

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Division of Forestry and Wildlife  
Honolulu, Hawai'i 96813

October 26, 2012

Chairperson and Members  
Board of Land and Natural Resources  
State of Hawai'i  
Honolulu, Hawai'i

**SUBJECT: REQUEST FOR APPROVAL OF THE DIVISION OF FORESTRY AND WILDLIFE PLACEMENT OF ACT 82, 2003 SESSION LAWS HAWAII, WARNING AND MANAGEMENT SIGNS AT OHAI LOOP TRAIL AND WAIPOI ROAD ON THE ISLAND OF MAUI; MAUNA LOA OBSERVATORY ROAD, MANUKA LOOP TRAIL, MAUUMAE, ALA KAHAKAI, MULIWAI TRAIL, ONOMEA TRAIL AND ROAD, AND POLOLU TRAIL ON THE ISLAND OF HAWAII**

**BACKGROUND:**

Act 82, 2003 Session Laws Hawaii, relating to Public Land Liability allows the State and Counties conditional protection from liability arising from the inherent risks on public lands. Risk management can only reduce public exposure from a hazardous condition. This Act will provide equitable protection for the personal responsibility of individuals engaged in public recreational activities, and the government's duty to warn and protect its citizens from harm. By allowing the State and Counties to manage these risks on public lands, the result will permit government agencies to take reasonable steps to protect its citizens from harm and avoid further public recreational area closures. Act 82 establishes a process for State and County protection from liability on improved public lands when the requirements of this Act are met.

Pursuant to Act 82, the Board of Land and Natural Resources (Board) has oversight in reviewing and approving the design and placement of these signs on improved public lands. Collectively, the Board and the Governor approved the Department of Land and Natural Resources (Department) Hawaii Administrative Rules, Chapter § 13-8 HAR for the "Design and Placement of Warning Signs on Improved Public Lands" on January 23, 2006. The Board following the recommendations of the Risk Assessment Working Group (RAWG) will finalize the approval of the Departments sign placement for Division of Forestry and Wildlife (DOFAW). Subsequently, all sign placements under the Department and Counties under Act 82 are subject to preliminary review of RAWG and final approval by the Board of Land and Natural Resources.

### **Chapter 13-8 Hawaii Administrative Rules: Sign Placement Criteria**

§ 13-8-9 HAR. Public use and exposure. (a) Traffic patterns and managed access points of people accessing the improved public lands shall be considered when placing signs. (b) The type, frequency, and location of incidents or potential public exposure relating to specific dangerous natural conditions when known on the improved public lands shall be considered when placing signs.

§ 13-8-10 HAR. Placement. Sign(s) shall be placed at or near access points; i.e., along vehicle and pedestrian traffic corridors in clearly visible locations placed as close as possible to the potentially dangerous natural conditions on improved public lands and at managed and designated entrances where the signs will be seen as users enter improved public lands. View sheds, aesthetics, and feasibility of installation shall be considered in the placement of the signs. Signs shall be installed with consideration for the average adult line-of-sight but outside of the general path of travel to avoid physical contact with the signs. Signs maybe attached to posts or by any other method of installation depending on the nature of the location and terrain.

#### **RAWG Review:**

On August 28, 2012, DLNR, Chairperson William Aila Jr. or his representative signed a memo to request that RAWG members review and/or approve the warning sign list over various Division of Forestry and Wildlife features on the islands of Maui and Hawaii. The memo identified: 1) members of RAWG, 2) what is being requested, 3) background information of Act 82 and the sign placement criteria, and 4) background information of DOFAW's Act 82 Warning Sign Program (Exhibit #1).

Based on these specific Act 82 requirements, DOFAW staff on Maui and Hawaii carefully assessed and identified specific dangerous natural conditions on DOFAW improved lands. Numerous hazardous areas were identified in DOFAW management areas and warning signs were selected for these locations: Maui – Ohai Loop Trail (hazardous cliffs) and Waipoli Road, Kula Forest Reserve (falling trees) and; Hawaii – Mauna Loa Observatory Road (end of maintained trail), Manuka Loop Trail (hazardous cliffs, end of trail), Mauumae, Ala Kahakai (flash flood, area closed), Muliwai Trail (falling rocks, hazardous cliffs, flash flood), Onomea (falling rocks, flash flood, hazardous cliffs), Pololu Trail (flash flood, falling rocks, hazardous cliffs, end of trail).

Of the nine RAWG members, six members returned an approval and one returned a dissenting approval to DOFAW's list (Exhibit #1). RAWG members representing City and County of Honolulu and Maui County did not return a response. An explanation could be that City and County of Honolulu and Maui County administrations have yet to designate a representative on RAWG or a political Administration transition prevented the Mayor from appointing a representative.

The RAWG representation from the Attorney General's Office is the legal Counsel on behalf of the Department. DOFAW received approval from the Attorney General's Office as well as RAWG members from, Kauai and Hawaii Counties, National Park Service, DLNR,

Chairperson and Acting DOFAW Administrator. However, the lone dissenting RAWG disapproval came from DLNR, State Parks in its two page memo to DOFAW (Exhibit #2).

Although DOFAW would like to have consensus with its RAWG members, DOFAW will proceed with the Land Board Submittal because the responding seven RAWG members met the quorum of nine current members; with six members approving, one member disapproving, and two members were excused (signed RAWG approval/disapproval page, attached to Exhibit #1).

The basic argument of State Parks is consistency. Staff argued that DOFAW placed too many warning signs on DOFAW management areas and the amounts, far exceeded the need or numbers for placing the warning signs. DOFAW Maui and Hawaii staff was diligent to carefully inspect all potential trail hazards and based on Act 82 criteria, implemented these requirements.

DOFAW staff acknowledged the serious consequences for identifying these hazards, if DLNR failed to warn the public. For Waipoli Road on Maui, DOFAW removed much of the tree snags (hazardous trees) along the road following a large forest fire that burned about 2,300 acres in the Kula Forest Reserve. Still, many hazardous trees remain and are a threat to public safety (falling trees). If and when additional discretionary funds become available in its forest management budget, DOFAW staff will systematically remove the snags to reduce this danger. For the remote Muliwai trail on the northeastern side of the Big Island, this rugged 18 mile trek crosses many steep ridges and cliffs in a dense tropical forest canopy including numerous independent streams (streams are not connected to each other). Hawaii staff installed these signs (flash flood, hazardous cliffs, and falling rocks) because the potential of exposing the public to these hazards are elevated because this trail is a frequent destination of many visitors and residents.

#### **Description of Maui and Hawaii Sign Placement:**

Maui County – Ohai Loop Trail: This trail is located at the northeastern area of the West Maui Mountains. It is a short 1.2 mile hike. To expand on the landscape experience, Maui DOFAW staff planted a number of native shrubs that are common to the area. Tourist and locals alike can be seen enjoying this nature trail. Because the trail meanders down towards a steep cliff, DOFAW staff placed hazardous cliff warning signs at the entrance and at the site of the cliffs.

Maui County – Waipoli Road, Kula Forest Reserve: Several years ago, a wildfire burned about 2,300 acres in the Kula Forest Reserve. Many tree snags (hazardous trees) remained that created a public safety hazard. To protect the public, the Maui DOFAW staff placed falling tree warning signs at the entrance and at numerous site specific locations along Waipoli Road. This recreational feature on the slopes of Haleakala Mountain is popular with visitors and local residents for great view plains, hunting and access to Polipoli Spring State Recreational Area.

Hawaii County – Mauna Loa Observatory Road: This access road is approximately 8-10 miles of winding, rolling single lane, two wheeled drive road. Because there are no signs to indicate where resource management ends, Hawaii staff placed an end of maintained trail sign at this location to warn the public of possible dangers ahead.

Hawaii County – Manuka Loop Trail: This trail is within the Manuka Natural Area Reserve encompassing about 25,550 acres. At the mauka section of the NAR, visitors will encounter steep cliffs that prompted Hawaii staff to place hazardous cliff warning sign as well as an end of trail sign at this location. Complementing the site warnings are two entrance signs warning the public of the mauka hazardous cliffs.

Hawaii County – Mauumae, Ala Kahakai: This coastal trail traverses through several private and public property areas. Because flash flooding is a common dangerous condition in this area, warning signs were placed at the entrances and at the sites along this trail.

Hawaii County – Muliwai Trail: This 18 mile trail is rugged with steep cliffs and probable treacherous rushing stream flow but lends to a beautiful tropical Hawaiian forest experience. Hawaii staff identified the numerous hazards (falling rocks, hazardous cliffs, flash flood) along this popular trail and placed site and entrance warning signs at these locations.

Hawaii County – Onomea: This short old government trail/road meanders down the cliffs of Hamakua Coast and is a local visitor attraction because of its scenic views. This pedestrian walkway leads down into the Hawaii Tropical Botanical Garden. Along this path are steep cliffs, falling rocks, and flash flood hazards that may occur near the mouth where the stream meets the ocean. Hawaii staff placed site warning signs for all potential hazards at these locations.

Hawaii County – Pololu Trail: Located at the northern region of the Big Island in the Kohala District, Pololu Trail starts at the lookout and traverses down a steep switch-back cliff into the valley. This trail is steep and can be slippery. Hazardous cliffs, falling rocks and flash flooding below in the valley are potential hazards of this trail. Hawaii staff confirmed these hazards and placed appropriate warning signs at strategic locations along this trail.

