

Invasive Pest Prevention Standard Operating Procedures (SOPs)

This document lists protocols for preventing the introduction of harmful invasive pests including coqui, ants, weeds, and Rapid 'Ōhi'a Death into Hawai'i Volcanoes National Park. It is the project leader's, contractor's, or concessioner's responsibility to ensure compliance with these protocols.

- 1. All work vehicles, machinery, and equipment must be clean and free of debris prior to entering the park.**
 - a. Vehicles, machinery, and equipment must be thoroughly pressure washed and visibly free of mud, dirt, plant debris, frogs and frog eggs, insects including termites, other vertebrate species such as rats, mice, and reptiles, and other debris. A hot water wash is preferred. Areas of particular concern include bumpers, grills, hood compartments, areas under the battery, wheel wells, undercarriage, cabs, and truck beds.
 - b. The interior and exterior of vehicles, machinery, and equipment must be free of rubbish and food. The interiors of vehicles and the cabs of machinery must be vacuumed clean. Floor mats will be sanitized with a solution of >70% isopropyl alcohol.
 - c. All work vehicles, machinery, and equipment may be subject to inspection.
 - d. Any vehicles, machinery, and equipment that do not pass inspection will be turned away.
 - e. Vehicles, machinery, and equipment leaving the park for any reason must be cleaned prior to re-entry into the park, and may require re-inspection at the park's discretion. Treatment is the responsibility of the equipment or vehicle owner or operator.

- 2. Inspection of all work vehicles, machinery, and equipment for invasive ants prior to entering the park, or in a predetermined location in the park.**
 - a. Inspections are conducted by park staff and preferably occur outside the park, but other locations may be arranged at the park's discretion. Instructions for inspections are provided to allow contractors, cooperators, and others to check vehicles and equipment to ensure they are pest free prior to showing up at the inspection site.
 - b. In addition to visual inspection for plant debris, insects, soil, frog and frog eggs, and other vertebrate pests, testing for invasive ants shall be conducted prior to entry into the park. Test for invasive ants by placing chopsticks baited with a dab of peanut butter for 30 minutes to 1 hour throughout the equipment being tested. About 6 chopsticks will be used to test most personal vehicles and trucks, larger vehicles and heavy machinery may require up to 10-20 baits. Baits will be placed in the shade, inside the cab, engine compartment, and truck bed if applicable. Please note baits are only good for detection and do not control ants, and the bait will not be left in the vehicle for over 1 hour as this may attract ants from beyond the area of concern.
 - c. Any ants found will be collected, bagged and labelled for identification, and the equipment will not be allowed to enter the park until it is sanitized and re-tested following a minimum 48-hour resting period. Infested vehicles will be sanitized following recommendations by the Hawaii Ant Lab (<http://www.littlefireants.com>) or other ant control expert and in accordance with all State and Federal laws, and baited with a granular or liquid insecticide bait prior to re-entry to the park. Control records will be required to confirm treatment. Treatment is the responsibility of the equipment or vehicle owner.
 - d. Gravel, building materials, or other equipment such as portable buildings will also be tested, using the same method as above, however, baited chopsticks will be placed every 10-20 feet around the area, in the shade, and the immediate surrounding area will be searched for 2 minutes for ants. These monitoring stations must be left out for 1 hour, and any ants found will be collected for

identification. The vehicle base yard and quarries may also be tested using these methods if deemed necessary by the park.

- e. The park reserves the right to conduct additional tests for ants at any time during the course of the project, and to require deployment of preventative granular or liquid insecticide baits.
- f. If a project is extensive, the park may require cost recovery for the expense of inspections.

3. Base yards and staging areas inside and outside the park must be kept free of invasive pests.

- a. Base yards and staging areas shall be inspected for invasive pests at the beginning of the project and may be inspected weekly thereafter. Any invasive pests found are to be removed immediately. Parking on pavement and not under trees, while not always practical, is best.
- b. Pest control records may be requested anytime at the park's discretion.
- c. Project vehicles or equipment stored outside of a base yard or staging area, such as a private residence, are to be kept in a pest free area, preferably on pavement and not under trees. Such vehicles or equipment may be subject to additional inspection as described in (1) above and will be turned away if infested.

4. All cutting tools must be sanitized to prevent rapid 'ōhi'a death (ROD).

- a. Avoid wounding 'ōhi'a trees and roots with mowers, chainsaws, weed eaters, and other tools. Cut only minimum amount of trees and branches as approved for project and avoid making jagged cuts or stripping bark. Treat cut standing sections of 'ōhi'a with a wound sealant, such as Spectracide Pruning Seal*.
- b. All cutting tools, including machetes, chainsaws, and loppers must be sanitized to remove visible dirt and other contaminants prior to entry into the park, and when moving to a new project area in the park. Tools may be sanitized using a solution of >70% isopropyl alcohol. One minute after sanitizing, you may apply an oil based lubricant to chainsaw chains or other metallic parts to prevent corrosion.
- c. Only dedicated tools and chainsaws will be used to sample known or suspected ROD infected trees.
- d. Vehicles, machinery, and equipment must be cleaned as described in (1) above.

5. Imported firewood, logs, and 'ōhi'a parts:

- a. 'Ōhi'a firewood, 'ōhi'a logs, and 'ōhi'a parts may not be brought into the park. All non-'ōhi'a firewood and logs imported into the park must be sourced from a park approved site free of ROD, invasive weeds, coqui and ants.

6. For individuals who work in the field:

- a. Before going into the field, visually inspect and clean your clothes, boots, pack, radio harness, tools and other personal gear and equipment, for seeds, soil, plant parts, insects, and other debris. A small brush is handy for cleaning boots, equipment and gear. Soles of shoes should be sanitized using a solution of >70% isopropyl alcohol.
- b. Immediately after returning from the field, visually inspect and clean your clothes, boots, pack, radio harness, tools and other personnel gear and equipment, for seeds, soil, plant parts, insects, and other debris. Soles of shoes should be sanitized using a solution of >70% isopropyl alcohol.

For current disposal/removal recommendations please contact the following:

1. Little Fire Ants - <http://www.littlefireants.com>
2. Rapid 'Ōhi'a Death - <https://cms.ctahr.hawaii.edu/rod>

3. Coqui - <http://www.biisc.org>
4. All taxa - <http://www.biisc.org>

Scheduling an inspection for a park approved project:

Requests for inspections should be made via email to Stacey_Torigoe@nps.gov and should include the park project lead and contracting officer (as applicable). **Requests must be made a minimum of 3 business days prior to inspection.** We may be unable to accommodate requests made on shorter notice, though you may contact the following staff via email to try to arrange an inspection. **Please make sure to also copy your park project lead on this correspondence.**

For questions or to schedule an inspection:

1. Stacey_Torigoe@nps.gov
2. kimdillman59@gmail.com

*The use of trade names is for descriptive purposes only and does not imply endorsement by the National Park Service.

