Natural Area Partnership Program

Pre-Proposal (Revised May 29, 2013)

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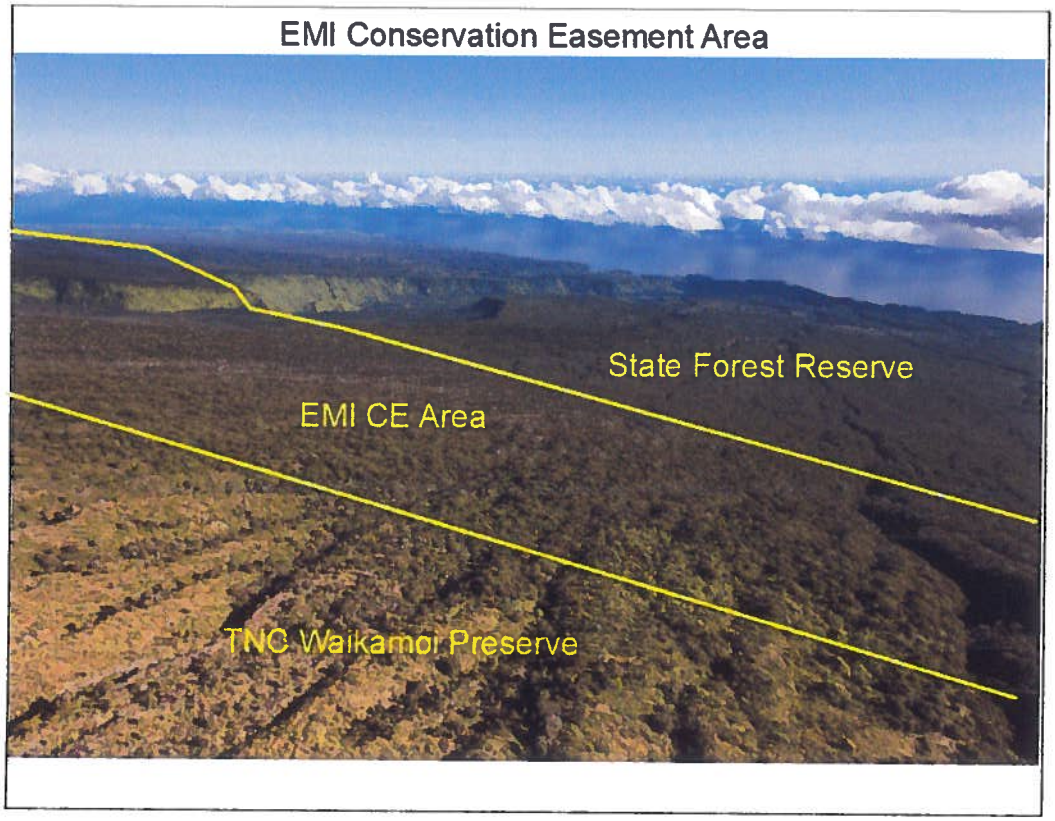
Cooperating Entity: The Nature Conservancy
Mark White
Same Contact Info as Above



Item 5 a

1. **What are the natural resources being managed?**

The parcel is primary habitat for the endemic ʻākohekohe and kiwikiu, which are among the rarest birds in the United States. It contains 16 threatened or endangered plant and animal species, 19 species of concern and 7 candidate species (Table 1). Additionally, much of the property has been designated as critical habitat by the U.S. Fish & Wildlife Service to protect *Geranium multiflorum* and eight other rare plant species. These 3,550 acres make up the core management area of the East Maui Watershed Partnership (EMWP), of which The Nature Conservancy (TNC) is a partner. Over the past six years, 2,500 acres of this property has received some management, primarily to reduce ungulates. It is partially protected by fencing, the agreement for which is subject to renewal in 2013. However, 1,000 acres of the western end of the property has received no management and is severely impacted by ungulates and increasing invasive weed species, such as pampas grass, Himalayan ginger, blackberry, and strawberry guava. This unmanaged portion of the property contains some of last remaining unprotected habitat for kiwikiu, ʻākohekohe and many rare plant species (Figure 1). It is also the primary watershed for the upper Kula water supply, which will continue to be degraded without immediate management (Figure2).