Exhibit #3 is the Hazard Sign Data Sheet and map of each DOFAW trail contained in this Land Board Submittal. Furthermore, it explains every warning or danger sign, end of maintained trail sign and its location for Maui County (2 areas) and Hawaii County (6 areas).

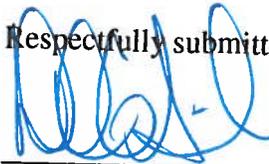
DOFAW has reviewed the Department of Health, Chapter 343, HRS and Chapter 11-200, HAR (§ 11-200-8 (A.)(5.) HAR) requirement for placing warning signs at these locations on the island of Maui and Hawaii. In addition, DLNR, Division of State Parks filed its Exemption List with the Environment Council, December 4, 1991 and has exempted the placement of safety signs according to (Exemption Class 3, #10). DOFAW believes that placing these signs will protect its citizens from harm and will have minimal or no significant impact on the environment and therefore, the sign placements can be exempted from preparing an environmental assessment.

**RECOMMENDATION:**

That the Board:

- 1) Approve the placement of DOFAW's warning signs on Maui – Ohai Loop Trail and Waipoli Road, Kula Forest Reserve; and Hawaii – Mauna Loa Observatory Road, Manuka Loop Trail, Mauumae Ala Kahakai, Muliwai Trail, Onomea, and Pololu Trail as shown in Exhibit #3.
- 2) Approve that the placing of the warning signs on DOFAW management areas will have minimal or no significant impacts on the environment and is therefore, exempted from preparing an environmental assessment under Chapter 343, Hawaii Revised Statutes, Chapter-200, Hawaii Administration Rules, and filed docket Exemption List for DLNR, Division of State Parks.

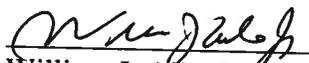
Respectfully submitted,



---

David G. Smith  
Acting, Administrator

**APPROVED FOR SUBMITTAL:**



---

William J. Aila, Jr., Chairperson  
Board of Land and Natural Resources

# Exhibit 1.

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

August 28, 2012

WILLIAM J. AILA, JR.  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

PAUL J. CONRY  
ACTING FIRST DEPUTY

WILLIAM M. TAM  
DEPUTY DIRECTOR WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

**To: Risk Assessment Working Group Members:**

Caron Inagaki, Deputy Attorney General  
Dan Quinn, DSP Administrator  
Roger Imoto, Acting DOFAW Administrator  
Tom Fake, National Park Service  
County of Maui, Hawaii, Kauai, Oahu

*me* *for* **FR:** William Aila Jr., Chairperson  
Department of Land and Natural Resources

*Paul J Conry*

**RE:** Review of Act 82, Session Laws Hawaii (SLH), 2003, and the Placement of Warning and Management Signs along designated Department of Land and Natural Resources, Division of Forestry and Wildlife Program features on the Islands of Maui and Hawaii.

Due to changes in County Administrations and staff, this memo is being sent to the Counties for actions related to Act 82, SLH 03, and to clarify the County's role in its implementation. Pursuant to Act 82 and Chapter 13-8 Hawaii Administrative Rules (HAR), DLNR requests that each County select a representative to participate on the Risk Assessment Working Group (RAWG). The risk assessment working group shall consist of the following members, who shall serve without compensation. 1) Chairperson of the board, or designee i.e. Chairperson, William Aila Jr., 2) the mayor of each county, or designee, normally it is the representative of the respective counties, 3) the administrator of the department's division of forestry and wildlife, i.e. acting administrator, Roger Imoto, and division of state parks, i.e. Dan Quinn, or their designees, 4) the attorney general, or designee, and 5) a person appointed by the chairperson of the board knowledgeable in warning sign design, i.e. Tom Fake, National Park Service.

DLNR requests that RAWG review and approve the attached Act 82 sign and management placements for the Division of Forestry and Wildlife.

### **Background Information on Act 82, 2003 Session Laws of Hawaii, Relating to the Public Land Liability.**

Act 82, SLH 03 established a process for installing and maintaining warning signs on improved public lands, and provides the State and Counties with protection from liability for damages caused by dangerous natural conditions. Pursuant to Act 82, the Board of Land and Natural Resources (Board) approved the design and placement of these

warning signs. Although Act 82 will sunset in 2014, Legislation is anticipated in the next Legislative Session to remove the sunset date and allow this Act to become law.

On January 6, 2006, the Board following the recommendations of RAWG, reviewed and approved a series of sign design in compliance with Chapter 13-8, HAR. All subsequent sign placement by the Department and County are reviewed by RAWG and approved by the Board.

**Sign Placement Criteria: Pursuant to Chapter 13-8, HAR, the following guidelines are used to determine the placement of warning signs:**

§13-8-9 Public use and exposure. (a) Traffic patterns and managed access points of people accessing the improved public lands shall be considered when placing signs. (b) The type, frequency, and location of incidents or potential public exposure relating to specific dangerous natural conditions when known on the improved public lands shall be considered when placing signs.

§13-8-10 Placement. Sign(s) shall be placed at or near access points; i.e., along vehicle and pedestrian traffic corridors in clearly visible locations placed as close as possible to the potentially dangerous natural conditions on improved public lands and at managed and designated entrances where the signs will be seen as users enter improved public lands. View sheds, aesthetics, and feasibility of installation shall be considered in the placement of the signs. Signs shall be installed with consideration for the average adult line-of-sight but outside of the general path of travel to avoid physical contact with the signs. Signs may be attached to posts or by any other method of installation depending on the nature of the location and terrain.

### **Background Information on DOFAW Act 82 Warning Sign Program**

The Division of Forestry and Wildlife (DOFAW) received initial Board of Land and Natural Resources approval on February 23, 2007, March 14, 2007, and May 23, 2008 to place hazard warning and management signs on improved DOFAW lands at various locations on the islands of Oahu, Kauai, Maui, and Hawaii.

Since the initial Board approval, a 2009 change in program staff slowed the progress of DOFAW Act 82 warning and management sign inventory. From the initial 2007 Board approval to 2012, the urgency to update DOFAW's Act 82 warning and management sign record keeping became apparent.

This request will add to the current Act 82 warning and management sign inventory for the islands of Maui and Hawaii. The strategic placement of warning and management signs follows §13-8 Subchapter 3 "Standards for Sign Placement," §13-8-10 Placement. Hawaii Administrative Rules and will alert hikers of specific dangerous natural conditions on DOFAW improved lands. DLNR, Division of Forestry and Wildlife staff have carefully assessed and identified specific dangerous natural conditions on DOFAW improved lands and have installed appropriate warning and management signs at these locations.

Act 82 sign inventory by type (warning description), location (station number), and DOFAW feature by island is attached for your review and approval.

Please note that the Hazard Sign Data Sheet for each Trail is the new sign location list for RAWG approval. But the trail map will include the previously approved locations (February 23, 2007, March 14, 2007, May 23, 2008 Board Approvals) and new sign locations. For example, the map for Waipoli Road on Maui will show the locations of Station MA00024, and MA00025 which was previously approved. It also include the location of the new additions (MA0043 to MA0059 and MA00062 and MA00063).

Following your approval, DLNR, Division of Forestry and Wildlife will seek final approval to the Board of Land and Natural Resources at its next meeting.

Questions, please call Nelson L. Ayers at (808) 587-4175 or email: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov)

Please place an X on the following:

Approved:

Not Approved

\_\_\_\_\_  
Print RAWG Member Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Government Agency

Please fax (808) 587-0160 or email this page to Nelson L. Ayers at: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov) by **September 17, 2012**.

**Attachments: Maui and Hawaii – Hazard Sign Data Sheet and Maps**

Act 82 sign inventory by type (warning description), location (station number), and DOFAW feature by island is attached for your review and approval.

Please note that the Hazard Sign Data Sheet for each Trail is the new sign location list for RAWG approval. But the trail map will include the previously approved locations (February 23, 2007, March 14, 2007, May 23, 2008 Board Approvals) and new sign locations. For example, the map for Waipoli Road on Maui will show the locations of Station MA00024, and MA00025 which was previously approved. It also include the location of the new additions (MA0043 to MA0059 and MA00062 and MA00063).

Following your approval, DLNR, Division of Forestry and Wildlife will seek final approval to the Board of Land and Natural Resources at its next meeting.

Questions, please call Nelson L. Ayers at (808) 587-4175 or email: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov)

Please place an X on the following:

Approved:

Not Approved

William J. Ado Jr. *WAdo*  
Print RAWG Member Name

9/17/12  
Date

DLNR, Chairperson  
Government Agency

Please fax (808) 587-0160 or email this page to Nelson L. Ayers at: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov) by **September 17, 2012**.

**Attachments: Maui and Hawaii – Hazard Sign Data Sheet and Maps**

Act 82 sign inventory by type (warning description), location (station number), and DOFAW feature by island is attached for your review and approval.

Please note that the Hazard Sign Data Sheet for each Trail is the new sign location list for RAWG approval. But the trail map will include the previously approved locations (February 23, 2007, March 14, 2007, May 23, 2008 Board Approvals) and new sign locations. For example, the map for Waipoli Road on Maui will show the locations of Station MA00024, and MA00025 which was previously approved. It also include the location of the new additions (MA0043 to MA0059 and MA00062 and MA00063).

