

Request For Quotes  
MO-FIREBREAKS-21  
Molokai Firebreaks 2021

**Site Visit**

A site visit will be offered to view the roads. To register to attend the site visit, please email [Emma.Yuen@hawaii.gov](mailto:Emma.Yuen@hawaii.gov) before June 21, 2021. Date, time, and logistics will be provided to registered participants.

**Bidder qualifications and requirements**

A contractor's license type A or C-17 is required.

Vendor must provide insurance to State requirements.

Bid Offer of \$25,000 or higher will require Bid Bond of at least 5% of the offered amount.

Labor and Wage Rates will meet Davis Bacon rate requirements. The contractor will provide their own heavy machinery to accomplish the tasks, and the wage rates vary based on the type of machinery used. Contractors can visit the following website to determine the applicable wage rate for the power equipment operator group that best matches the type of machinery used: <https://sam.gov/wage-determination/HI20210001/6>

Weekly certified payrolls will need to be provided to the contract administrator.

**Scope of Work**

To repair and perform maintenance on existing firebreak/access/maintenance roads along the south slope of Moloka'i. This job may be partially awarded, based on funding availability and permissions for access.

All roads are unpaved dirt trails for 4x4 access. Approximate lengths:

Kawela I – 4.9 mi  
Kawela III – 4.3 mi  
Puaahala – 2.5 mi  
Kaluaaha – 1.2 mi

**Job Specs:**

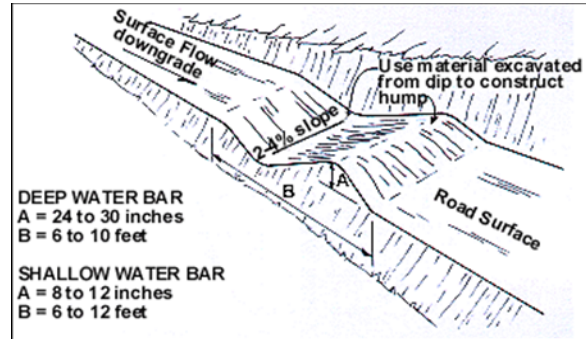
Perform maintenance/repair of entire road system.

Each pass will include the following:

Grade road to proper angle for proper water runoff to minimize impact of erosion.

Repair and maintain water diversions (throw-aways, water bars) where needed:

- Repair/maintain existing water diversions where needed at top crown of slope 20% or more downhill to reduce drainage on slope
- Repair/maintain existing water bars where needed at the base of any slope 20% or more  
See picture for water bar specifications.



-In Kawela I and III, the contractor will need to repair existing water bars.

-In Puaahala and Kaluaaha, the roads largely do not have water bars. In these areas, contractor will repair/maintain existing water throw-away features, and install new water bars in areas that require them, which will be approximately every 200 feet.

Maintain/repair existing water diversions.

Fill ruts in road where erosion has occurred, may use dirt aggregate material that is available on-site. Fill sections of road where exposed rocks are present with dirt, base course or rock dust material.

Maintain and repair roadside ditches and drainages that show signs of deep erosion.

Equipment. The Contractor shall be responsible for providing all equipment related to completing the roadwork.

Logistics. The Nature Conservancy of Molokai will assist the contractor access, keys to gates and can also provide drop-offs and pick-ups if needed for equipment movement.

Road Construction. The Contractor shall be responsible for improving the road corridor to 15 feet wide (which involves removing all vegetation so the road functions as a firebreak) and constructing water bars to prevent road erosion.

### **Sanitation and Safety**

**There are to be no fires (including smoking) and all waste products will be removed and disposed of in a legally run landfill.**

**1 - Vehicles Keep field vehicles clean.** Tires/Tracks (especially treads) and undercarriage of vehicles should be hosed off after each field visit to avoid transporting weed seeds.

**2 - Travel Routes and Trails Avoid carrying weed seeds from an infested part of the island of Molokai to these areas.** If travel routes go through areas infested with invasive weeds, be conscious of the potential for spread. When leaving a weedy area and entering a more pristine area, transport of weed seeds can be reduced by carrying a small brush to clean shoe soles, pant legs, and packs. Stick to established

and well used trails or travel routes to avoid spreading weeds off trail.

