

State of Hawai'i
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of State Parks
Honolulu, Hawai'i

June 28, 2013

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

SUBJECT: Request for Approval of the Placement of Act 82, SLH 03, Warning and Management Signs on the Island of Kaua'i at selected locations within Kaua'i's Wailua River State Park including Wailua Falls, Uluwehi Falls, Kaumuali'i, Old Smith's Landing, and Fern Grotto as well as the Canyon and Cliff Trails within Kōke'e State Park and along Kūhiō Highway within Hā'ena State Park.

Request for Approval of the Design and placement of a New Warning Sign at Waiakanaloa Wet Cave in Hā'ena State Park and at Kalalau Beach in Nāpali Coast State Wilderness Park, Kaua'i, Pursuant to Act 82, SLH 2003

Background Information on Act 82, SLH 03, Warning Signs:

Act 82, Session Laws of Hawai'i 2003, relating to Public Land Liability, 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 the dangerous natural conditions that are identified through the signage. Pursuant to Act 82, SLH 03, the Board is to review and approve of the design and placement of these types of signs. The Board, following the recommendations of a Risk Assessment Working Group (RAWG) reviewed and approved the sign design as dictated by Chapter 13-8, Hawai'i Administrative Rules (HAR). All subsequent sign placement at park and trail locations under the Department and County jurisdiction are submitted for review by the RAWG and approved by the Board.

Sign Placement Criteria: Pursuant to Chapter 13-8, HAR, the following guidelines have been used for determination of the placement of signage:

§ 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.

I. The Division of State Parks is requesting approval on the placement of Act 82, SLH 03, warning and management signs at several managed and improved State Park areas within Kaua'i's Wailua River State Park including Wailua Falls, Uluwehi Falls, Wailua Marina, Kaumuali'i, Old Smith's Landing, and Fern Grotto.

1. Wailua Marina, Kaumuali'i and Old Smith's Landing:

Along the west side of the main road into the Wailua Marina is a cliff with potential for rock fall hazard. Signs will be placed at the entrance and three points along this portion of the road to warn visitors of the potential for rock fall.

With distant rain high in the mountains, the Wailua River level can surge when the weather appears fine on the coast. At the three boat ramps accessing the Wailua River at Wailua Marina, Kaumuali'i and Old Smith's Landing, signs will be placed to warn river users of the potential for flash flooding. See Exhibit 1.

2. Wailua Falls:

There is a heavily used parking area on the cliffs above Wailua Falls. There are routes leading to both the top and bottom of the falls. If visitors take these routes they are exposed to risk of falling from high cliffs. Hazardous Cliff warning signs are necessary at these locations. Injuries and deaths have occurred here. In this same area, there is a wall that keeps people away from the cliffs above the falls. Visitors ignore the barrier and signage, climb over the wall or stand on the wall to take pictures. Signs would be installed at these locations and at two locations along Maalo Road below the parking area where people park and appear to be accessing the falls area, to warn visitors of the dangerous cliff and notify them of the area beyond the lookout being closed. See Exhibit 2.

3. Uluwehi Falls:

There is a heavily used trail that crosses a tributary of the Wailua River, subject to flash flooding, which leads to Uluwehi Falls. This area is accessed by boat. These boats most often come from Wailua Marina, Kaumuali'i boat launch or Old Smith's Landing boat launch. Signs will be placed at the trailhead to warn of the potential exposure to flash floods, falling rocks and submerged hazards along the trail. Site specific signs will be placed on both sides of the stream crossing to warn of the risk of flash flood. Signs will be placed at the base of the falls to warn of exposure to submerged rocks hazard and the risk of falling rocks in the area of the pool below the falls. See Exhibit 3.

4. Fern Grotto:

Visitors to the Fern Grotto access the site via boat. The walk from the dock to the Fern Grotto leads visitors past a cliff with potential for rock fall hazard. Although, rock fall mitigation measures have been taken at this site that includes rock scaling and installation of barrier fences, signs are being proposed in the event some hazard remains. Signs will be placed at one entrance point and four points along this portion of the trail to warn visitors of the potential for rock fall. See Exhibit 4.

II. The Division of State Parks is requesting approval on the placement of Act 82, SLH 03, warning and management signs at the Cliff Trail and Canyon Trails within Kōke'e State Park.

