS units aren't being used to their full capability. I've done some training with folks. There is so much more that these units can do than what they are doing. If they are just going to take single points, they might as well be using a cheap Garmin unit. Kerri is interested in doing more. I really want the crews to enter ALL their data on the GPS units and be able to download the data directly into the database. Melissa asked how the GPS coverage is out in that area. Mike replied that it is lousy. The newer units can view background data and if you have a fix and altimeter and compass you can pin point yourself on the screen even if you have no reception at the time. We are experimenting with the XM and XT models. The lower priced XM model is actually working better. Neither one works in the helicopter yet, but we've been talking to Trimble. We do have laptop computers with the software to communicate with the GPS. We want to buy two XMs especially for things like ivy gourd. We could do everything on the unit and not need the paper stack that comes back in.
- Lloyd noted that it sounds like a good solution and asked if there is a chance of getting the ISCs to come up with a standard? We've been talking about this for years and Shannon is supposed to be working with the ISCs. We should have him help us. Melissa asked if all the ISCs are supposed to be collecting similar fields? Teya responded that they aren't yet. Shannon is helping those that don't have databases. We need to develop standard definitions (i.e. what is mature, etc.). Jeremy commented that it seems like we keep reinventing the wheel. Lloyd asked if all the ISCs have functioning systems. Mike replied that they sort-of do, but they are disjunct. Lloyd noted that the ISCs have common problems and Shannon and that program could provide help to anyone who needs it. He is funded at \$150,000 a year to do this. We just need someone to take the lead.
- Steve suggested that we should look at the history. Philip put a huge amount of energy into trying to get statewide databases standardized, including alien plants. It reached a point where it was a complex enough software package that if you needed any changes made, you needed Philip's help. It was not supportable. With the EPMT, we took off from there and put the data into Access. We tried for a consistent package with agreed upon fields and definitions. There were a lot of desires among the different EPMT teams and the software grew. Once again we ended up with a monster that had issues of breaking or the need for Aaron to deal with it. At a minimum we need to first define what data are we going to collect, assign the same names to the fields, and populate the fields in a similar manner. If we can get to that point on a statewide basis, we will have done a lot. Lloyd stated that Shannon should be able to provide technical support and training for any ISC that needs it. That should be an incentive for the other ISCs to standardize.
- Mike commented that both Philip and Aaron were trying to build a common application. What Shannon is trying to do is to develop standard field definitions. He doesn't care what program we use. Shannon just sent out an email with a status update. When the ISC data mangers got together, we made it clear that data for MISC and the park are intermingled and we can't stray too far because we are intertwined. Shannon knows all the fields we have are the ones we want to collect and he is getting input from the other ISCs. The set of fields he comes up with will likely be very similar to what we have been using all along. As long as there is a set of common definitions and you can export into a file that can be used by something else, the

program doesn't matter. Jeremy acknowledged that the plan sounds acceptable as long as he can do quarterly reports in Access.

- Randy noted that as long as the core structure can be used in any database and you can customize, everything should work out. Mike added that there are no mandates regarding collecting a minimum amount of data. We are on the sidelines right now while Shannon is working on the core fields. After that we will be working with him more. Lloyd emphasized that we need to make sure Shannon is providing the help we need. Teya replied that the other ISCs seem to be happy and want the help. Steve asked if it is part of Shannon's role to be a repository. Is he on base funding? Lloyd responded that a repository would be a good role. Shannon's is funded to provide data for the USGS repository (PBIN). USGS is actually funding him and theoretically it is base funding. We need to make sure this is working the way it should.
- Mike commented that one of the big problems with the EPMT database was from too many cooks throwing things into the stew. The new additions are so time consuming that it doesn't work. Jeremy countered that we are stuck in APCAM, and we need a find a way to make this work. Steve indicated that the NPS has mandated structures and in order to get funding we need to comply. We need to find a way to meet these standards and make the system useful. Are we talking about a flat data structure? Mike replied --- yes, much flatter. We need to be more proactive about data transfer and lay down the law. Define what needs to be coming back from Hana on a CD weekly. Steve asked if there is anyone else who can deal with the data-logger when Kerri isn't around. How much of a learning curve do we have? Mike responded that the MISC crew can definitely deal. Out in Hana it may be difficult for the crew to adapt. Jeremy added that it will just need to be a requirement. Dayton and Dave Quisenberry should be able to deal. Mike added that the GPS units are not being used to their full capability. Should we be trying to push the Geo 3 or do we just go to the next level with the XM? The data dictionary isn't going to change. How it looks will just change. They can get used to it. We need to make sure it works on our end before we start training the Hana crews.
- A data meeting will be held at MISC at 8 AM on June 9 to continue these discussions. We should invite Shannon to the meeting.