Following your approval, DLNR, Division of Forestry and Wildlife will seek final approval to the Board of Land and Natural Resources at its next meeting.

Questions, please call Nelson L. Ayers at (808) 587-4175 or email: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov)

Please place an X on the following:

Approved:

Not Approved

  
Print RAWG Member Name

9/12/12  
Date

DLNR, DOFAW  
Government Agency

Please fax (808) 587-0160 or email this page to Nelson L. Ayers at: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov) by **September 17, 2012.**

**Attachments: Maui and Hawaii – Hazard Sign Data Sheet and Maps**

Act 82 sign inventory by type (warning description), location (station number), and DOFAW feature by island is attached for your review and approval.

Please note that the Hazard Sign Data Sheet for each Trail is the new sign location list for RAWG approval. But the trail map will include the previously approved locations (February 23, 2007, March 14, 2007, May 23, 2008 Board Approvals) and new sign locations. For example, the map for Waipoli Road on Maui will show the locations of Station MA00024, and MA00025 which was previously approved. It also include the location of the new additions (MA0043 to MA0059 and MA00062 and MA00063).

Following your approval, DLNR, Division of Forestry and Wildlife will seek final approval to the Board of Land and Natural Resources at its next meeting.

Questions, please call Nelson L. Ayers at (808) 587-4175 or email: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov)

Please place an X on the following:

Approved: \*

CURT COTTRELL

Print RAWG Member Name

DLNR DSP

Government Agency

Not Approved \*

SEPT 10<sup>TH</sup> 2012

Date

Please fax (808) 587-0160 or email this page to Nelson L. Ayers at: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov) by **September 17, 2012.**

Attachments: Maui and Hawaii - Hazard Sign Data Sheet and Maps

\* WAIPOLI ROAD KEULA FOREST RESERVE, MAUI  
ONAI LOOP TRAIL, MAUI  
MANUKA LOOP TRAIL, HAWAII  
MAUMAE, ALA KANAKAI HAWAII  
ONOMEA, HAWAII  
DOLOW, HAWAII

\* MULIWA

SEE  
ATTACHED  
COMMENTS

Act 82 sign inventory by type (warning description), location (station number), and DOFAW feature by island is attached for your review and approval.

Please note that the Hazard Sign Data Sheet for each Trail is the new sign location list for RAWG approval. But the trail map will include the previously approved locations (February 23, 2007, March 14, 2007, May 23, 2008 Board Approvals) and new sign locations. For example, the map for Waipoli Road on Maui will show the locations of Station MA00024, and MA00025 which was previously approved. It also include the location of the new additions (MA0043 to MA0059 and MA00062 and MA00063).

Following your approval, DLNR, Division of Forestry and Wildlife will seek final approval to the Board of Land and Natural Resources at its next meeting.

Questions, please call Nelson L. Ayers at (808) 587-4175 or email: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov)

Please place an X on the following:

<input checked="" type="checkbox"/> Approved:	<input type="checkbox"/> Not Approved
<u>CARON INAGAKI</u>	<u>9/11/12</u>
Print RAWG Member Name	Date

Dept. of the Attorney General  
Government Agency

Please fax (808) 587-0160 or email this page to Nelson L. Ayers at: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov) by September 17, 2012.

Attachments: Maui and Hawaii – Hazard Sign Data Sheet and Maps

Act 82 sign inventory by type (warning description), location (station number), and DOFAW feature by island is attached for your review and approval.

Please note that the Hazard Sign Data Sheet for each Trail is the new sign location list for RAWG approval. But the trail map will include the previously approved locations (February 23, 2007, March 14, 2007, May 23, 2008 Board Approvals) and new sign locations. For example, the map for Waipoli Road on Maui will show the locations of Station MA00024, and MA00025 which was previously approved. It also include the location of the new additions (MA0043 to MA0059 and MA00062 and MA00063).

Following your approval, DLNR, Division of Forestry and Wildlife will seek final approval to the Board of Land and Natural Resources at its next meeting.

Questions, please call Nelson L. Ayers at (808) 587-4175 or email: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov)

Please place an X on the following:

Approved:

Not Approved

Scott T. Knowles  
Print RAWG Member Name

9-13-12  
Date

County of Hawaii  
Government Agency

Please fax (808) 587-0160 or email this page to Nelson L. Ayers at: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov) by **September 17, 2012.**

**Attachments: Maui and Hawaii – Hazard Sign Data Sheet and Maps**

Act 82 sign inventory by type (warning description), location (station number), and DOFAW feature by island is attached for your review and approval.

Please note that the Hazard Sign Data Sheet for each Trail is the new sign location list for RAWG approval. But the trail map will include the previously approved locations (February 23, 2007, March 14, 2007, May 23, 2008 Board Approvals) and new sign locations. For example, the map for Waipoli Road on Maui will show the locations of Station MA00024, and MA00025 which was previously approved. It also include the location of the new additions (MA00043 to MA00059 and MA00062 and MA00063).

Following your approval, DLNR, Division of Forestry and Wildlife will seek final approval to the Board of Land and Natural Resources at its next meeting.

Questions, please call Nelson L. Ayers at (808) 587-4175 or email: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov)

Please place an X on the following:

Approved:

Not Approved

Janine Rapozo  
Print RAWG Member Name

9/10/2012  
Date

County of Kauai  
Government Agency

Please fax (808) 587-0160 or email this page to Nelson L. Ayers at: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov) by **September 17, 2012**.

**Attachments: Maui and Hawaii – Hazard Sign Data Sheet and Maps**

Act 82 sign inventory by type (warning description), location (station number), and DOFAW feature by island is attached for your review and approval.

Please note that the Hazard Sign Data Sheet for each Trail is the new sign location list for RAWG approval. But the trail map will include the previously approved locations (February 23, 2007, March 14, 2007, May 23, 2008 Board Approvals) and new sign locations. For example, the map for Waipoli Road on Maui will show the locations of Station MA00024, and MA00025 which was previously approved. It also include the location of the new additions (MA0043 to MA0059 and MA00062 and MA00063).

Following your approval, DLNR, Division of Forestry and Wildlife will seek final approval to the Board of Land and Natural Resources at its next meeting.

Questions, please call Nelson L. Ayers at (808) 587-4175 or email: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov)

Please place an X on the following:

Approved:

Not Approved

TOM FAKE  
Print RAWG Member Name

8/30/2012  
Date

NATIONAL PARK SERVICE  
Government Agency

Please fax (808) 587-0160 or email this page to Nelson L. Ayers at: [Nelson.L.Ayers@Hawaii.Gov](mailto:Nelson.L.Ayers@Hawaii.Gov) by **September 17, 2012.**

**Attachments: Maui and Hawaii – Hazard Sign Data Sheet and Maps**

# Exhibit 2.

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



## STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF STATE PARKS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

WILLIAM J. AILA, JR.  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

PAUL J. CONRY  
INTERIM FIRST DEPUTY

WILLIAM M. TAM  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

September 13, 2012

TO: Nelson Ayers, DOFAW

FR: Curt Cottrell, DSP

RE: RAWG Review of Act 82 Warning and Management Signs for Maui and Hawaii

This is in response to the August 28, 2012 RAWG request to review and approve/disapprove Act 82 sign locations at 2 DOFAW Maui features and 6 DOFAW Hawaii features.

As a RAWG member, I approve the following sign placements: **Waipoli Road and the Ohai Loop Trail located on Maui, and Manuka Loop trail, Mauumae – Ala Kahakai, Onomea and Pololu on Hawaii.**

**However, I offer the following additional comments:**

- There are 19 Falling Trees stations along the Waipoli Road and the Board was briefed in the May 23, 2008 submittal that due to the extent of the 2007 fire, high public demand for access and the inability to remove the hazards, a new sign for Falling Trees and a prolific sign strategy was warranted. Also, it is understood that due to public demand and the large amount of hazard trees that will be imminent for decades in an over 2,300 acre recreational area, a falling tree warning is only prescribed in this this location. While the current description for Waipoli reflects this need for the RAWG and Board to consider prior to approval, it is important to also note that this is the **only** location in the state thus far where Act 82 is being applied to trees. As, typically, trees posing a threat can be removed. Since 2008, there has been changes in the RAWG and this exception for hazard trees should be noted in the review and approval.
- Also, many of the other area descriptions seem to have been taken from informational literature for the public on the location and the description is not reflective for the rationale for warning signage. Rendering a decision on the placement may be speculative for those who have not been at these sites. Suggest considering more specific descriptions related only to the need for signage and omitting the general resource value descriptions.

- As indicated previously – RAWG/DSP expressed concerns associated with the placement of 56 signs at Muliwai – of which 27 are to warn of re-occurring exposure to Flash Flood along the trail. As Chapter 13-8-9 indicates for sign placement that “view sheds and aesthetics” are to be considered when installing the signage, a warning sign for the same hazard posted as frequently as has been done may not consider the aesthetic impact of the trail (a Flash Flood warning sign roughly every 1.4 miles along the 18 mile trail).

While Chapter 13-8-9 also indicate that “feasibly” of installation be considered, that was not an implement as the signs are currently in place. Understandably, due to Hawaii DOFAW staff effort’s to install 27 signs in a remote location, there may be reticence to now remove or reduce them. However, this is an important policy call that warrants explanation. If each of these drainages crossed repeatedly by hikers does in fact pose a Flash Flood threat – then all of the signs may be warranted. However, given the repetitive nature of the exposure– another equally tenable action would be to warn that the area contains this threat – and post at the major drainages that may flash with greater velocity and discharge than others.