**3 - Trash and Garbage Bring out your trash and unused foodstuffs.** Do not bury trash in the field.

A detailed sanitation protocol from The Nature Conservancy is attached.

**Project Supervision and Administration**

Emma Yuen, DOFAW Program Manager or her delegate will handle administration for this project at the local level and all on-the-ground coordination between the Contractor and DOFAW. Ms. Yuen can be reached by mobile telephone at 808/233-4788, or email a Emma.Yuen@hawaii.gov . The State may change the Administrator or delegate at any time.

**Written Inquiries**

Inquiries regarding this solicitation are due 14 DAYS BEFORE BID OPENING. Inquiries shall be made in writing, either via e-mail to: emma.yuen@hawaii.gov. Written inquiries received after this date may be responded to at the discretion of the State.

**Timing**

The State will issue Purchase Orders sequentially for each road section. Performance of services for each road section shall be completed within six months (6) months of issuance of each Purchase Order. The Kawela and Puaahala sections will be prioritized first.

## Proposed Firebreak Road Repair



0 2.5 5 10 Miles

DOFAW (808) 587-4170. April 2020. Features approximate and subject to change.

### TNC Molokai Rapid 'Ōhi'a Death (ROD) Prevention and Sanitation Protocols Information for Contractors and Researchers **Revised June 2019**

**COMPLIANCE WITH THESE PROTOCOLS IS MANDATORY.**

These protocols are not meant to be applied when working with known ROD infected trees.

### **Field Gear/Materials/Equipment**

- **No gear used on the Big Island or in natural areas on Kauai in the past 4 months is allowed at the TNC property or any TNC field sites.**
- Refer to standard Gear Sanitation Protocols, which are below. All standard protocols must be followed in addition to those outlined here.
- Contractor/Researcher must use **Molokai dedicated gear** during all work in Molokai Preserves, including rain gear, back packs, boots and/or hiking shoes, gaiters, tents, and thermarests.
- Site-specific gear shall be stored separately whenever possible.
- Thoroughly inspect for seeds, dirt, and plant parts and remove. Make sure all gear is clean prior to placing in garage, container, or shed.
- Sanitation of boots: Thoroughly scrub/wash all visible dirt, plant material, etc. from boot surfaces. Be sure to pay special attention to the sole grooves and any crevices that may trap soil. Spray with 70% rubbing alcohol or 10% bleach solution.
- All cutting/digging tools must be sanitized to remove visible dirt and other contaminants. Tools should be clean before entry and use in Kamakou Preserve and other forested areas of Molokai. Remove all dirt and then spray with alcohol.
- Use pump sprayers when spraying alcohol or bleach solution - need to saturate high-risk areas like backpack seams and boot laces.
- For any gear not dedicated to Kamakou, gear should be disinfected with **a fresh 70% isopropyl alcohol or 10% bleach solution.** Wash any clothing that was worn in hot water and detergent, and dry on high heat.
- If using cargo nets to transport material into a field site via helicopter, thoroughly wash the nets with a high-pressure washer and inspect for seeds and mud prior to loading. Spray off net with 70% isopropyl alcohol (dedicated herbicide sprayer for this use) after initial cleaning.

**Once ROD has been detected on Molokai,** the following vehicle decontamination will go into effect:

### **Vehicles – Between Field Sites**

- Pressure wash all vehicles after off road use.
- Makes sure to wash all undercarriage and tires and any area that may harbor soil.
- Wash vehicles with detergent, paying particular attention to removing dirt and organic material from the undercarriage, truck bed, bumpers, and wheel-wells. Clean all dirt and organic material from interior of vehicle. Wash floor mats with soap and water then spray floor mats with 70% rubbing alcohol.
- Use a 10% bleach solution (mixed the day of use) in a pump sprayer to disinfect tires and undercarriage and/or muddy areas.
- Spray off the vehicle washing area with the same bleach solution after vehicle cleaning as the decon area.