STATUS OF ENVIRONMENTAL ASSESSMENT (J. Gooding)

- The NPS Pacific Island Support Office (PISO) has been working on revisions to the EA and just sent out a new draft for review. The new version is dramatically better. This edition is only 47 pages rather than 100 pages and it is much easier to read. Jeremy is going to work on the methods section for a week and will send it to PISO. The methods section needs a lot of work. After that it will go out for final review and comment. It is relatively close to done.
- Pat asked that wherever TNC is mentioned, he would like a heads-up. The first draft was inaccurate. Pat also asked if there was any follow-up regarding monitoring plots for the non-target section. Is that an issue you need to deal with? Jeremy replied that since we are doing the "short form" EA, we won't need monitoring. Steve clarified that in reality there is no such thing as a "short form," but with the miconia issue as recognized as it is, they think we can get by with this short version. Jeremy added that the biggest hurdle will be the NPS regional office. Now that the EA is back on island it is a high priority. Teya mentioned that MISC is mentioned in the EA, but our role is not explained. Is this because most of our work is on private land? We need to clarify. Jeremy suggested that the document is NPS-centric. We need to at least explain the roles of other organizations. Jeremy will clean up the methods section and then send the document out so the other involved organizations can clarify their roles. MISC plays a big role in miconia control and needs more mention.

PUBLIC RELATIONS (J. Gooding)

- Right now we're not able to adequately take care of outreach or public relations. At the most basic level we need to deal with landowner permissions and the helicopter noise issue. There are a lot of things we are not doing. To date we have been mostly geared toward getting real people on the ground. We may need to hire a dedicated outreach person. We should hold a public meeting in Hana needed to gain program support. Randy suggested that MISC should be able to assist. Miconia is part of our mission and we held the first miconia public meeting. Jeremy suggested that it might be too much work for Mele. We could be looking

at anywhere between 10 and 60 hours a week depending on how far we jump. Pat asked what it would take to deal with the most basic issues of landowners and helicopter notification.

- Elizabeth suggested the possibility of a split position with PR and field responsibilities. That way the person would know exactly what was happening on the ground. This might create a little issue with the idea of the ground crew being a tight unit. Alex added that he is bringing on a PR person in mid-June. The position is 70% PR and the rest administrative. Alex doesn't have 100% PR duties for this person. We should try to avoid redundancy. Jeremy suggested that he is leaning towards Elizabeth's idea of someone on the ground. Randy concluded that Mele can assist with some things, but she can't do everything. Jeremy should check with Eric Andersen, the new Kipahulu Unit Manager, to see if the park staff in Kipahulu can be of some assistance.

AREAS FOR DISCUSSION - OPERATIONAL IMPROVEMENTS (All)

