1.0 INTRODUCTION

The Makua Implementation Plan (MIP) was finalized in May 2003. Since that time a lot has happened. We are currently working on Urgent Actions 3 and gearing up for Year 1, which is scheduled to begin in October 2004. This report serves as the annual status report to the Implementation Team (IT) on the IP actions that have occurred between September 2003 and September 2004.

Current status of the Implementation Plan

The Army sent a letter to the USFWS in 2003 agreeing to implement the MIP if the USFWS agreed to work with the Army to reduce the cost and scope of the plan. The MIT met in April 2004 to discuss a reduced MIP, which was then submitted to the USFWS for review. The USFWS comments on this reduced plan are still pending.

The USFWS is currently working on two revised Biological Opinions (BO) for Makua Valley. The first BO, revision 3, will include critical habitat and will consider the 41 listed endangered species found in Makua Valley. This BO should be finished in late September 2004. The second BO, revision 4, will include the use of additional weaponry in Makua Valley. Some of the MIP management units (MUs) will be designated as 'permanent' areas for rare species management actions in this BO. The 4th revised BO should be completed in January 2005.

We currently have MOUs with Board of Water Supply (BWS) and The Nature Conservancy (TNC) to do management actions on their lands. Our partnerships are going well. At this time, we have one full-time person working at TNC doing MIP management actions at Honouliuli, and we are working with BWS on the environmental assessment for a large fence in Makaha. We are still waiting for Dole Foods, Kamehameha Schools and the State of Hawaii to sign MOUs with us. The State of Hawaii wants to see a finalized MIP before they agree to work with the Army on the management actions. The Navy and Dillingham Ranch are not interested in participating in the MIP, and management actions have been revised to exclude those landowners.

Status of fire management plans

Army Natural Resource's staff (NRS) is currently working with Andy Beavers, a fire modeler at Colorado State University, to complete a fire management plan for the Kaluakauila management unit. In addition, the Army's Range Division will receive funding this year to hire 10 fire management staff to help implement fire management plans on-site.

Funding and staffing levels

Urgent Actions 3 actions are scheduled to be completed by October 1, 2004. Given the amount of funding available for UA3, Army NRS have done an excellent job working to achieve this goal (see Chapter 2). Unfortunately, only 43% of the funding necessary to complete UA3 was allocated to NRS. UA3 actions required $2,046,500 after overhead for full implementation, but only $900,000 after overhead was allocated for all UA3 actions.

There are currently 14 field staff and field supervisors (including one person at TNC), one implementation manager, one administrative assistant, one horticulturist and one database/GIS

specialist contracted through RCUH to do natural resources work on Army training areas. Full implementation of UA3 required 21 field staff, 2 implementation managers, 2 horticulturists, one administrative assistant, one database manager and one GIS specialist, a shortfall of ten people.

Full implementation of the revised Year 1 actions, including project-wide NEPA documentation, requires $3,690,000 in funding, including overhead. At this time, it is not known how much funding Army NRS will receive for next fiscal year. Space to house the required increase in staff is also a concern. The current NRS facility is unable to hold any more than the current 18 staff persons, and Year 1 requires an additional 10 staff persons.

Status of Urgent Actions 3

This year, the lean NRS staff accomplished many of the UA3 requirements. Ten small-scale fences were completed around small *in situ* populations of *Delissea subcordata, Schiedea kaalae, Hesperomannia arbuscula, Alsinidendron obovatum* and *Cyanea grimesiana,* and one fence was built around an outplanting of *Phyllostegia kaalaensis*. Of the 66 *in situ* 'manage for stability populations' in the revised MIP, 37 are currently fenced (56%). All of the UA2 and UA3 small-scale fences that could be built (populations are extant and landowners were cooperative) have been completed. A large Makaha fence has been scoped, and the EA is currently in pre-draft review. Thirteen populations have full representation in genetic storage, and many more have partial collections. The table in Chapter 2 covers the status of UA3 actions in detail.

Genetic storage collection issues

Currently the MIP requires that the Army collect from all Oahu populations of all stabilization species. This means that the Army must collect from and provide funding to support the maintenance of propagules from 158 populations. This number is overwhelming considering that multiple monitoring visits are needed to represent the minimum numbers of plants required according to the MIP collection guidelines. Often field collections are difficult to secure and clones must be collected and maintained in the greenhouse until ample seed can be acquired. For example, a species like *Dubautia herbstobatae* is impossible to collect seed from in large quantities in the wild, and for a large population like the one at Ohikilolo the minimum requirement is to collect at least 50 seeds each from 50 individual plants. This species is on cliffs and would probably require at least 20 collection attempts on rappel to secure the minimum number. The other option is to collect clones of 50 plants and grow them until they are mature to collect from them ex-situ. This places an additional burden on already stretched horticultural resources.

In addition, the up-front research that is required to determine the best storage techniques for each taxon is not easy to conduct. Confirmed seed storage data is only available for one of the MIP species so far, though preliminary research has been conducted on several others. Hundreds of seeds and at least five years of testing are needed to determine the best storage technique for each taxon. From some taxa, hundreds of seeds are simply not available. In addition, yearly collections from populations will be necessary in order to account for the reduction in seed viability over time. This will be very time consuming, and may become a drain on the wild seed resources.

In light of the many un-anticipated challenges met in attempting to secure genetic storage for MIP species, this topic needs to be revisited by the IT to consider doing genetic collection efforts on fewer populations. Army Natural Resource Staff support collecting from populations that are threatened by fire from military training, from populations that will be actively managed for stability under the MIP, and for populations that will be used as propagule sources for augmentations or reintroductions.

Species status differences between the final MIP and this report

The numbers of individuals in the population units (PUs) in this report are generally lower than the numbers found in the final MIP. In most cases, this is because more extensive monitoring of the PUs has been done since the MIP PU numbers were finalized. Often, landowner permission and other access problems meant that best-guess estimates were including in the final MIP as PU numbers. Over the last three years, many of those populations have been visited, and more accurate numbers are included in this report. Unfortunately, in several cases, most notably *Chamaesyce herbstii*, *Delissea subcordata*, *Hesperomannia arbuscula*, and *Phyllostegia kaalaensis*, the decline is real, due to environmental factors beyond our control.