ʻĀkohekohe.
Photo by Jack Jeffrey

Kiwikiu. Photo by Maui Forest Bird Recovery Project.

Geranium multiflorum. Photo by Forest and Kim Starr

Table 1. Rare plants and animals associated with Property. Listing and abbreviations according to USFWS Species List January 5, 2010. (E=endangered; C=candidate; T= threatened; SOC=Species Of Concern)

Species Name	*Hawaiian/ Common Name*	*Federal Listing*	*Recovery Priority No.*	*Recovery Plan, if any*
Anoectochilus sandwicensis	Hono hono orchid, jewel orchid	SOC	NEED	NEED
Asplenium fragile var. insulare		E	6	Final
Asplenium haleakalense		SOC	NEED	NEED
Calamagrostis expansa		C	NEED	NEED
Clermontia oblongifolia subsp. Mauiensis	ʻŌhā; ʻŌhā Wai	E	6	Final
Clermontia tuberculata	ʻŌhā; ʻŌhā Wai	SOC	None	None
Cyanea copelandii subsp. Haleakalaensis	Hāhā	E	6	Final
Cyanea glabra	ʻŌhā, Hāhā, ʻŌhā Wai	E	5	Final
Cyanea hamatiflora subsp. Hamatiflora	Hāhā	E	6	Final
Cyanea horrida	Holokea	C	None	None

Cyanea kunthiana	`Ōhā, Hāhā, `Ōhā Wai	C	None	None
Cyanea mceldowneyi	`Ōhā, Hāhā, `Ōhā Wai	E	2	Final
Cystopteris douglasii		SOC	NEED	NEED
Diplazium molokaiense		E	3	Final
Dryopteris tetrapinnata		SOC	NEED	NEED
Dubautia reticulate	Na`ena`e	SOC	None	None
Fragaria chiloensis var. sandwicensis	`Ōhelo papa	SOC	None	None
Geranium multiflorum	Noho`anu	E	8	Final
Hillebrandia sandwicensis	Waimakanui, `aka`aka`awa	SOC	NEED	NEED
Joinvillea ascendens subsp. Ascendens	'Ohe	C	None	None
Liparis hawaiensis	`Awapuhiakanaloa	SOC	NEED	NEED
Melicope balloui	Alani	E	5	Final
Melicope haleakalae	Alani	SOC	None	None
Melicope sp. nov. 2	Alani	SOC	None	None
Phyllostegia ambigua		SOC	NEED	NEED
Phyllostegia bracteata		C	None	None
Phyllostegia macrophylla		SOC	NEED	NEED
Pritchardia arecina	Loulu	SOC	NEED	NEED
Ranunculus mauiensis	Makou	C	None	None
Rubus macraei	`Ākala	SOC	None	None
Sanicula sandwicensis		SOC	NEED	NEED
Schiedea diffusa subsp. diffusa		SOC	None	None
Sicyos cucumerinus	'Anunu; Kupala	SOC	None	None
Wikstroemia villosa	'Ākia	SOC	NEED	NEED

Rare animals associated with Property.

Species Name	***Hawaiian/ Common Name***	***Federal Listing***	***Recovery Priority No.***	***Recovery Plan, if any***
Branta (Nesochen) sandwicensis	Nēnē	E		
Lasiurus cinereus semotus	`Ōpe`ape`a Hawaiian Hoary Bat	E	9	Final
Loxops coccineus ochraceus	Maui `Ākepa; `Akepeu`ie	E	1	Final
Pseudonestor xanthophrys	Maui Parrotbill	E	1	Final
Pterodroma phaeopygia sandwichensis	Hawaiian Dark-Rumped Petrel, `Ua`u	E	2	Final
Puffinus auricularis newelii	Newell's shearwater, `A`o	T	3	Final
Palmeria dolei	Crested Honeycreeper, `Ākohekohe	E	7	Final
Megalagrion nesiotes	Damselfly, pinao `ula	C	5	None