Cliff Trail and Canyon Trail:

Visitors to the Cliff Trail are greeted with beautiful views down into the Waimea Canyon. At the end of the trail is a railing to keep people from continuing past the end of the trail. A sign will be placed at the end of the trail warning visitors not to proceed past the railing.

The Canyon Trail is accessed from the same trailhead as the Cliff Trail. At this trailhead, entrance signs will be posted to warn visitors of the hazardous cliffs along the Canyon Trail, the risk of flash floods when crossing the stream and the submerged hazards in the stream.

This is a heavily used trail that crosses Kōke`e stream, just below a small waterfall and above a tall waterfall (both parts of Waipo`o Falls). Signs will be placed to warn of the potential exposure to flash floods along the stream. Signs will be placed at the small upper falls to warn of exposure to submerged rocks hazard. Signs will be placed along the trail leading to the falls warning of the hazardous cliff along a portion of the trail. See Exhibit 5.

III. The Division of State Parks is requesting approval for the placement of Act 82, SLH 03, warning and management signs along Kūhiō Highway within Hā`ena State Park.

Hā`ena State Park:

Kūhiō Highway, the only driving route within Hā`ena State Park, follows along the base of a large cliff with potential for rock fall hazard. Pedestrians also use this road. Signs will be placed at one entrance point and three sites along this portion of the road to warn visitors of the potential for rock fall. See Exhibit 6.

IV. The Division of State Parks is requesting approval of the Design of a New Warning Sign pursuant to Act 82, SLH 03.

On February 9, 2007, the Board of Land and Natural Resources (Board) approved the design of warning signs as recommended by the Risk Assessment Working Group (RAWG), consistent with Act 82, SLH 2003 (See attached Exhibit A). The approved signs included a "DANGER" level sign for Falling Rocks that states:

DANGER!

Falling Rocks!

Do not go beyond this point!

Rocks may fall without warning causing serious injury or death.

Upon further analysis, a need has been discovered for another type of "DANGER" level falling rocks sign.

Per the Act 82 Administrative Rules, §13-8-2, Definitions, and §13-8-5, Hazard labels, the "DANGER" signal word is appropriate where the natural condition, if not monitored or avoided, could result in severe injury or death, or where a fatality has been documented.

As there have been fatalities as a result of people being killed by falling rocks on State lands and the risk at these sites is significantly different from that which would be covered by the existing DANGER Falling Rocks sign, design, review and approval of a DANGER Falling Rocks sign is appropriate. Attached as Exhibit B is a proposed second type of DANGER Falling Rocks sign (DRLS) which states:

DANGER!
Falling Rocks!
Leave this area immediately!
Rocks may fall without warning causing serious injury or death.

This sign is to be posted at parks and trails where falling rock incidents have been documented and the potential for falling rocks is the greatest and particularly if there is no practical way to warn people before they enter a hazardous area. This sign will be used at site specific locations.

V. The Division of State Parks is seeking approval for the placement of the newly designed Act 82, SLH 03, Danger Falling Rock sign at Waiakanaloa Wet Cave along Kūhiō Highway within Hā`ena State Park and at Kalalau Beach in Nāpali Coast State Wilderness Park, Kaua`i.

1. Kalalau Beach:

On July 8, 2011, the Board approved placement of Hazard Warning and Management Signs at several sites within Nāpali Coast State Wilderness Park, Kauai (Exhibit C). The Division of State Parks is proposing adding signs to this park and modifying two sign locations that were previously approved. State Parks also seeks approval to place signs at Hā'ena State Park.

At Nāpali Coast State Wilderness Park, approval was granted for the placement of seasonal warning signs around the caves at the western end of Kalalau Beach to notify visitors of the risk of falling rocks from the cliffs above. Due to increased year round visitation, sand migration and vandalism/theft of seasonal signs, Division of State Parks requests the modification from seasonal signs posted on the beach to permanent signs attached to the rock face surrounding the caves. The three signs approved in Exhibit 4 of BLNR submittal dated July 8, 2011 at location KA00041 and KA00042 will no longer be used, but replaced with two permanent Danger Falling Rock signs attached to the rock face of the cliff. State Parks would like to have approval to use the new Danger Falling Rock sign (DRLS) for these locations to encourage visitors to leave the rock fall area. Additional signs will be placed near the caves, near the waterfall, and on the cliff face between the waterfall and the caves (see Exhibit 7) based on a more recent rock fall inspection report. There will be a total of six Danger Falling Rocks signs (DRLS) between the waterfall and the cave area.