This was the approach taken by DSP for the 11 mile Kalalau trail for warning of Flash Floods – the major drainages with perennial stream crossing were signed – the smaller drainages with reduced potential of posing a threat were not. This strategy was approved by the RAWG and the Board in 2011. In addition, the RAWG and Board understood that the public is now informed of the potential exposure to dangerous natural conditions in Napali while:

- 1) Viewing park information online,
- 2) Obtaining a Kalalau camping permit (warning information is printed on the required permit),
- 3) Entering the Kalalau trailhead before proceeding along the trail, and
- 4) Hiking along several specific trail locations and at the designated camping area.

While the precedent of such a frequent posting of signs for a discernable topographic condition is problematic, DSP would approve the posting with a request for a disclaimer (similar to what was submitted for the Kula Forest Reserve and falling Trees in the 2008 submittal) in the submittal to establish that this is a special and unique condition specific to Muliwai trail and that these drainages – due to precipitation and topography – require this frequent and repetitive warning. That will then allow for other State agencies and the respective Counties – when evaluating this type of exposure and warning in the future, to then consider an area based warning rather than signage at each conceivable - and identical– exposure to hazard.

Please contact me if you feel the need to discuss these concerns. It is the goal of DSP to apply consistent and essential information to the Board for approval and then obtaining the desired liability protection, in a manner that provides for pragmatic implementation.

c: RAWG Members  
Mr. William J. Aila, Jr., Chairperson

Exhibit 3.

**DLNR Division – DOFAW  
Hazard Sign Data Sheet**

**Island: Maui**

**Trail Name: Ohai Loop Trail**

The Ohai Loop Trail traverses rolling terrain about 1.2 miles long. The hike is moderate difficult overlooking the West Maui Mountains. Although, the hike is fairly short, the trail meanders through steep cliffs and terrain. On a clear day, the scenery is outstanding looking across to Haleakala Mountain.

**Natural Condition Exposure: Cliffs**

**Entrance Hazard Signs:**

Station: MA00060

**Warning**  
Hazardous Cliffs

**Acronym**  
WHCE

**Site Specific Hazard Signs:**

Station: MA00061

**Warning**  
Hazardous Cliffs

**Acronym**  
WHCS

# Papanalaho Pt

Station MA00061  
WHCS

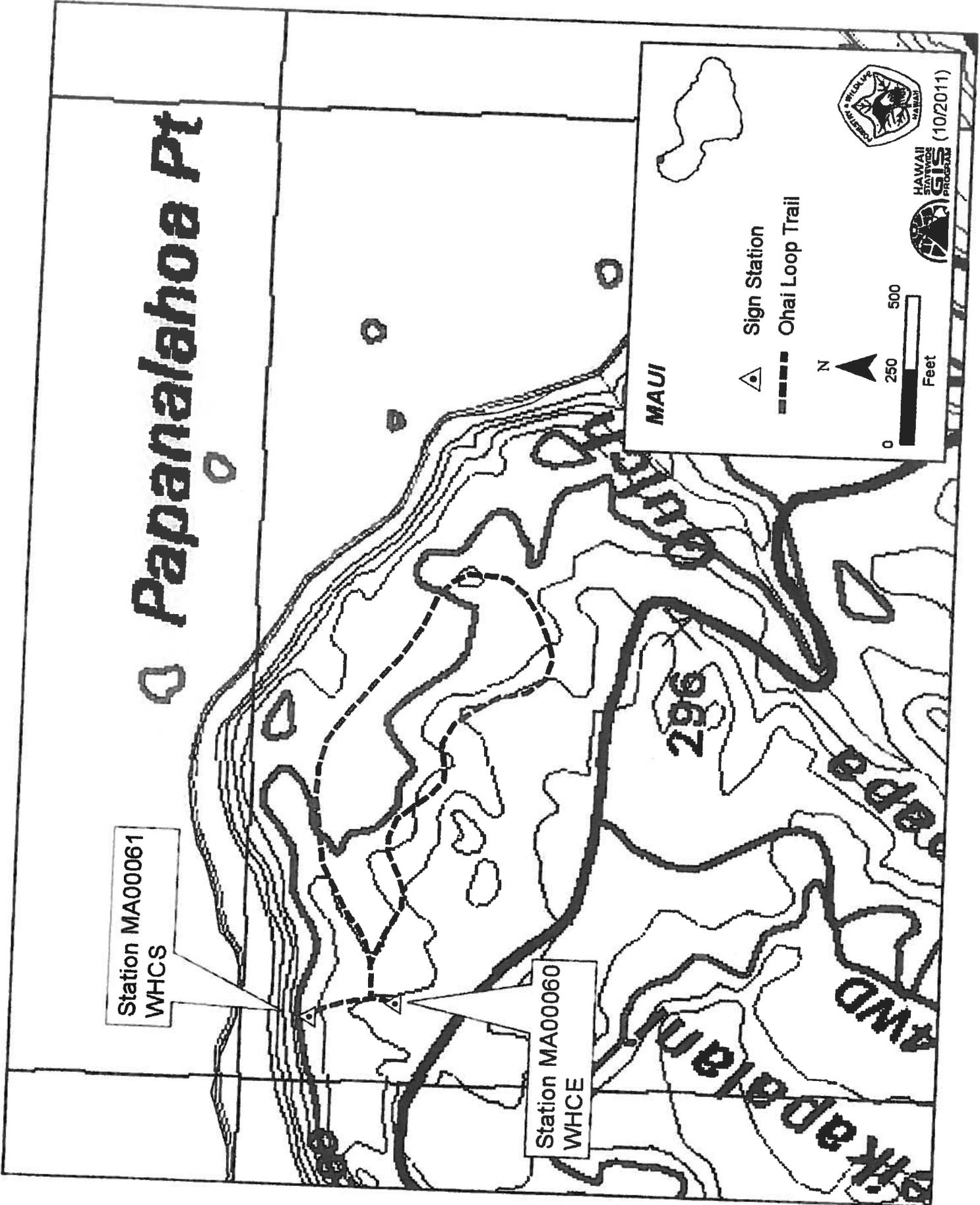
Station MA00060  
WHCE

MAUI

- ▲ Sign Station
- Ohai Loop Trail



HAWAII STATE GIS PROJECTS (10/2011)



**DLNR Division – DOFAW  
Hazard Sign Data Sheet**

**Island: Maui**

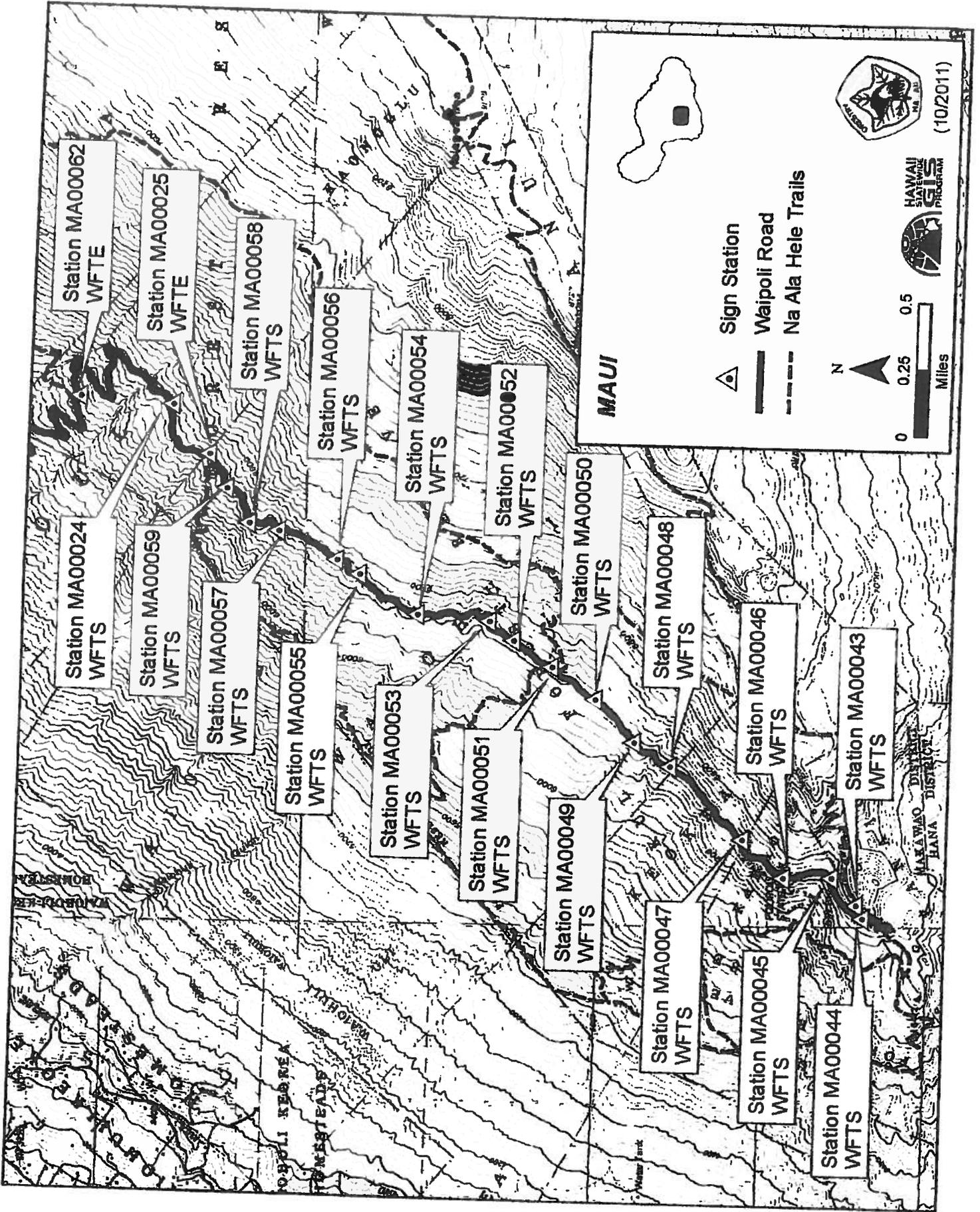
**Trail Name: Waipoli Road - Kula Forest Reserve**

