Evaluation of Warning Sign Placement
Department of Land and Natural Resources Staff Guidelines
for Placement of Warning and Management Signage

June - 2005

(Pursuant to the Administrative Rules for the Design and Placement of Warning Signs on Improved Public Lands: 13-8, HAR)

Placement:

1. Identify the public use patterns of the relevant trails, access roads and parks.

2. Consider the type, frequency, and location of incidents or potential public exposure relating to the identified dangerous natural conditions associated with the pertinent feature for sign placement.

3. Signs are to be placed at formal entrances where the signs will be seen as users enter improved public lands or near access points, such as along vehicle and pedestrian use patterns in an optimally visible location and placed as close as possible to the potential dangerous natural conditions.

4. Consider view shed, aesthetics, and feasibility of installation in the placement of the signs.

5. Signs are to be installed within the average adult line of sight but outside of the general path of travel to avoid physical contact with the signs.

6. Signs may be affixed to posts or by any other method of installation depending on the nature of the location and terrain.

Type:
Warning Signs

1. Identify the type and location of public exposure to the currently identified dangerous and reoccurring natural conditions:

   - Rockfall
   - Cliffs
   - Flash Floods
   - Submerged Objects in Water

Management Signs

2. Identify locations where staff has knowledge that the public goes beyond managed areas and either due to resource protection or public safety it is necessary modify public behavior:

   - End of Trail
   - End of Maintained Trail
   - End of Road
   - Area Closed
**Warning Signs**

**Warning Signs are intended to warn of potentially dangerous natural conditions and modify public behavior in an appropriate manner**

1. **Warning**
   Flash Flood!
   Be alert, water may rise without warning.
   Fast moving water may result in serious injury or death.

2. **Danger**
   Flash Flood!
   Be alert, water may rise without warning.
   Fast moving water in this stream has killed people.
   IF IN DOUBT, STAY AWAY.
   (Use of the word “Danger” is triggered if there has been an injury or fatality)

*Flash flood signs are to be posted on trails or access roads that cross streams where there is the potential for the water to rise quickly.*

3. **Warning**
   Falling Rocks!
   If you proceed, be alert! Rocks may fall without warning causing serious injury or death.
   IF IN DOUBT, STAY AWAY.
   (Trail is open and the user is provided an informed choice)
Warning Signs

Warning Signs are intended to warn of potentially dangerous natural conditions and modify public behavior in an appropriate manner.

1. Warning
   Flash Flood!
   Be alert, water may rise without warning.
   Fast moving water may result in serious injury or death.

2. Danger
   Flash Flood!
   Be alert, water may rise without warning.
   Fast moving water in this stream has killed people.
   IF IN DOUBT, STAY AWAY
   (Use of the word "Danger" is triggered if there has been an injury or fatality.

Flash flood signs are to be posted on trails or access roads that cross streams where there is the potential for the water to rise quickly.

3. Warning
   Falling Rocks!
   If you proceed, be alert! Rocks may fall without warning causing serious injury or death.
   IF IN DOUBT, STAY AWAY
   (Trail is open and the user is provided an informed choice.)
4. **Danger**
   Falling Rocks!
   Do not go beyond this point
   Rocks may fall without warning causing serious injury or death
   *(There has been an injury or exposure is so severe use is restricted)*

   *(The Rockfall signs are to be posted in areas where there is knowledge of rockfall, or where it is determined that exposure to potential rockfall is highly probable. Exposure to rockfall is greater when users are stationary - such as the base of waterfalls or viewpoints adjacent cliffs or road cuts.)*

5. **Danger**
   No Diving or Jumping!
   You may strike submerged objects and be seriously injured or killed.
   *(This sign is to be posted in situations where there are known underwater hazards that are not visible to the user, and there have either been injuries or there is knowledge that the public engages in diving or jumping at the location. The use of the word “danger” is due to the fact that there is a high probably of injury or death if an individual strikes a submerged object)*

6. **Warning**
   Hazardous Cliff!
   The ground may break off without warning and you could be seriously injured or killed
   Stay back from the edge

   *(This sign is to be posted in situations that may apply to trail termini or edges with steep cliffs, scenic lookouts and areas where there is unstable cliff structure and there is knowledge the users venture to the edge.)*
Management Signs

Management signs are intended to convey information and modify public behavior.