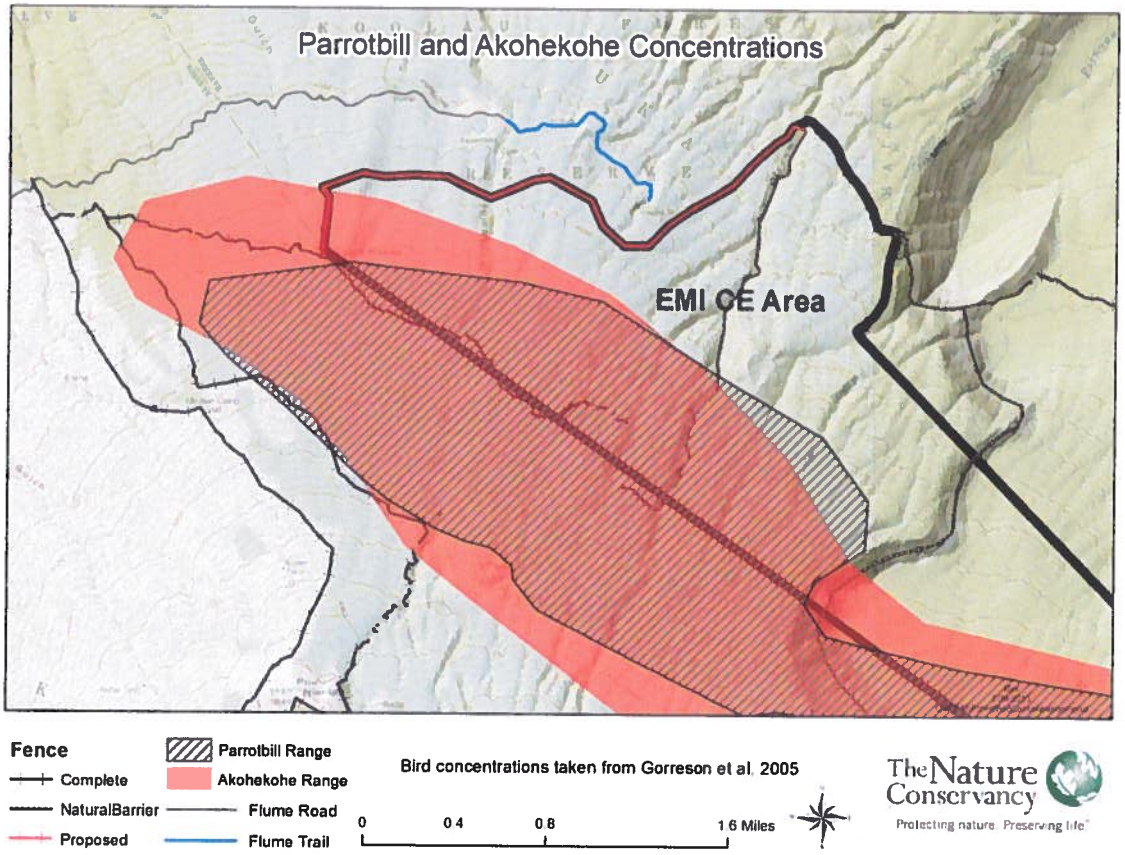


Figure 1. Endangered forest bird concentrations in relation to CE area.

Figure 2. Recent pig damage in endangered forest bird habitat of unmanaged portion of EMI Parcel.
Photo by Kerri Fay

2. **Where is the property located? How many acres will be managed?**

The East Maui Irrigation conservation easement includes over 3,550 acres. It is mauka (upslope) of the towns of Makawao and Haiku on the island of Maui. The Property is literally at the center of the 100,000-acre East Maui Watershed Partnership (EMWP) area, which is managed by six major landowners. It is bordered by the State of Hawai`i Ko`olau Forest Reserve, the Hanawi Natural Area Reserve, Haleakala National Park, and lies immediately below TNC's Waikamoi Preserve, with which it shares a long seven mile boundary (Figure 3).