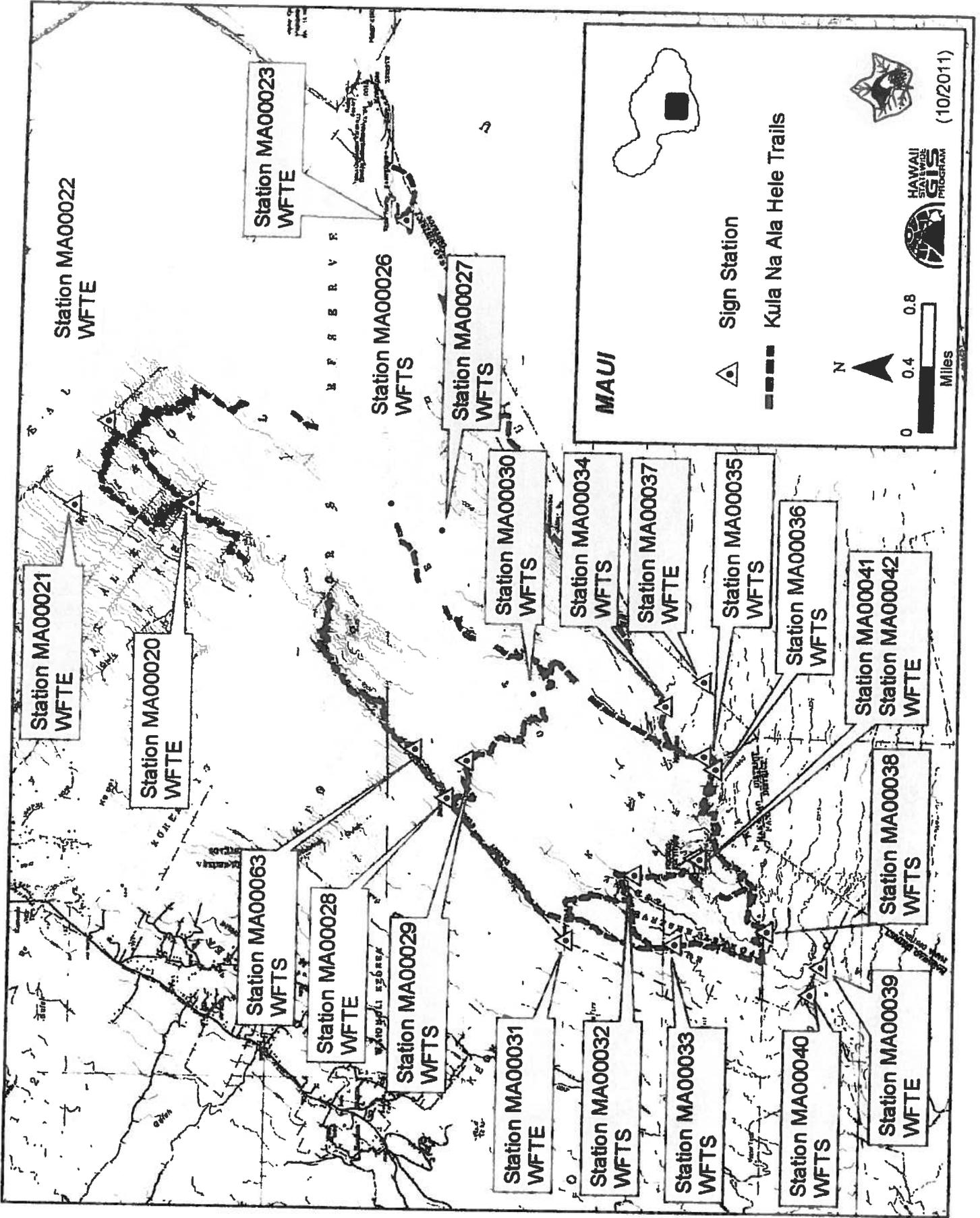
A wildfire burned Kula Forest Reserve about 2,300 acres. DOFAW removed much of the snags in the burnt area as possible but, many hazardous snags and trees remain that may have potential to become a hazard. The public use Waipoli road to access the Forest Reserve and Polipoli Spring State Recreational Area. Because this recreation area is popular among hunters, hikers, bird watchers and campers, installing these signs will warn each user of the dangerous natural conditions in this area.

**Natural Condition Exposure: Falling Trees**

<b>Entrance Hazard Signs:</b>	<b><u>Warning</u></b>	<b><u>Acronym</u></b>
Station: MA00062	Falling Trees	WFTE

<b>Site Specific Hazard Signs:</b>	<b><u>Warning</u></b>	<b><u>Acronym</u></b>
Station: MA00043	Falling Trees	WFTS
MA00044	Falling Trees	WFTS
MA00045	Falling Trees	WFTS
MA00046	Falling Trees	WFTS
MA00047	Falling Trees	WFTS
MA00048	Falling Trees	WFTS
MA00049	Falling Trees	WFTS
MA00050	Falling Trees	WFTS
MA00051	Falling Trees	WFTS
MA00052	Falling Trees	WFTS
MA00053	Falling Trees	WFTS
MA00054	Falling Trees	WFTS
MA00055	Falling Trees	WFTS
MA00056	Falling Trees	WFTS
MA00057	Falling Trees	WFTS
MA00058	Falling Trees	WFTS
MA00059	Falling Trees	WFTS
MA00063	Falling Trees	WFTS





**DLNR Division – DOFAW  
Hazard Sign Data Sheet**

**Island: Hawaii**

**Trail Name: Manuka Loop Trail**

This trail loops around the Manuka Natural Area Reserve about 25,550 acres. Although the Reserve extends down to the ocean, its ahupuaa joins the mauka section around the 5,000 foot elevation. The trail meanders through rugged cliffs of the Reserve that displays a broad range of habitats; alpine shrub-lands and forests, mesic montane kipuka forests, wet montane forests, low-land mesic and dry forests, and lava anchialine pools. The Hawaiian hoary bat can sometimes be seen from the self-guiding trail guide that winds through the Reserve.

**Natural Condition Exposure: Cliffs, Trail Ends**

**Entrance Hazard Signs:**

Station: HA00070  
HA00073

**Warning**

Hazardous Cliffs  
Hazardous Cliffs

**Acronym**

WHCE  
WHCE

**Site Specific Hazard Signs:**

Station: HA00071

**Warning**

Hazardous Cliffs

**Acronym**

WHCS

**Management Signs:**

Station: HA00072

**Notice**

End of Trail

**Acronym**

NETS

HAWAII



Sign Station



Manuka Loop Trail



N



0 340 680

Feet



(03/2012)



HAWAII STATEWIDE GIS PROGRAM

Station HA00071  
WHCS

Station HA00072  
NETS

Station HA00073  
WHCE

Station HA00070  
WHCE

MANUKA STATE PARK

Tanks

Mauka House (Site)

1760

2000

**DLNR Division – DOFAW  
Hazard Sign Data Sheet**

**Island: Hawaii**

**Trail Name: Muliwai Trail**

Muliwai trailhead is located at the eastern end of Waipio Valley. The trail starts as a switch-back up to 1,200 foot level. Since year-round game hunting is prevalent in this area; we recommend that hikers wear bright colored clothing. This trail is 18 miles long to Waimalu Valley. The hike meanders through steep ridges and cliffs, and numerous stream crossings. It could be a difficult hike but it lends to a beautiful tropical Hawaiian forest experience.

