

## **Green Waste Disposal Standard Operating Procedures (SOPs)**

This document lists protocols for disposal of green waste generated in Hawai'i Volcanoes National Park. Green waste is hereby defined as detached vegetation parts generated during vegetation management, clearing along road, trail, fence, and utilities corridors, and during the maintenance of facilities and grounds in the park. This definition excludes compostable or other food waste generated in the park, and all other vegetative material generated outside of the park.

### **1. Green waste will be recycled in the ecosystem, as close to the site of origin as practicable.**

- a. Lawn clippings will be left in place, or captured in a bag and used as mulch on nearby grounds.
- b. Logs and branches should be left on site or recycled into the ecosystem whenever possible per Pacific West Region Directive PW-062. Tree and shrub limbs and stems removed along fence and utilities corridors and around buildings will be scattered within or adjacent to the project area, out of view of visitors, in an area previously surveyed by NRM and CRM to ensure there are no negative impacts to park natural and cultural resources.
- c. Invasive trees and shrubs removed during vegetation management operations in front country locations will follow guidelines above. In remote areas out of view of visitors, green waste may be left in place, and may be chemically treated if necessary to prevent regrowth. In areas where this practice contributes to a high fire risk, the green waste will be lopped and scattered to spread the fuels and lower the fire potential.
- d. Where green waste is generated to meet specific fire management objectives, it will be lopped and scattered, or transported to another site, following invasive pest SOPs.
- e. In sites where recycling into the environment is not a viable option due to the density of vegetation or size and volume of green waste, 'ōhi'a and koa logs >8 inches in diameter may be reused for appropriate administrative purposes (PW-062).
  - A. Such logs designated for administrative use should be cut and peeled on site before transport wherever practical, and peeled bark material and branches recycled into the ecosystem. If logs must be peeled at an alternate site, peeled material should be returned to the site of origin and recycled into the ecosystem.
  - B. If logs are to be stored, they should be treated with a bifenthrin spray prior to storage to prevent attack by ambrosia beetles or other disease promoting insects.
  - C. Logs must be stored covered by a tarp or roof.
  - D. Prior to use in construction, logs must be painted or otherwise sealed. Logs should not contact live 'ōhi'a branches or roots.
- f. In sites where scattering is not a viable option due to the density of vegetation or size and volume of green waste, a chipper may be used to compact the green waste. The chips generated may be disposed of as above, or used for landscaping in adjacent areas.
  - A. 'Ōhi'a material should be scattered whole whenever possible rather than chipped or cut, to avoid creating small pieces of sawdust and chips that can carry ROD. All asymptomatic 'ōhi'a material should be considered as potentially infective as symptomatic material, since it is impossible to determine ROD infection status in an asymptomatic tree.
- g. In sites where above steps are not feasible, green waste may be disposed of properly outside of the park.

### **2. Disposal of green waste in the park must follow invasive pest prevention SOP's.**

- a. All disposal of green waste in the park must not contribute to the spread of invasive species. Green waste must be disposed of as close to its source as possible. Fragments of invasive plant species

must be treated to prevent regrowth. When green waste must be moved further from the site of origin, inspections outlined in the invasive pest prevention protocols will be required.

- b. All equipment utilized to cut and transport green waste will be sanitized and inspected before work, and before moving to a new area in the park.

### **3. Green waste mitigations to prevent rapid ‘ōhi‘a death (ROD) will be followed**

- a. Avoid unnecessary wounding of ‘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.
- b. All cutting tools, including machetes, chainsaws, and loppers must be cleaned of visible dirt and other contaminants and then sanitized with a solution of >70% isopropyl alcohol prior to use, and when moving to a new project area in the park.
- c. Only dedicated tools and chainsaws will be used to sample or fell known or suspected ROD infected trees.
- d. Green waste generated from ROD confirmed trees will be left in place, and may be stacked in a pile and covered with a tarp.