Aerial Sprays / Under Canopy Ground Sweeps

- Jeremy shared that we have made some interesting observations by doubling up helicopter and ground searches. There is a lot left after the helicopter goes through and the ground crews are missing things too. We need to determine a fudge factor for misses. Mike continued that we want to get a comparison of sub-canopy vs. what we see from the air for various levels of canopy cover. We need to determine what we need to do for follow-up in specific areas. We would like to set up a few plots and do meticulous ground sweeps for a one-time efficacy assessment. Jeremy noted that his big concern is that the more we do stuff like that the less time we have to kill. Could we use Kim, Forest, and Erica for something like this? Lloyd answered that the logistics would be too much. This is something the MISC crew can do themselves. Steve agreed that if the crew that is doing the sweeps does the analysis it is a learning experience for them. Pat asked if there is a standardized protocol for ground sweeps that covers parameters. We really need to emphasize communication between the crewmembers. This is a huge deficiency. With some crews you have some quiet types. It is important they talk to each other, whistle, etc. Pat will email his protocol for ground sweeps to us.
- Teya asked if anyone has suggestions for how best to accomplish looking at this. Pat suggested that belt transects would be good or a couple of 10 x 10 plots where you look at everything including vigor of plants that were sprayed but not dead. Steve emphasized that as small as the seeds are, each dispersal event probably resulted in more than one plant. We have to hit it on the ground in those outlying areas. It is disheartening to hear that we are hitting an area that we did by ground and having to redo it aerially. Jeremy noted that the crews are spreading a bit wide sometimes especially on some of the old sweeps where there were only 3 or 4 people. The crews are getting more accustomed to doing close sweeps. Pat reminded the group that Chuck did some transects so there is some baseline. Randy concluded that we will never be able to get by with just one pass. Mach suggested that the search image needs to change as the density of miconia changes. Pat added that he did something similar with gorse and from plot to plot results varied by person more than by anything else. Steve interjected that inkberry is a search image issue we will need to figure out. Jeremy noted that our long-term goal is to have guaranteed coverage on the outlying areas.

Quality Control – Review of Work by Individuals / Teams

- We've been discussing the possibility of checking field work and search adequacy, perhaps by establishing a quality control team. Jeremy countered that he thinks this would be bad for morale right now. Maybe in five years when we start to see some success it would be feasible. Some of the crew got pretty upset when they were told we were flying the Ranch and finding misses. Erik suggested it might be a good strategy to take ground crew members up in the air so they can see what they missed.

Standardization of Repeat Visits

- This is a big question mark. We know what we would like to do, but we don't have enough funding to go back every two years.

Feasibility of Prioritizing Areas

- Jeremy indicated that right now we are basically making seat-of-the-pants, common sense decisions. If it looks like an outlier, we go. This is not based on science right now. Randy asked if we need a decision matrix to help us prioritize. If we came up with criteria, then we could rank everything and see how it

comes out. The group had a lengthy discussion regarding possible criteria for a ranking system. Suggestions included elevation, distance from the core, proximity to natural areas, phenology, size, density, disturbance/spread potential, light, canopy height/coverage, delectability, previous treatment history (time since last treatment), etc. Pat asked if anyone has looked at how DBH or base diameter correlates to seeding. Height doesn't really correlate. Jeremy noted that we could set up a plot where we don't do any control until just before seeding. We could determine the age/diameter/seeding correlation, growth rate etc.

- Jeremy noted that we already consider these criteria informally. Do we really need to formalize this? Pat asked if we feel like we are having problems with decision making. How important is this? Steve suggested that a couple of monitoring plots that we don't control would be a good idea. Jeremy asked Mike if he could redo his nearest neighbor analysis. Mike replied that it would be about the same. This will be more important later on when we need to refine things. Alex asked if there is some value in sharing this sort of decision making information with the crews so they fully understand why we are doing what we are doing. Jeremy responded that we are already doing that informally.

Other Discussion

- Jeremy noted that the personnel management on the miconia project is still a little rough. Kerri wants a tight crew and wants to be able to count on who she has. She is being given a lot of control and there is some difficult balancing. We need to diversify so we aren't totally dependent on Kerri and Mike Walker. We also need to develop a list of rain-out activities.
- Alex has offered to have his crew help us with miconia work. The contamination risk is just too great. There are other threats like pampas grass that would be a more effective use of the EMWP crew. Pampas is a valid goal for East Maui Watershed protection.

BIO-CONTROL

- There are no current efforts underway at MISC. Mach shared that there are five new fungi in Brazil that have potential. They may be able to fast track some of them. We will need people to test them when it comes to it. The testing takes a long time.
- We need to get a final report from the \$28,000 contract MISC supported through PCSU with county funding this past year.

Next Regular MISC Meeting Date/Time: June 27, 2003, 9am-12noon