**Natural Condition Exposure: Falling Rocks, Cliffs, Flash Flood**

**Entrance Hazard Signs:**

	<u>Warning</u>	<u>Acronym</u>
Station: HA00035	Falling Rocks	WFRE
HA00035	Hazardous Cliffs	WHCE
HA00035	Flash Flood	WFFE
HA00059	Falling Rocks	WFRE
HA00059	Hazardous Cliffs	WHCE
HA00059	Flash Flood	WFFE

**Site Specific Hazard Signs:**

	<u>Warning/Danger</u>	<u>Acronym</u>
Station: HA00036	Falling Rocks	WFRS
HA00036	Hazardous Cliffs	WHCS
HA00037	Falling Rocks	WFRS
HA00037	Hazardous Cliffs	WHCS
HA00038	(2) Flash Flood	WFFS
HA00039	Hazardous Cliffs	WHCS
HA00039	Danger, Falling Rocks	DFRS
HA00040	(2) Flash Flood	WFFS
HA00041	Falling Rocks	WFRS
HA00042	(2) Flash Flood	WFFS
HA00043	(2) Falling Rocks	WFRS
HA00044	(2) Flash Flood	WFFS
HA00045	Falling Rocks	WFRS
HA00046	Hazardous Cliffs	WHCS
HA00047	Falling Rocks	WFRS

**Site Specific Hazard Signs:**

Station: HA00047  
HA00048  
HA00049  
HA00050  
HA00051  
HA00051  
HA00052  
HA00053  
HA00054  
HA00055  
HA00056  
HA00057  
HA00058

**Warning/Danger**

Hazardous Cliffs  
(2) Flash Flood  
(2) Flash Flood  
(2) Flash Flood  
Falling Rocks  
Hazardous Cliffs  
(2) Flash Flood  
(2) Flash Flood  
(2) Flash Flood  
Hazardous Cliffs  
(2) Flash Flood  
Falling Rocks  
(2) Flash Flood

**Acronym**

WHCS  
WFFS  
WFFS  
WFFS  
WFRS  
WHCS  
WFFS  
WFFS  
WFFS  
WHCS  
WFFS  
WFRS  
WFFS

**Management Signs:**

Station: HA00060

**Notice**

Area Closed

**Acronym**

NACS

# HAWAII



(10/2011)



▲ Sign Station

--- Muliwai Trail



0 1,000 2,000  
Feet

Station HA00060  
NACS

Station HA00059  
WFRE, WHCE, WFFE

Station HA00057  
WFRS

Station HA00058  
WFFS, WFFS

Station HA00056  
WFFS, WFFS

Station HA00049  
WFFS, WFFS

Station HA00046  
WHCS

Station HA00045  
WFRS

Station HA00055  
WHCS

Station HA00050  
WFFS, WFFS

Station HA00054  
WFFS, WFFS

Station HA00053  
WFFS, WFFS

Station HA00048  
WFFS, WFFS

Station HA00044  
WFFS, WFFS

Station HA00052  
WFFS, WFFS

Station HA00051  
WFRS, WHCS

Station HA00047  
WFRS, WHCS

Station HA00043  
WFRS, WFRS

Station HA00041  
WFRS

Station HA00040  
WFFS, WFFS

Station HA00038  
WFFS, WFFS

Station HA00037  
WFRS, WHCS

Station HA00036  
WFRS, WHCS

Station HA00039  
WHCS, WFRS

Station HA00035  
WFRE, WHCE, WFFE

**DLNR Division – DOFAW  
Hazard Sign Data Sheet**

**Island: Hawaii**

**Trail Name: Mauumae – Ala Kahakai**

Hikes on Ala Kahakai may begin or end at any of the listed public access points. The trail follows the coastline over ancient fishermen`s trails and Hawaiian Kingdom roads that are connected through generations of use to form a single continuous route. It passes through both public and private lands, providing access to numerous beaches and resorts, and to both the Malama Trail to Puako petroglyph field near Holoholokai and the Kings Highway inland of the Mauna Lani to Mauna Kea Beach Resorts. The Ala Kahakai also provides access to some of the most pristine Hawaiian shoreline, as well as numerous anchialine ponds which are unique biota ecosystems. Much of the trail receives limited maintenance and short sections have been eroded by ocean waves. Only the Spencer-Puako section of the trail has signage. Caution is advised as hikers may encounter dangerous flash flooding in certain areas of the trail.

**Natural Condition Exposure: Flash Flood**

**Entrance Hazard Signs:**

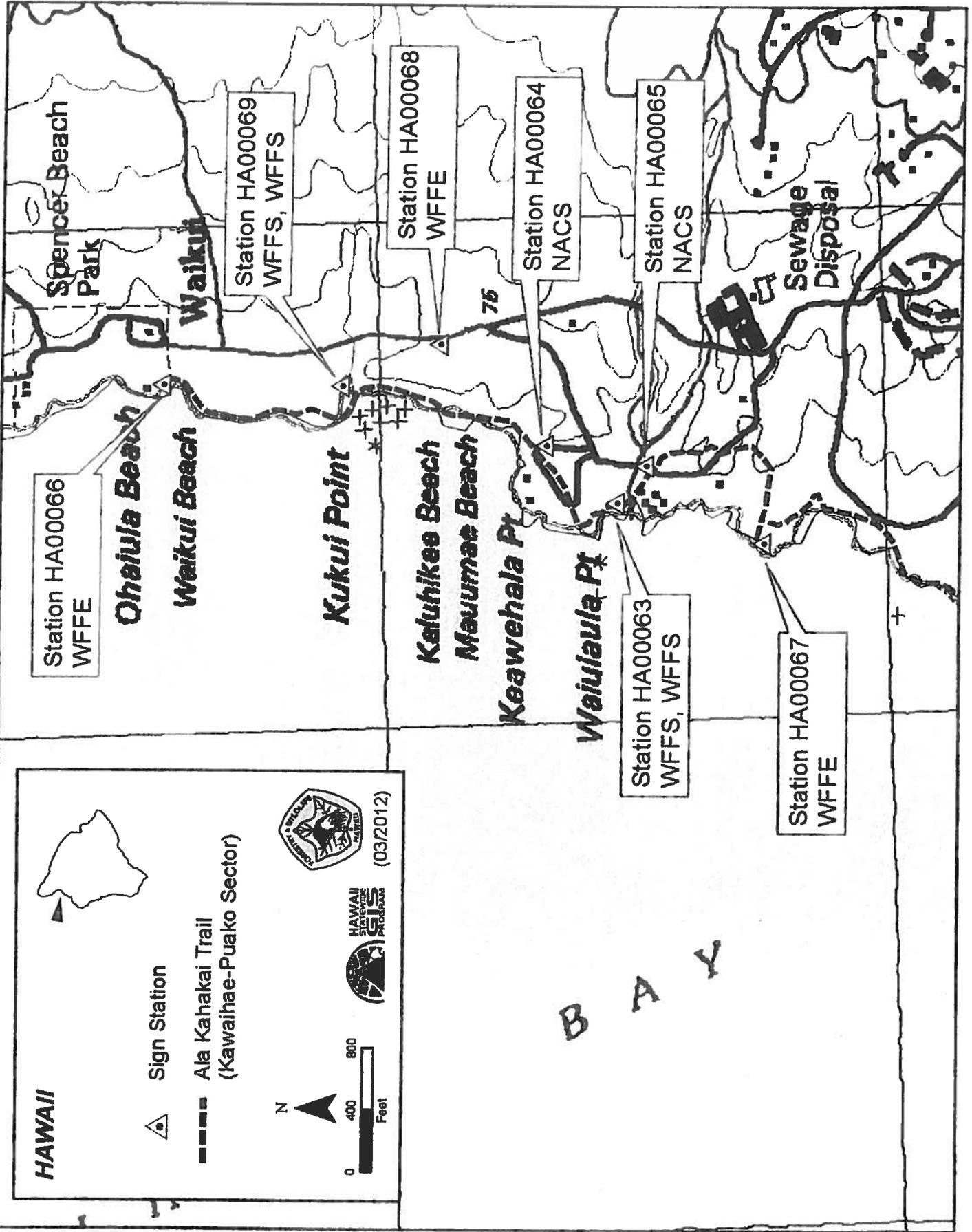
	<u>Warning</u>	<u>Acronym</u>
Station: HA00066	Flash Flood	WFFE
HA00067	Flash Flood	WFFE
HA00068	Flash Flood	WFFE

**Site Specific Hazard Signs:**

	<u>Warning</u>	<u>Acronym</u>
Station: HA00063	(2) Flash Flood	WFFS
HA00069	(2) Flash Flood	WFFS

**Management Signs:**

	<u>Notice</u>	<u>Acronym</u>
Station: HA00064	Area Closed	NACS
HA00065	Area Closed	NACS



Station HA00066  
WFFE

Station HA00069  
WFFS, WFFS

Station HA00068  
WFFE

Station HA00064  
NACS

Station HA00065  
NACS

Station HA00063  
WFFS, WFFS

Station HA00067  
WFFE

Spencer Beach  
Park

Ohaiula Beach

Waikui Beach

Waikui

Kukui Point

Kaluhikae Beach

Mauumae Beach

Keaweheala Pt

Waiula Pt

Sewage  
Disposal

75

HAWAII

▲ Sign Station

--- Ala Kahakai Trail  
(Kawaihae-Puako Sector)

N



(03/2012)



B  
A  
Y

**DLNR Division – DOFAW  
Hazard Sign Data Sheet**

**Island: Hawaii**

**Trail Name: Mauna Loa Observatory Road**

This poorly paved winding, rolling, single lane, two wheel drive road proceeds roughly south for about 3 miles, then southeast for 5 miles, then west over nearly barren lava flows, rising steadily to the Solar Observatory at the 11,150 foot elevation on the north slope of Mauna Loa. Clear weather provides a spectacular view of Mauna Kea, Kohala, Haleakala, Hualalai and the Pohakuloa Saddle. Under optimum conditions Kahoolawe, Lanai and Molokai islands can be seen. The Solar Observatory is not open to the public.