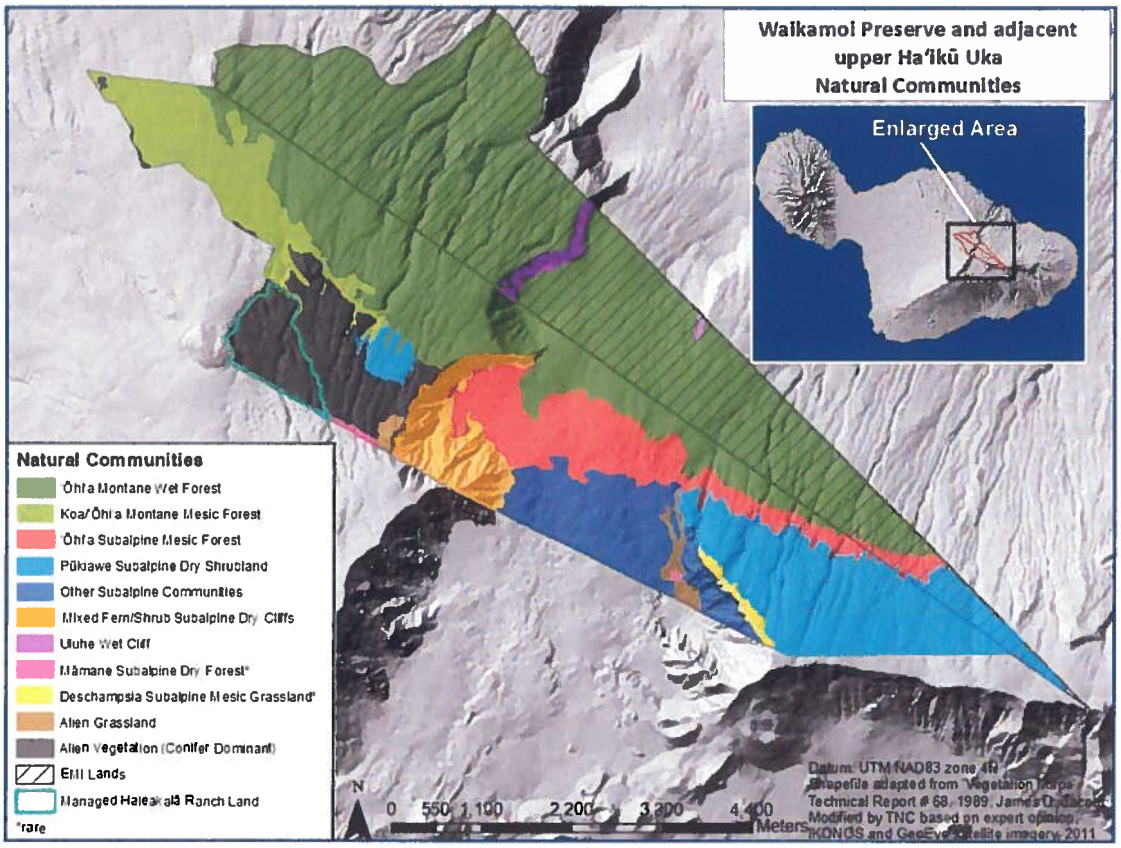


Figure 3. EMI CE and Waikamoi boundaries and natural communities

This project area encompasses significant unmanaged portions of the Upper East Maui Watershed Area and abuts the larger 12,000 acre core EMWP area of native-dominant watershed on Maui. This project not only benefits 1,000 new unmanaged acres but also the entire 12,000 acre core East Maui watershed managed area. The western flank of this 12,000 acre area is currently unfenced and urgently needs to be closed to prevent continued ungulate ingress. The property has been one of The Nature Conservancy's highest conservation priorities in Hawai`i for at least two decades. The continued and expanded management of this parcel is essential to effective management of the Waikamoi Preserve and the entire EMWP managed area. The addition of this parcel into the NAPP program will allow for better integrated long-term management of both Waikamoi and the new EMI property. However, without it, continued effective long-term EMWP and TNC management will be compromised by the increase in invasive species and the lack of a legal agreement allowing for their perpetual management. Activities covered under this NAPP proposal will focus on: planning and regular maintenance of a three mile western boundary fence (construction costs not included in this proposal); establishing helicopter landing zones and foot trails; routine ungulate scouting, monitoring and removal; invasive plant mapping and control; and research management.