### **IF A SUSPECT TREE IS FOUND:**

*Best methods and practices for sampling suspected ROD-infected trees are constantly evolving.*

If you see an 'ōhi'a tree whose entire crown or major limb has turned brown within a few days or weeks, **Take a GPS point and pictures, and notify the TNC Director (emisaki@tnc.org) and MoMISC (lbuchanan@tnc.org) right away (within 24 hours).**

ROD symptoms:

- Crowns of 'ōhi'a trees that appear healthy turn yellowish or brown within days to weeks; dead leaves remain on branches for some time.
- All ages of 'ōhi'a trees can be affected and can have symptoms of browning of branches and/or leaves.
- If a tree with ROD is cut down, or a section of the tree is removed, the fungus shows up as dark staining in the sapwood along the outer edge, and there may be an over-ripe fruit-like odor. Presence of wood staining does not necessarily mean that a tree has been infected by *Ceratocystis*.
- Trees within a given stand die in a haphazard pattern; the disease does not appear to radiate out directly from infected or dead trees.

*For updated information on *Ceratocystis luku'ōhi'a* and *Ceratocystis huli'ōhi'a* (a.k.a. Rapid 'Ōhi'a Death), visit [www.rapidohiadeath.org](http://www.rapidohiadeath.org)*

## **Gear Sanitation Protocols**

Hawai'i's natural resources management crews work in a variety of habitats in the course of their conservation work. These different habitats likely have weed strata that reflect the climate, elevation, or relatively pristine nature of the sites.

As a result, managers should be keenly aware of the composition of those various weed strata, especially in terms of priority invasive plants.

While other people besides conservation workers may frequent these assorted places, and possibly transport weeds seeds in their gear, it is imperative that conservation workers hold a much higher standard that reflects their value to protect natural areas. Any complacency in this regard only will undermine the huge effort made to preserve native ecosystems.

**FOOTWEAR:** When working in areas where seeds of highly invasive plants are likely to be in the soil, footwear should be inspected and cleaned (on site when possible) prior to entering vehicles.

This can be done with water and a shoe brush, disposing of the debris in 1) a known contaminated site, 2) a site that will have continued monitoring, or 3) trash receptacles, all depending on the severity of the species.

While the extremely tiny seeds of plants like melastomes are one of the greatest concerns, they may need mud or fruit pulp to adhere to footwear.

Grass seeds, on the other hand, are notorious for sticking to even dry boots.

An often overlooked aspect of cleaning footwear is the collection of seeds (especially grasses) inside the tongue and laces of boots. This requires a thorough inspection of laced footwear and is the main reason that rubber boots are often suggested.

In all cases, the insides of footwear should be inspected and brushed as well.

**RAINGEAR:** The seams of most raingear make them susceptible to hiding tiny seeds within the flap. Even raingear that is dedicated to certain sites known to harbor highly invasive plants should be periodically washed. This can be done in a tub containing 5% bleach in water, with disposal going into a place routinely monitored for any seedlings.

For less severe species, a hose can be directed at the seams, or they can be dry brushed. Also make a point of cleaning any pockets. The guidelines for where any debris is disposed of can be similar to that of footwear.

**PANTS:** Cloth pants are more difficult to separate as gear than rainpants, and therefore should be viewed in the same context as other working gear. They could be easily overlooked when removing and cleaning other gear, and contaminated pants could even be inadvertently worn inside vehicles. At some sites, it is not always practical or modest to be removing pants upon return to the vehicle. Provisions should be made to anticipate removal of pants (also shirts, hats, and socks) contaminated with mud from an area with highly invasive plants, such as wearing shorts underneath.

Again, depending on the severity of the weed and potential for contamination, change of clothing should be waiting for workers upon return to the vehicle.

**PACKS:** One of the most overlooked aspects of sanitation procedures is the pack.

Some workers make special effort to hang their packs above ground, while many other set them down in contaminated mud or weed debris.

As in raingear, packs contain many seams or netting material that readily adhere seeds. All sections of the pack, including the inside, should be examined for hitchhiking seeds or mud. Disposal guidelines as listed above.

**GLOVES:** If gloves are worn in areas where tiny seeds of invasive plants could be in mud or debris, they should be separated and washed as recommended above. In some cases, gloves should be dedicated gear per specific weed.

**TOOLS:** Machetes, hip chains, flagging tape, radios, GPS, spray bottles, and other supplies and tools that accompany crews into invasive plant work sites are sometimes just as susceptible in carrying unwanted seeds as personal gear. An example is the machete scabbard, which has an interior that no one looks at (cleaning a used scabbard will reveal dirt that has been hidden for some time).

According to the site and severity of the weed, this gear should be designated for use on a specific plant, or at the least, routinely inspected and cleaned.