1. Notice
   End of Trail!
   Do not go beyond this sign — please turn back

   (This sign is intended to stop public access and is to be posted in situations that apply to either resource management or safety issues, where staff has determined that the end of the trail experience is to occur, but has knowledge that the public continues past a certain point. Practical examples include ridge trails that terminate at the summit but the public habitually continues laterally along the ridge).

2. Caution
   End of maintained trail!
   Trail beyond this sign not maintained.

   (This sign is intended to notify the public that there is a change in the management standards for the trail. The public is not being discouraged from continuing, but due to the change in the condition of the trail they are being put on notice to adjust their level of expectation and be more vigilant of trail conditions. The sign implies that the trail may be more difficult or require greater skill to traverse.)

3. Notice
   Area Closed!
   Do not go beyond this sign — please turn back

   (This sign is to be posted along areas where there is no formal or clearly established trail or access route and where public access is prohibited for either resource management or safety issues and managers have knowledge that the public traverses the area. This sign was intended to delineate the end of managed park or arboretum boundaries.)
4. **Notice**
   End of Road!
   No motor vehicles beyond this sign

(This sign is intended to stop vehicular public access due to poor access road conditions or to notify the user about the actual end of the road. This does not indicate that there is no pedestrian public access past the sign. That management directive would require the “Area Closed” sign.)
Site Evaluation #1

Island: Oahu
Trail Name: Manoa Falls
Exposure to natural conditions:
Warning Signs:

Management Signs: End of Trail, Area Closed
Sign Placement Criteria:

- **Warning - Flash Flood:** Points where the trail crosses streams, at both sides of stream crossing
- **Falling Rocks – End of Trail:** At the viewing area at the end of the trail
- **Area Closed:** Beyond viewing area, near base of falls at fence
Site Evaluation #2

Island: Oahu
Trail Name: Maunawili Falls Trail
Exposure to natural conditions:
Warning Signs:

Management Signs: End of Trail

Sign Placement Criteria:
- *Smaller signs at each crossing and due to high use signs should be placed on both sides of each stream crossing*

- *No Diving or jumping at falls*
Site Evaluation #3

Island: Oahu
Trail Name: Manoa Cliff Trail
Exposure to natural conditions: Steep Cliffs along trail

Warning Signs: Warning- Hazardous Cliffs
Management Signs: None

Sign Placement Criteria:

- Sign only needed at both trailheads and junctions due to obvious hazard that is virtually continuous for entire trail
Site Evaluation #4

Island: Oahu
Trail Name: Ma'akua Gulch Trail
Exposure to natural conditions:

Warning Signs:

Management Signs: End of Trail

Sign Placement Criteria:

• All hazards are beyond the end of the trail. However, staff has knowledge that the public proceeds past the end of the trail and up the canyon
Site Evaluation  #5
Island: Kauai
Trail Name: Nounow Mountain Trail East/West
Exposure to natural conditions: Cliffs

Warning Signs: Warning- Hazardous Cliffs
Management Signs: End of Trail

Sign Placement Criteria:

- Cliff and End of Trail sign to be placed in shelter area
Site Evaluation  #6
Island:  Kauai
Trail Name:  Kalalau
Exposure to natural conditions: Falling Rocks
Warning Signs: Warning - Falling Rocks
Management Signs: End of Trail

Sign Placement Criteria:

- **Sign at Entrance to campground warning of falling rocks**

- **At camp trail warning of falling rocks placed every 100 feet at line of sight along camp trail. All camping should be between camp trail and beach trail**