3. How will the project be accomplished?

Acquisition of the Conservation Easement (CE) should be completed by July, 2013. TNC and A&B have finalized the terms of the CE and are currently awaiting a final appraisal, which is coordinated with the U.S. Fish & Wildlife Service, DOFAW, and the Department of the Interior. The CE will be funded through the US Fish & Wildlife Recovery Land Acquisition Grant Program.

TNC is currently seeking funds to install a western boundary fence (Figure 4). TNC will establish and maintain ungulate and weed management and monitoring in the currently unmanaged areas of the parcel. TNC will also begin mapping and controlling priority weeds, especially strawberry guava, Himalayan ginger, Clidemia, and pampas grass, and initiate a weed management program.

This NAPP funding would help ensure long-term management, which the property urgently needs. The current landowner has been very supportive of conservation efforts for nearly two decades, supporting and allowing much of the conservation work that has taken place to date. For example, EMI has allowed for fencing of the lower Honomanu area, and for controlling ungulates and weeds on a large portion of the property. However, without the CE, a subsequent and possibly less friendly landowner could refuse to allow conservation organizations access for protection of the native species. Such a scenario would jeopardize decades of successful conservation work in the EMWP and Waikamoi area.

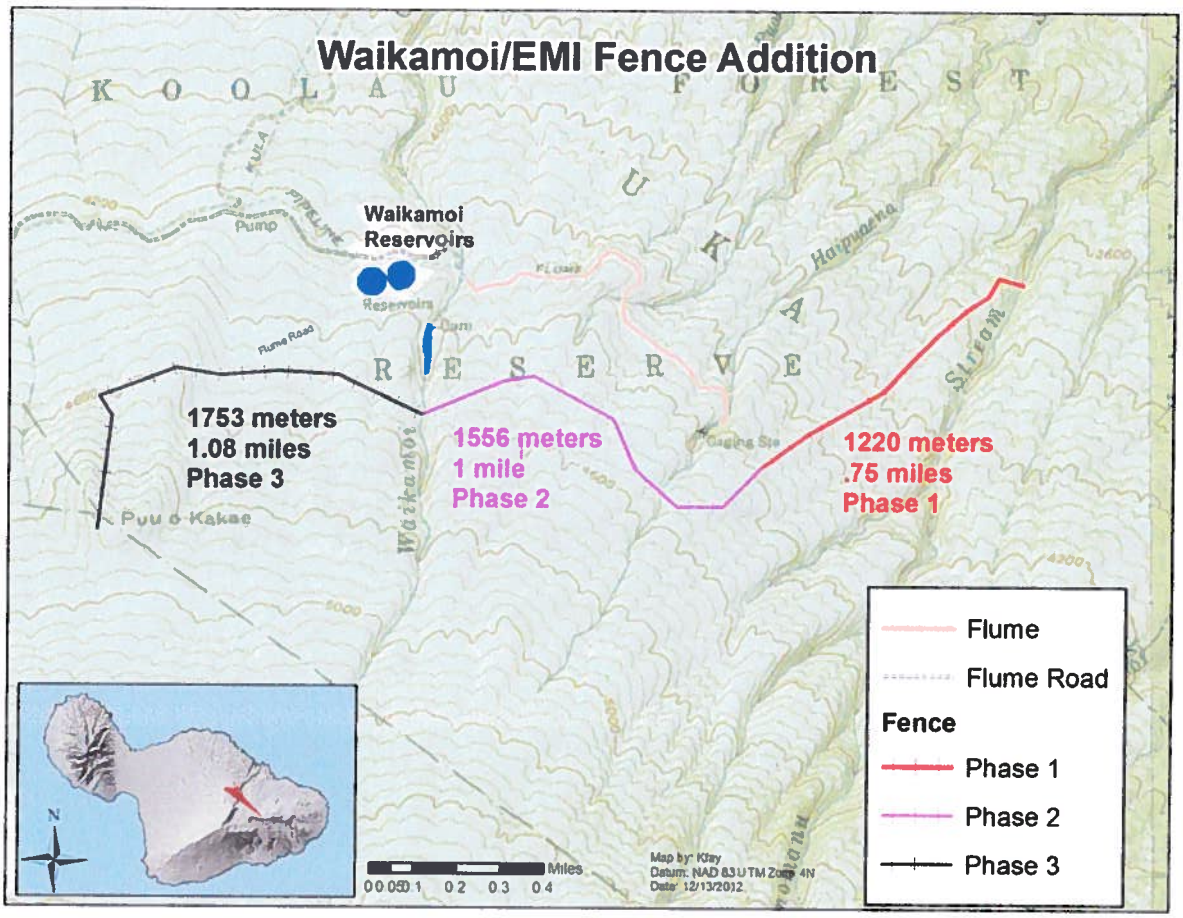


Figure 4. Western Boundary Fence and construction phases

4. Are there any public benefits from this project?