2. Waiakanaloa Wet Cave:

At Waiakanaloa Wet Cave, in Hā'ena State Park, State Parks seeks approval for placement of one of the newly designed Danger Falling Rock signs (Exhibit B) to be placed at Waiakanaloa Wet Cave to warn visitors, who often stop to photograph the cave, of the risk of falling rocks. State Parks would also place four of the original Danger Falling Rocks sign (DRLS) at the perimeter of this site. As shown on Exhibit 6 Inset B, State Parks has blocked parking in the area with permanent traffic delineators, no parking surface striping and no parking signs. Three of the DRLS signs will be placed in the surface striped area. One DRLS sign will be placed at a forty-five degree angle at each end of the striping where pedestrians and vehicles would approach (Exhibit 6).

The Risk Assessment Working Group has been consulted and concurs with the proposed new sign design and installation.

RECOMMENDATION:

That the Board approve:

- I. The placement of Act 82, SLH 03, Warning and Management Signs on the Island of Kaua`i at selected locations within Wailua River State Park including those at Wailua Marina, Kaumuali`i, and Old Smith's Landing as shown on the map identified as Exhibit 1; Wailua Falls as shown on the map identified as Exhibit 2; Uluwehi Falls as shown on the map identified as Exhibit 3; and Fern Grotto as shown on the map identified as Exhibit 4.
- II. The placement of Act 82, SLH 03, Warning and Management Signs on the Island of Kaua`i at selected locations within Kōke`e State Park including those on the Cliff and Canyon Trails as shown on the map identified as Exhibit 5.
- III. Design of a new DANGER Falling Rocks (DRLS) sign, as shown in Exhibit B, to be used statewide;
- IV. The placement of Act 82, SLH 03, Warning and Management Signs including the newly designed DANGER Falling Rock sign (DRLS) on the Island of Kaua`i at selected locations within Hā`ena State Park as shown on the map identified as Exhibit 6 and Nāpali Coast State Wilderness Park on the map identified as Exhibit 7.

Respectfully submitted,



DANIEL S. QUINN
State Parks Administrator

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson

Attachments:

- Exhibit A: February 9, 2007, Board of Land and Natural Resources approved design of warning signs
- Exhibit B: New design for DANGER Falling Rock Sign (DRLS)
- Exhibit C: July 8, 2011, Board approval of placement of Hazard Warning/Management Signs at sites within Nāpali Coast State Wilderness Park, Kauai
- Exhibit 1: Map depicting placement of signs at Wailua River State Park – Wailua Marina, Kaumuali`i, and Old Smith's Landing
- Exhibit 2: Map depicting placement of signs at Wailua River State Park – Wailua Falls
- Exhibit 3: Map depicting placement of signs at Wailua River State Park – Uluwehi Falls
- Exhibit 4: Map depicting placement of signs at Wailua River State Park - Fern Grotto
- Exhibit 5: Map depicting placement of signs at Kōke`e State Park – Cliff and Canyon Trails
- Exhibit 6: Map depicting placement of signs at Hā`ena State Park – Kūhiō Highway and Waiakanaloa Wet Cave
- Exhibit 7: Map depicting placement of signs at Nāpali Coast State Wilderness Park – Kalalau Beach

EXHIBIT 1

DLNR: Division of State Parks Island: Kaua`i Park: Wailua River State Park – Wailua Marina, Kaumuali`i, and Old Smith’s Landing

Exposure to natural conditions: Falling Rocks and Flash Flooding

Entrance Hazard Signs:

Station: KA00043	Warning - Falling Rocks	(WFRE)
Station: KA00047	Warning – Flash Flood	(WFFE)
Station: KA00048	Warning – Flash Flood	(WFFE)
Station: KA00049	Warning – Flash Flood	(WFFE)

Site Specific Hazard Signs:

Station: KA00044	Warning - Falling Rocks	(WFRS)
Station: KA00045	Warning - Falling Rocks	(WFRS)
Station: KA00046	Warning - Falling Rocks	(WFRS)

EXHIBIT 2

DLNR: Division of State Parks Island: Kaua`i Park: Wailua River State Park – Wailua Falls