**Natural Condition Exposure: End of Maintained Trail**

**Management Signs:**  
Station: HA00061

**Caution**  
End of Maintained  
Trail

**Acronym**  
CEMS

**HAWAII**

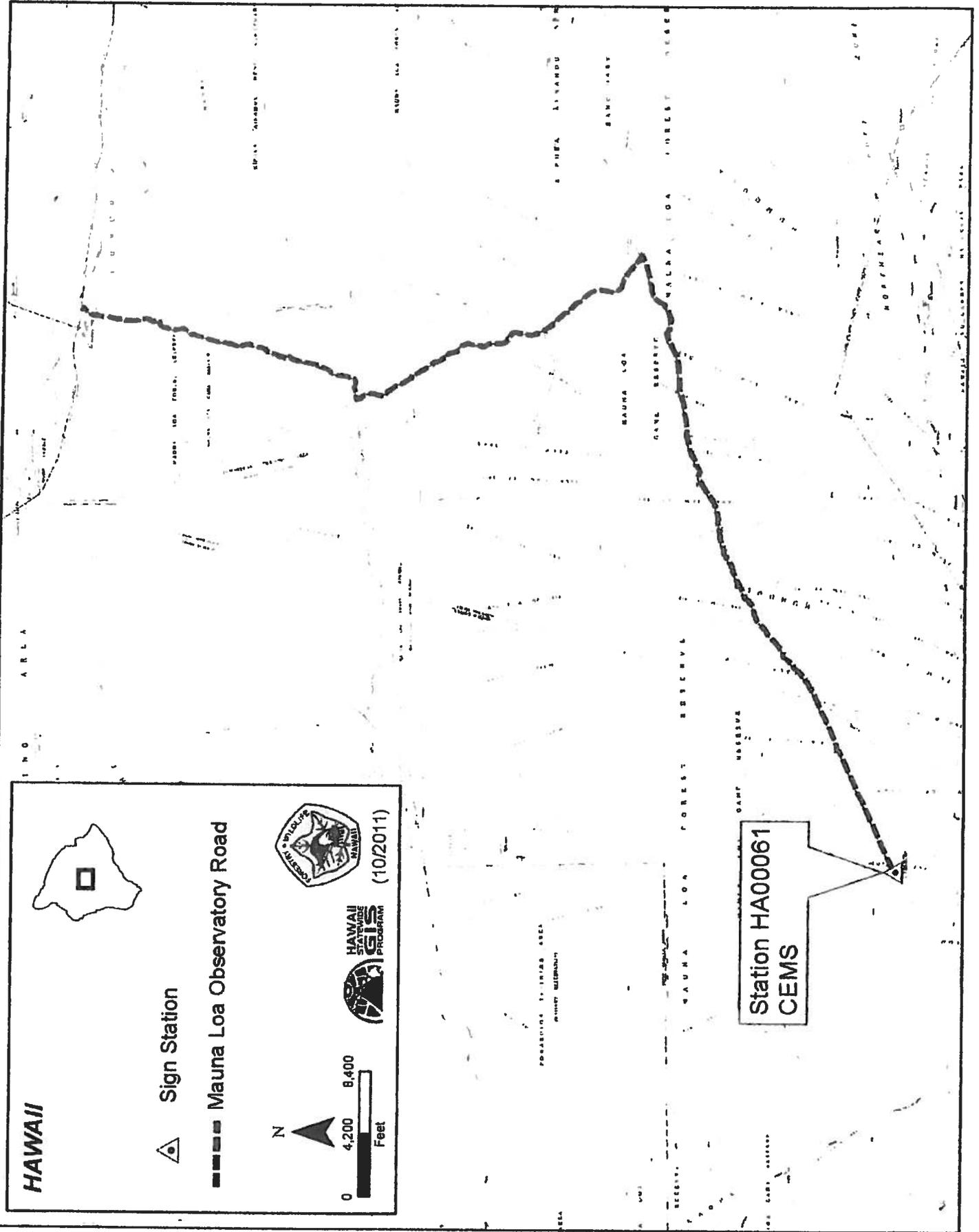


Mauna Loa Observatory Road



(10/2011)

Station HA00061  
CEMS



**DLNR Division – DOFAW  
Hazard Sign Data Sheet**

**Island: Hawaii**

**Trail Name: Onomea**

The Onomea Trail follows the alignment of the old government road into Hawaii Tropical Botanical garden and splits at Alakahi Stream; one branch turns right to Kukilu Bay and the other continues directly across the garden to the east side of Kahali`i Stream. The stream crossing is forded at this point to connect with the Donkey Trail which goes directly to the point between Kenenu and Kahali`i Bays. The trail is also steep along shoreline cliffs, with uneven tread lending to a slippery surface. The Donkey Trail is part of a Hawaiian Kingdom government cart road used for hauling goods and supplies from Onomea Landing.

**Natural Condition Exposure: Cliffs, Falling Rocks, Flash Flood**

**Entrance Hazard Signs:**

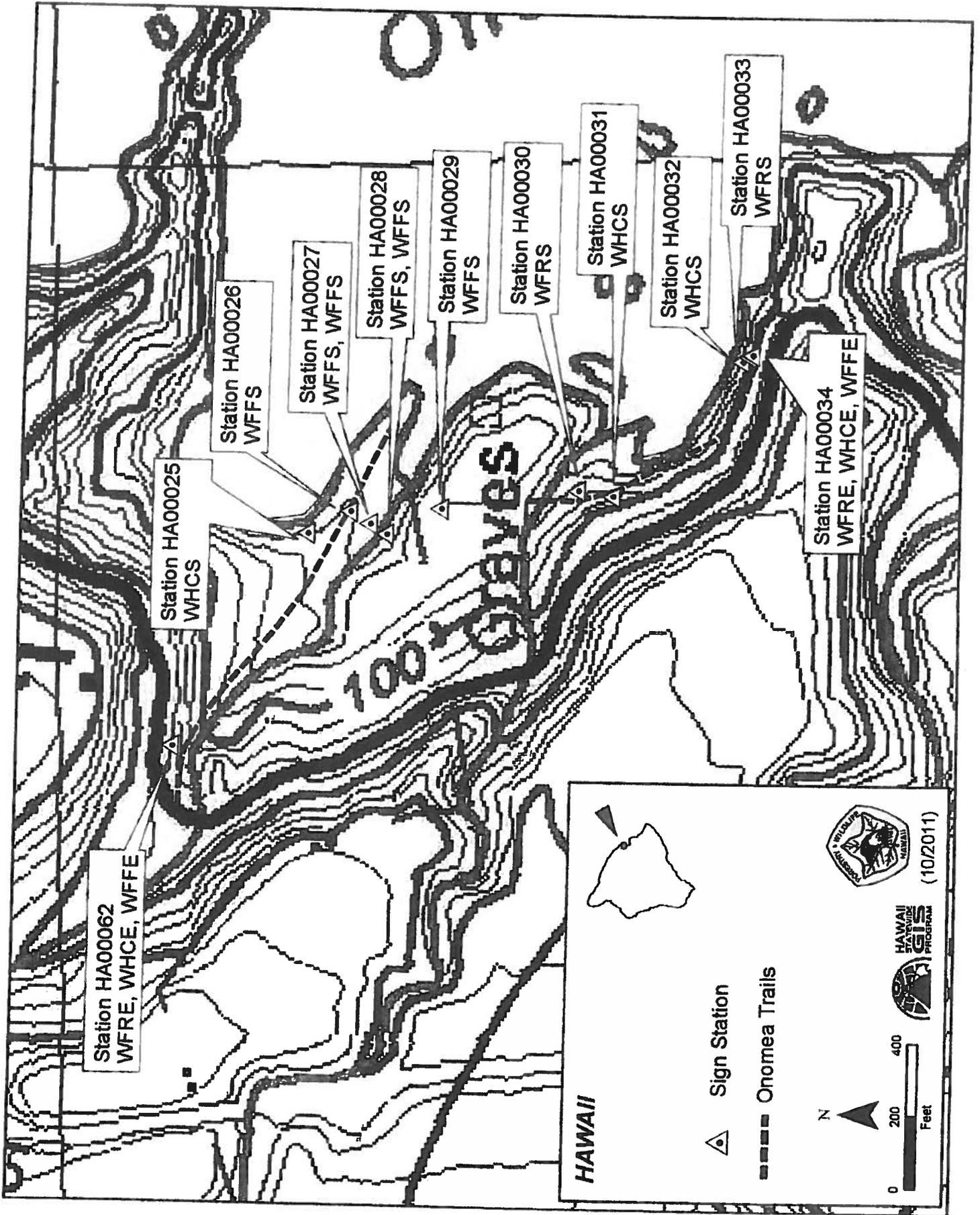
Station: HA00062  
HA00062  
HA00062

**Warning**

Falling Rocks  
Hazardous Cliffs  
Flash Flood

**Acronym**

WFRE  
WHCE  
WFFE



Station HA00062  
WFRE, WHCE, WFFE

Station HA00025  
WHCS

Station HA00026  
WFFS

Station HA00027  
WFFS, WFFS

Station HA00028  
WFFS, WFFS

Station HA00029  
WFFS

Station HA00030  
WFRS

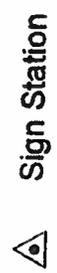
Station HA00031  
WHCS

Station HA00032  
WHCS

Station HA00033  
WFRS

Station HA00034  
WFRE, WHCE, WFFE

HAWAII



Sign Station



Onomea Trails



(10/2011)

**DLNR Division – DOFAW  
Hazard Sign Data Sheet**

**Island: Hawaii**

**Trail Name: Pololu Trail**

This trail is a section of the Old Government Road to Awini. It begins at the end of the paved road and goes down the face of the cliff (420 feet) to just behind the shoreline about 1 mile in length. The trail is steep and can be slippery. Significant ancient cobble stones are still embedded in sections of the trail as it runs down to the mouth of Polulu stream and the Pacific Ocean.