The primary public benefit is the protection and management of native forest within the East Maui watershed, providing Maui with a clean abundant source of fresh water. The EMI parcel is at the heart of the East Maui watershed which provides over 60 billion gallons of fresh water a year to the people of Maui. Protection and management of this parcel is critical to the protection of the watershed and to ensuring that Maui's residents continue to have abundant, clean water. The primary threats—invasive plants and feral ungulates—will be contained or controlled; thereby enhancing the preservation of dozens of rare, threatened, and endangered species.

Benefits as a result of protection of this parcel:

- Reduced damage to native forest vegetation and soil disturbance as a result of pig and other ungulate damage
- Potential recovery of dozens of listed endangered plant and animal species through the protection of intact native montane forest systems
- Climate change adaptation ability enhanced by maintaining ecosystem resilience, and by providing suitable habitat for the highly endangered kiwikiu and `ākohekohe (highly vulnerable to climate change effects)
- Improved groundwater recharge ability through protection and enhancement of native canopy and ground cover
- Improved watershed protection and function specific to the Upper Kula water system drainage area and Waikamoi reservoirs
- Leveraging funds and conservation actions
- Conservation awareness and engagement of the local community
- Documentation of conservation successes

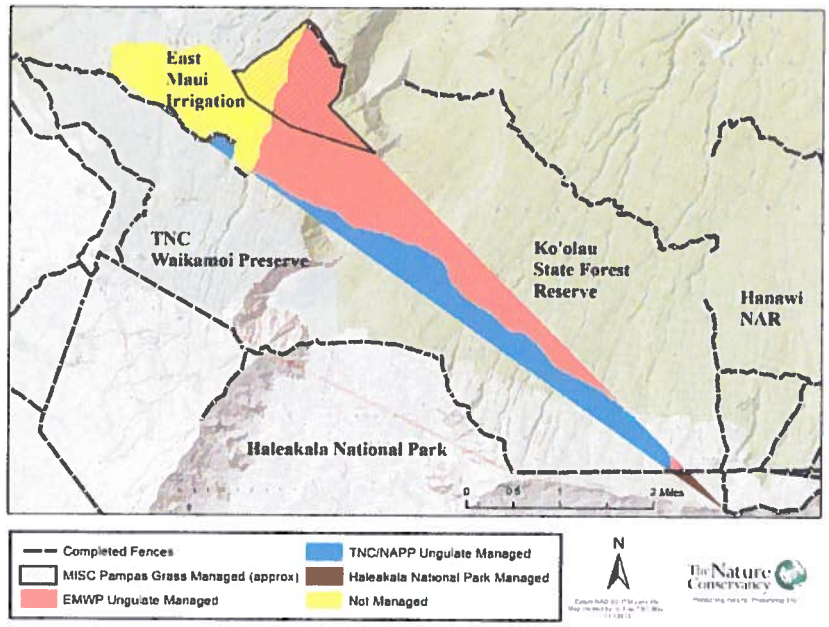
5. Are there any partnerships/other organizations involved? How will they be involved in the project?