- **Suggest at sign depicting the camping area and trail layout**
Site Evaluation #7
Island: Kauai
Trail Name: Hanakapiai Falls Trails
Exposure to natural conditions:
Warning Signs:
Warning - Falling Rocks
Warning - Flash Floods
Management Signs:
End of Trail

Sign Placement Criteria:
• Warning at first crossing on trail. Other crossings not signed because of wild nature of trail
• Fall rocks warning to be placed at the falls area
Site Evaluation #8
Island: Kauai
Trail Name: Uluwehi Falls (Trailhead)
Exposure to natural conditions:

Warning Signs:
Warning- Flash Floods

Management Signs:
None

Sign Placement Criteria:

- The boat landing site is considered the trailhead. Proximity to the first river crossing dictates a flash flood warning sign.
Site Evaluation #9

Island: Kauai
Trail Name: Uluwehi Falls (2nd Stream)
Exposure to natural conditions: Stream crossings

Warning Signs: Warning- Flash Floods
Management Signs: None

Sign Placement Criteria:

- The second stream crossing due to exposure to potential flash floods is more hazardous than the first crossing, therefore a second warning sign.
Site Evaluation #10

Inspection Date: 11/5/04

Island: Kauai

GPS Location: (458742, 2439279)

Trail Name: Uluwehi Falls (Falls)

Managing Division: State Parks

Exposure to natural conditions: Falling rocks, Shallow water

Warning Signs: Warning - Falling Rocks

Warning- No Jumping or Diving

Management Signs: End of Trail

Sign Placement Criteria:

- Hazardous falling rocks conditions at the falls in combination with shallow water at the base of the falls warrants falling rock and no diving signs.
- The end of trail sign should be placed at the end of the trail leading to the waterfall.
Site Evaluation #11

Island: Kauai
Trail Name: Fern Grotto/Rope Swing
Exposure to natural conditions: Shallow Water

Warning Signs: Danger – No Diving or Jumping
Management Signs: None
Sign Placement Criteria: Area Closed

- No diving or jumping sign should be located at the site
Site Evaluation  #12

Island: Kauai
Trail Name: Nu’Alolo Trail

Inspection Date: 11/6/04
GPS Location:
(431950, 2447274)
Managing Division
State Parks

Exposure to natural conditions:
Stream crossings, cliffs - falling rocks

Warning Signs:
Warning – Flash Flood Hazardous Cliffs, Falling Rocks

Management Signs:
End of Trail

Sign Placement Criteria:

- General cliff hazards exist on trail at various locations
Site Evaluation #13

Island: Kauai
Trail Name: Nu'alolo Cliff Trail
Exposure to natural conditions: Cliffs

Warning Signs: Warning- Hazardous Cliffs
Management Signs: None

Sign Placement Criteria:

• Narrow cliff hazards exist between destination area(s) which include eroded and narrow trail conditions
Site Evaluation #14
Island: Kauai
Trail Name: Awa' awapuhi Trail
Exposure to natural conditions:

Warning Signs: Warning- Hazardous Cliffs
Management Signs: End of Trail

Sign Placement Criteria:

• Hazardous Cliff and End of Trail signs required at vista area of lookout.
Site Evaluation  #15
Island:  Oahu
Inspection Date:  11/7/04
GPS Location: (456932, 2440822)
Sign: (456916, 2440780)
Managing Division: DOFAW– NAH
Stream crossings, shallow water
Trail Name: Keahua Forestry Arboretum
Exposure to natural conditions:
Warning Signs:
Warning- Flash Flood
Management Signs:
None
Sign Placement Criteria:
•  Sign should be placed before the crossing on both sides of the crossing
•  No diving or jumping should be located beside the river where staff has knowledge of visitors jumping or diving into shallow, murky waters
Site Evaluation #16
Island: Kauai

Inspection Date: 11/7/04
GPS Location: (431622, 2444762)
Waterfall: (431753, 2444612)
Trailhead: (431626, 2444844)
Managing Division: State Parks

Exposure to natural conditions: Stream crossings, Cliffs

Warning Signs:
Warning – No Diving or Jumping
Warning – Flash Floods
Warning – Hazardous Cliffs