**Natural Condition Exposure: Cliffs, Flash Flood, Falling Rocks**

**Site Specific Hazard Signs:**

Station: HA00074  
HA00075  
HA00076

**Warning**

Flash Flood  
Falling Rocks  
Hazardous Cliffs

**Acronym**

WFFS  
WFRS  
WHCS

**Management Signs:**

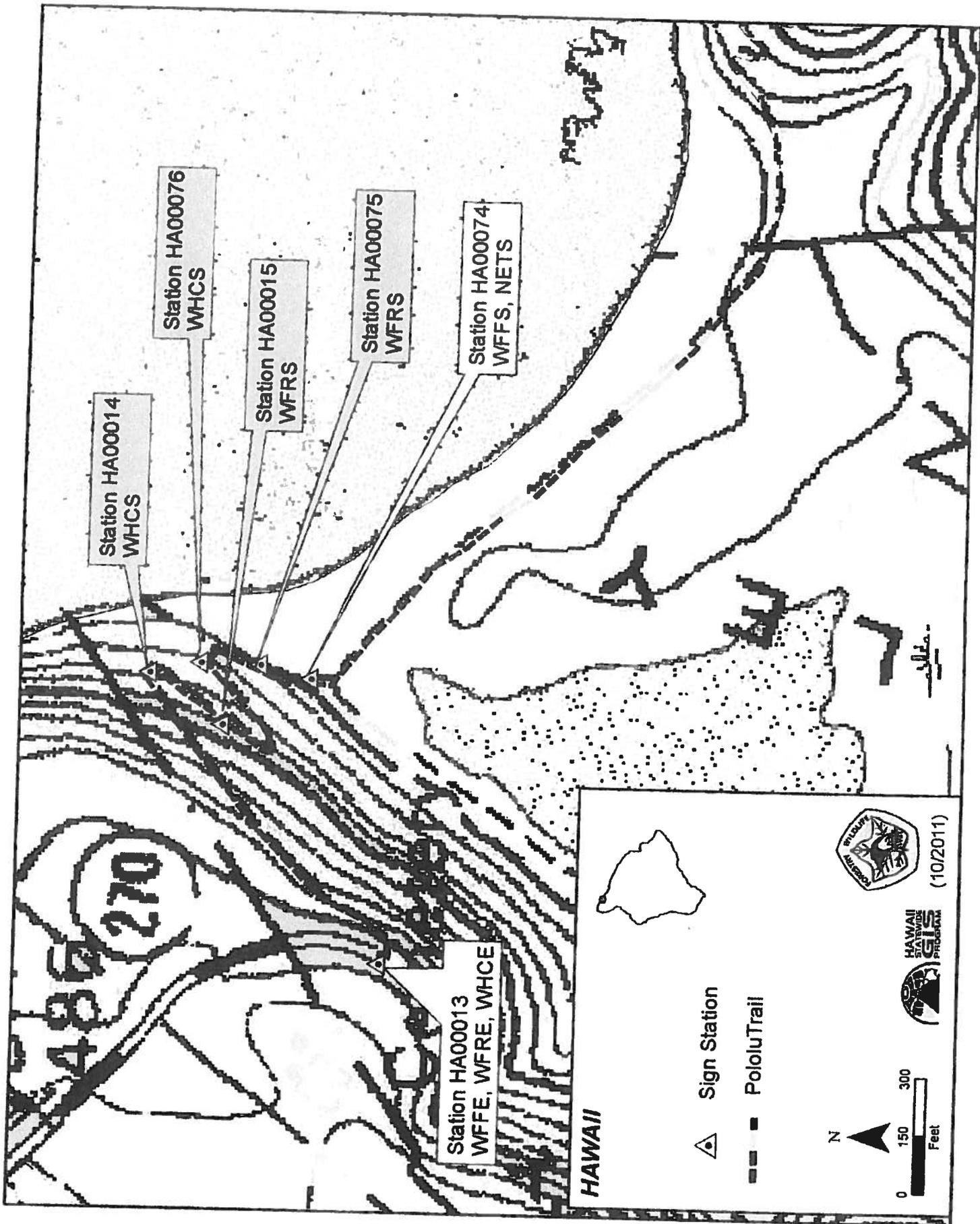
Station: HA00074

**Notice**

End of Trail

**Acronym**

NETS



Station HA00014  
WHCS

Station HA00076  
WHCS

Station HA00015  
WFRS

Station HA00075  
WFRS

Station HA00074  
WFFS, NETS

Station HA00013  
WFFE, WFRE, WHCE

485  
270

HAWAII

▲ Sign Station

--- Pololu Trail

N



(10/2011)



Muliwai Trail  
Flash Food Warning Sign  
HA00048

HA00048





**Muliwai Trail  
Possible Flash Flooding  
Possible Falling Rocks  
No Warning Sign**



**Muliwai Trail  
Possible Flash Flooding  
No Warning Sign**

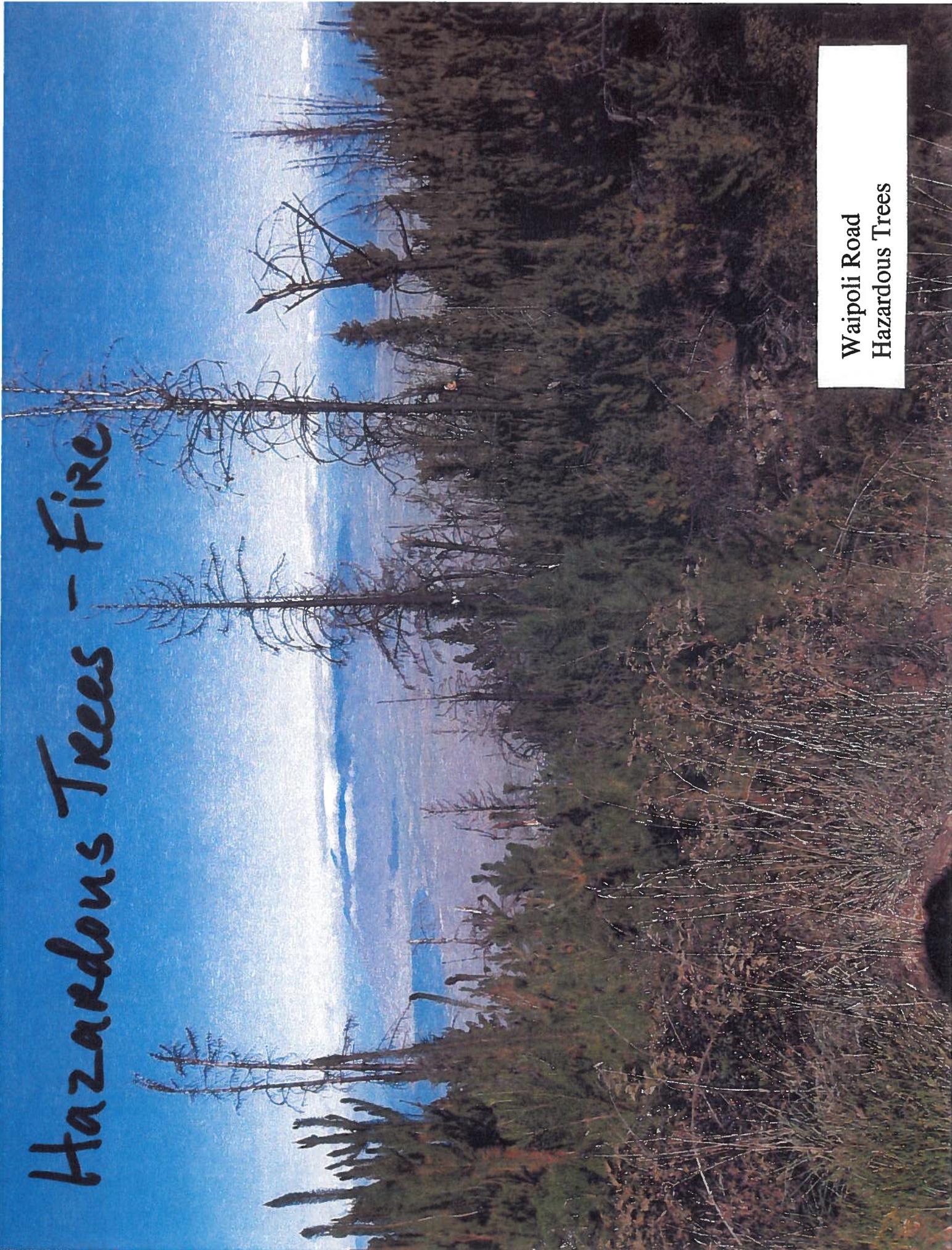
*MA00049  
Shows steep slope*



Waipoli Road  
Falling Trees Warning Sign  
MA00049

# Hazardous Trees - Fire

Waipoli Road  
Hazardous Trees



# Hazardous Trees - Fire



Waipoli Road  
Hazardous Trees