Extra precaution should be taken for any camping gear used at such sites.

Disposal areas for debris the same as listed above.

**GEAR CONTAINMENT:** Once work is completed at a site and personnel return to the vehicle, provisions should be made for storage of the potentially contaminated gear. Gear designated for use on a particular species should be stored as such, with clear writing indicating the use. Large poly tubs are practical storage for these items, and plastic trash bags may provide an additional layer to contain boots, packs, and muddy clothes. This procedure minimizes the potential to contaminate the work vehicle.

**VEHICLES:** Wash all vehicles after off road use if moving between sites. Make sure to wash all undercarriage, tires and any area that may harbor soil. Wash vehicles with detergent, paying particular attention to removing dirt, debris and organic material from the undercarriage, truck bed, bumpers, and wheel-wells. Clean all dirt and organic material from interior of vehicle with vacuum. Wash floor mats with soap and water. **NOTE: IF ROD has been detected on island, the stricter protocols for vehicle decontaminations will apply.**

**INSECTS ETC.:** Also be aware when entering natural areas to avoid carrying roaches, ants, spiders, etc., in packs and supplies. Gear and food items should be inspected prior to going into natural areas.

**COMMON SENSE:** This task becomes much easier when personnel anticipate what challenges they will encounter when following sanitation procedures.

Each crew should have the same understanding of the priority weeds and their locations.

Knowing aspects of the target plant, such as seed size and likelihood to be in the soil or air, can help crews address the necessary precautions. As crews become confident in following these procedures, they can also be confident they are part of the solution and not the problem of vectoring priority weeds.

## **LIABILITY INSURANCE**

The Contractor shall maintain in full force and effect during the life of this contract, liability and property damage insurance to protect the Contractor and his subcontractors, if any, from claims for damages for personal injury, accidental death and property damage which may arise from operations under this contract, whether such operations be by himself or by a subcontractor or anyone directly or



indirectly employed by either of them. If any subcontractor is involved in the performance of the contract, the insurance policy or policies shall name the subcontractor as additional insured. As an alternative to the Contractor providing insurance to cover operations performed by a subcontractor and naming the subcontractor as additional insured, the Contractor may require the subcontractor(s) to provide its own insurance which meets the requirements herein. It is understood that a subcontractor's insurance policy or policies are in addition to the Contractor's own policy or policies. The following minimum insurance coverage(s) and limit(s) shall be provided by the Contractor, Including its subcontractor(s) where appropriate.

**Coverage Limits**

**Commercial General Liability \$2,000,000 combined single  
(Occurrence form) limit per occurrence for bodily  
injury and property damage**

**Basic Motor Vehicle Insurance BI: \$1,000,000 per person  
and Liability Policies \$1,000,000 per accident  
PD: \$1,000,000 per accident**

Each insurance policy required by this contract, including a subcontractor's policy, shall contain the following clauses:

1. "This insurance shall not be canceled, limited in scope of coverage or non-renewed until after 30 days written notice has been given to the State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife, 1151 Punchbowl Street, Room 325, Honolulu, Hawaii 96813."
2. "The State of Hawaii is added as an additional insured as respects to operations performed for the State of Hawaii."
3. "It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contribute with, insurance provided by this policy."

The minimum insurance required shall be in full compliance with the Hawaii Insurance Code throughout the entire term of the contract, including supplemental agreements.

Upon Contractor's execution of the contract, the Contractor agrees to deposit with the State of Hawaii certificate(s) of insurance necessary to satisfy the State that the insurance provisions of this contract have been complied with and to keep such insurance in effect and the certificate(s) therefore on deposit with the State during the entire term of this contract, including those of its subcontractor(s), where appropriate. Upon request by the State, the Contractor shall be responsible for furnishing a copy of the policy or policies.

Failure of the Contractor to provide and keep in force such insurance shall be regarded as material default under this contract, entitling the State to exercise any or all of the remedies provided in this contract for a default of the Contractor.

The procuring of such required insurance shall not be construed to limit the Contractor's liability hereunder or to fulfill the indemnification provisions and requirements of this contract. Notwithstanding said policy or policies of insurance, the Contractor shall be obliged for the full and total amount of any damage, injury, or loss caused by negligence or neglect connected with this contract.