The East Maui Watershed Partnership (EMWP) has co-managed 2,500 acres of the 3,550 acre project area cooperatively with The Nature Conservancy (TNC) since 2005. To date, the more eastern lands have been managed by the Nature Conservancy, while those in the lower Honamanu and Ko`olau gap area are managed by the EMWP (Figure 5). TNC will take the lead on the management of the additional 1,000 acres of the parcel, which are currently unmanaged, while the EMWP will continue to manage portions of the Honomanu and Ko'olau Gap sections. This management arrangement will either continue into the future or TNC will subcontract management to EMWP or another entity. The ultimate goal will be to manage the 3,550 acre area in the most cost-effective way possible under TNC leadership working collaboratively with EMWP.

TNC also partners routinely with the Maui Invasive Species Committee (MISC) and the Maui Forest Bird Recovery Project (MFBRP). MISC is currently controlling highly invasive pampas grass in the lower Honomanu section of the EMI parcel and will likely continue to do so. The MFBRP is currently banding kiwikiu and `ākohekohe in Waikamoi with plans to continue research and banding efforts to support the potential Nakula NAR release of kiwikiu, in addition to increasing our understanding of the current range and population of Maui's endangered forest birds. The currently unmanaged portion of the EMI Property contains high quality kiwikiu and `ākohekohe habitat that will continue to be further degraded without immediate management. It is also severely impacted by ungulates and increasing invasive weed species like Himalayan ginger and strawberry guava.

The Property is owned by East Maui Irrigation Co., Limited (EMI), a subsidiary of Alexander & Baldwin ("Landowner" or "A&B"). A&B is a multi-market transportation and real estate company. It is among the largest private landholders in Hawai`i. A&B/EMI has been an active participant in the EMWP since its

formation in 1991. TNC expects to continue to nurture and develop this partnership into the future, and more so now that TNC will soon hold a CE over this 3,550 acre parcel.



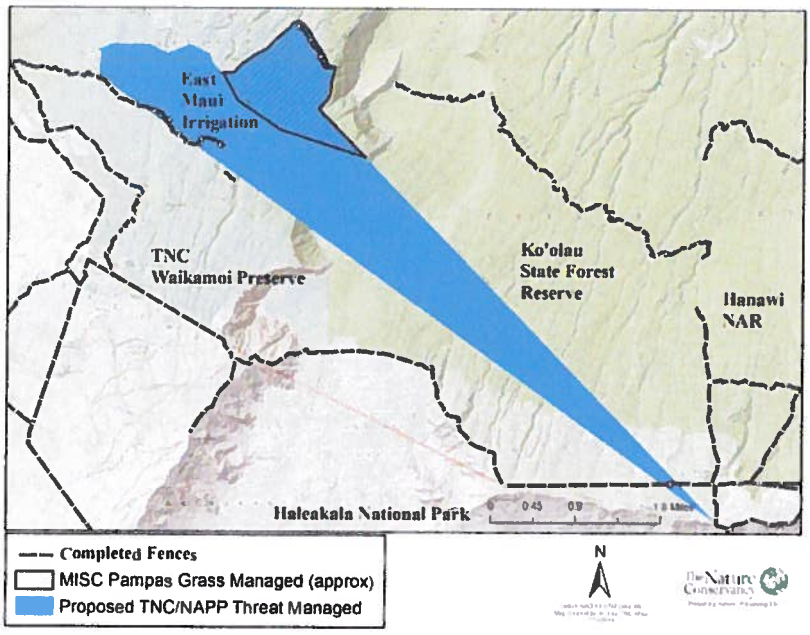


Figure 5. Current Management Lead by Agency and Area
Proposed Future Management Lead

6. **When could the project begin? Provide an approximate timetable for project development for a minimum of 10 years.**

The project could begin immediately upon signing of the Conservation Easement and preliminary NAPP approval.