Management Signs:
None

Sign Placement Criteria:
- Signs should be located at stream crossings and exposed cliff area
Site Evaluation #17

Island: Maui
Trail Name: Unamed Site - Puohokamoa
Exposure to natural conditions: Falling rocks, Shallow water

Warning Signs: Danger – No Diving or Jumping
Warning- Falling Rocks

Management Signs: None: Area Closed - Beyond

Sign Placement Criteria:

- Common roadside falls and pools with above rock fall and swing area
- Not under active management
Site Evaluation #18
Island: Maui

Trail Name: Keanae Arboretum
Exposure to natural conditions:
Warning Signs:

Management Signs: None

Sign Placement Criteria:

• Signs required near swimming hole at locations where staff has knowledge that the public enters the water
Site Evaluation #19
Island: Maui
Trail Name: Puaa’Kaa Wayside Park
Exposure to natural conditions:
Warning Signs:
Management Signs:
Sign Placement Criteria:

- End of trail sign should be placed at the base of waterfall.
Site Evaluation #20

Island: Maui
Trail Name: Hana-Wainapanapa Trail
Exposure to natural conditions:
Warning Signs:

Management Signs: None

Sign Placement Criteria:

- *This coastal trail should be signed with the standard set of Act 190 beach warning signs*

- *Cliff warning where trail borders ocean*
Site Evaluation #21  
Island: Island of Hawaii  

Trail Name: Captains Trail  
Exposure to natural conditions: Cliffs - falling rocks  

Warning Signs: Warning- Hazardous Cliffs  
Management Signs: End of Trail  

Sign Placement Criteria: 

- Cliff warning at large crack located along trail at both ends of trail where it traverses the crack
Site Evaluation #22

Island: Island of Hawaii  
Trail Name: Manuka State Park Nature Trail  
Exposure to natural conditions: Cliffs - falling rocks

Warning Signs: Warning- Hazardous Cliffs

Management Signs: End of Trail

Sign Placement Criteria:

- **Cliff warning at the Pit Crater**
Site Evaluation #23

Island: Island of Hawaii
Trail Name: Kaheawai Trail
Exposure to natural conditions: Not a maintained Trail
Warning Signs: Warning - Falling Rocks
Warning - Flash Floods
Management Signs: None
Sign Placement Criteria: Staff has knowledge of public use

- This trail is a currently undeveloped and unmanaged historic Hawaiian trail.
**Site Evaluation #24**

**Island:** Island of Hawaii

**Trail Name:** White Road Trail

**Exposure to natural conditions:** Cliffs

**Warning Signs:** Warning- Hazardous Cliff

**Management Signs:** End of Trail

**Sign Placement Criteria:**

- *Hazard begins after the first overlook of the valley. Sign should be placed at overlook*

- *Trail improvements may be warranted*
Site Evaluation #25

Island: Island of Hawaii

Trail Name: Kapaloa Falls Trail

Exposure to natural conditions:
Warning Signs:

Management Signs:

Sign Placement Criteria:

- *Hazardous and Falling Rock warnings at second gate not at highway*

- *No Diving or Jumping at first waterfall and end of trail at Second falls.*
Site Evaluation #26
Island: Island of Hawaii
Trail Name: Pololu Trail
Exposure to natural conditions: Stream crossings
Warning Signs: Warning - Flash Floods
Management Signs: End of Trail, Area Closed

Sign Placement Criteria:
- Dangerous Flash Flood conditions occur at river crossing. Signs should be place on both sides of crossing
Site Evaluation  #27
Island:  Island of Hawaii
Trail Name:  Ala Kahakai Trail
Exposure to natural conditions:  Cliffs
Warning Signs:  Warning- Hazardous Cliffs
Management Signs:  End of Trail

Sign Placement Criteria:
  • Warning signs should be placed in parking area near house
  • Signs at both trailheads
  • End of trail at the last segment of improved trail