Project Preparation:

- Submit NAPP pre-proposal to NARS commission. (June 2013)
- Finalize and sign Conservation Easement with EMI. (July 2013)
- Submit finalized long-range management plan for approval. (August 2013)
- Secure fencing funding and other permits and approvals as necessary. Some actions already approved under Waikamoi and EMWP CDUPs and EAs. (August 2013)
- Secure additional matching funds for initial phase of project. (August 2013)
- Obtain final Land Board approval and finalize contract. (September 2013)

Management Actions:

Year 1:

- Complete final planning, permitting, scouting, surveying and fence alignment for Western boundary fence.
- Initiate construction of phase 1 fence (¾ mile).*
- Establish three permanent, 500 meter ungulate monitoring transects.
- Complete initial ungulate hot-spot map of western 1,000 acres via FLIR and ground scouts.
- Initiate ungulate control through snaring and ground hunting.
- Initiate priority weed mapping and scouting for rare species.
- Evaluate currently flown Resource Mapping high resolution imagery and ground scouts to refine priority weed locations.
- Collaborate with MISC on pampas grass control and Miconia surveys.
- Collaborate with EMWP and MFBRP for landscape scale management and forest bird protection.

Year 2:

- Complete phase 1 fence and initiate phase 2 & phase 3 western boundary fence.*
- Monitor three ungulate transects twice per year.
- Complete initial ginger, strawberry guava, Clidemia and pampas grass maps.
- Complete FLIR monitoring twice per year.
- Continue ungulate control through snaring and hunting.
- Complete establishment of three helicopter landing zones (LZs).
- Collaborate with MISC on pampas grass control and Miconia surveys.
- Collaborate with EMWP and MFBRP for landscape scale management and forest bird protection.

Year 3:

- Complete 3 mile western boundary fence (phase 2 & 3 fencing).*
- Inspect three mile Western boundary fence quarterly.
- Monitor three ungulate transects twice per year.
- Update and complete existing ginger, strawberry guava, Clidemia and pampas grass maps.
- Carryout outlier-focused weed control on weeds above.
- Complete FLIR monitoring twice per year.

- Continue ungulate control through snaring and hunting.
- Collaborate and work with MISC on pampas grass control and Miconia surveys.
- Collaborate and work with EMWP and MFBRP for landscape scale management and forest bird protection.

Years 4–10:

- Inspect three mile Western boundary fence quarterly (Figure 4).
- Monitor three ungulate transects twice per year.
- Update ginger, strawberry guava, Clidemia and pampas grass maps.
- Carryout outlier-focused weed control on weeds above.
- Complete FLIR monitoring twice per year.
- Continue ungulate control through snaring and hunting.
- Maintain helicopter landing zones (LZs) and trails.
- Collaborate with MISC on pampas grass control and Miconia surveys.
- Collaborate with EMWP and MFBRP for landscape scale management and forest bird protection. Potentially contract portions of management to EMWP or other entity with NAPP funds.

* = NAPP funds requested will not be sufficient to fund fence construction actions.

7. Why does this project need funding?

This project represents a 66% increase in the scope and scale of Waikamoi Preserve management. The property is partially protected by fencing, however, 1,000 acres of the western end of the property has received no management and is severely impacted by ungulates and increasing invasive weed species, such as pampas grass, Himalayan ginger, blackberry, and strawberry guava. This unmanaged portion of the property also contains some of last remaining unprotected habitat for kiwikiu and ʻākohekohe and high numbers of threatened and endangered species. The project provides substantial benefits to the public and protects water resources upon which current and future generations depend. TNC can cover a portion of the costs but needs additional dedicated funding to ensure project success over the long-term. TNC has a proven track record at Waikamoi and has shown itself to be a reliable partner with DOFAW over the past 30 years. This project strengthens an existing NAPP (Waikamoi Preserve) within the EMWP, the first and one of the most successful watershed partnerships. Waikamoi has provided a stable anchor site for the development and stability of the EMWP over the past 20 years. This addition will shore up any management weaknesses in the EMWP and Waikamoi Preserve and better ensure both projects' long-term success.

8. What is the estimated total cost of the project?

The NAPP portion of the project costs will be $75,000 per year for six years for a grand total of $450,000. This does not include TNC's required 1/3 match or the required three miles of fence construction costs which TNC will seek additional funding to complete. Historically, TNC has invested much more than the required 1/3 match required at Waikamoi Preserve. Securing NAPP funds will also enable additional matching support from the County of Maui and other public and private sources.