Exposure to natural conditions: Hazardous Cliff and Area Closed

Site Specific Hazard Signs:

Station: KA00050	Warning – Hazardous Cliff	(WHCS)
Station: KA00051	Warning – Hazardous Cliff	(WHCS)
Station: KA00052	Warning – Hazardous Cliff	(WHCS)
Station: KA00053	Warning – Hazardous Cliff	(WHCS)
Station: KA00054	Warning – Hazardous Cliff	(WHCS)
Station: KA00055	Warning – Hazardous Cliff	(WHCS)
Station: KA00056	Warning – Hazardous Cliff	(WHCS)
Station: KA00057	Warning – Hazardous Cliff	(WHCS)

Management Signs:

Station: KA00050	Area Closed	(NACS)
Station: KA00054	Area Closed	(NACS)
Station: KA00057	Area Closed	(NACS)
Station: KA00058	Area Closed	(NACS)

EXHIBIT 3

DLNR: Division of State Parks Island: Kaua`i Park: Wailua River State Park – Uluwehi Falls

Exposure to natural conditions: Flash Flooding, Submerged Hazard, and Falling Rocks

Entrance Hazard Signs:

Station: KA00059	Warning – Flash Flood	(WFFE)
Station: KA00059	Danger – Falling Rocks	(DRLS)
Station: KA00059	Danger – No Diving or Jumping	(DNDE)

Site Specific Hazard Signs:

Station: KA00060	Warning – Flash Flood	(WFFS)
Station: KA00061	Warning – Flash Flood	(WFFS)
Station: KA00064	Danger – Falling Rocks	(DRLS)
Station: KA00065	Danger – No Diving or Jumping	(DNDS)

EXHIBIT 4

DLNR: Division of State Parks Island: Kaua`i Park: Wailua River State Park – Fern Grotto

Exposure to natural conditions: Falling Rocks**Entrance Hazard Signs:**

Station: KA00066	Warning - Falling Rocks	(WFRE)
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Site Specific Hazard Signs:

Station: KA00067	Warning - Falling Rocks	(WFRS)
Station: KA00068	Warning - Falling Rocks	(WFRS)
Station: KA00069	Warning - Falling Rocks	(WFRS)
Station: KA00070	Warning - Falling Rocks	(WFRS)

EXHIBIT 5

DLNR: Division of State Parks Island: Kaua`i Park: Kōke`e State Park – Cliff and Canyon Trails

Exposure to natural conditions: Flash Flooding, Hazardous Cliff, and Submerged Hazard**Entrance Hazard Signs:**

Station: KA00071	Warning – Hazardous Cliff	(WHCE)
Station: KA00071	Warning – Flash Flood	(WFFE)
Station: KA00071	Danger – No Diving or Jumping	(DNDE)

Site Specific Hazard Signs:

Station: KA00073	Warning – Hazardous Cliff	(WHCS)
Station: KA00074	Warning – Hazardous Cliff	(WHCS)
Station: KA00075	Warning – Flash Flood	(WFFS)
Station: KA00076	Warning – Flash Flood	(WFFS)
Station: KA00077	Danger – No Diving or Jumping	(DNDS)

Management Signs:

Station: KA00072	End of Trail	(NETS)
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EXHIBIT 6

DLNR: Division of State Parks Island: Kaua`i Park: Hā`ena State Park – Kūhiō Highway

Exposure to natural conditions: Falling Rocks

Entrance Hazard Signs:

Station: KA00078 Warning - Falling Rocks (WFRE)

Site Specific Hazard Signs:

Station: KA00079 Warning - Falling Rocks (WFRS)

Station: KA00080 Danger - Falling Rocks (DRLS)

Station: KA00081 Danger - Falling Rocks (DRLS)

Station: KA00082 Danger - Falling Rocks (DRLS)

Station: KA00083 Danger - Falling Rocks (DRLS)

Station: KA00084 Danger - Falling Rocks Leave (DRLS)

Station: KA00085 Warning - Falling Rocks (WFRS)

EXHIBIT 7

DLNR: Division of State Parks Island: Kaua`i Park: Nāpali Coast State Wilderness Park – Kalalau Beach

Exposure to natural conditions: Falling Rocks

Site Specific Hazard Signs:

Station: KA00041 Danger - Falling Rocks Leave (DRLS)

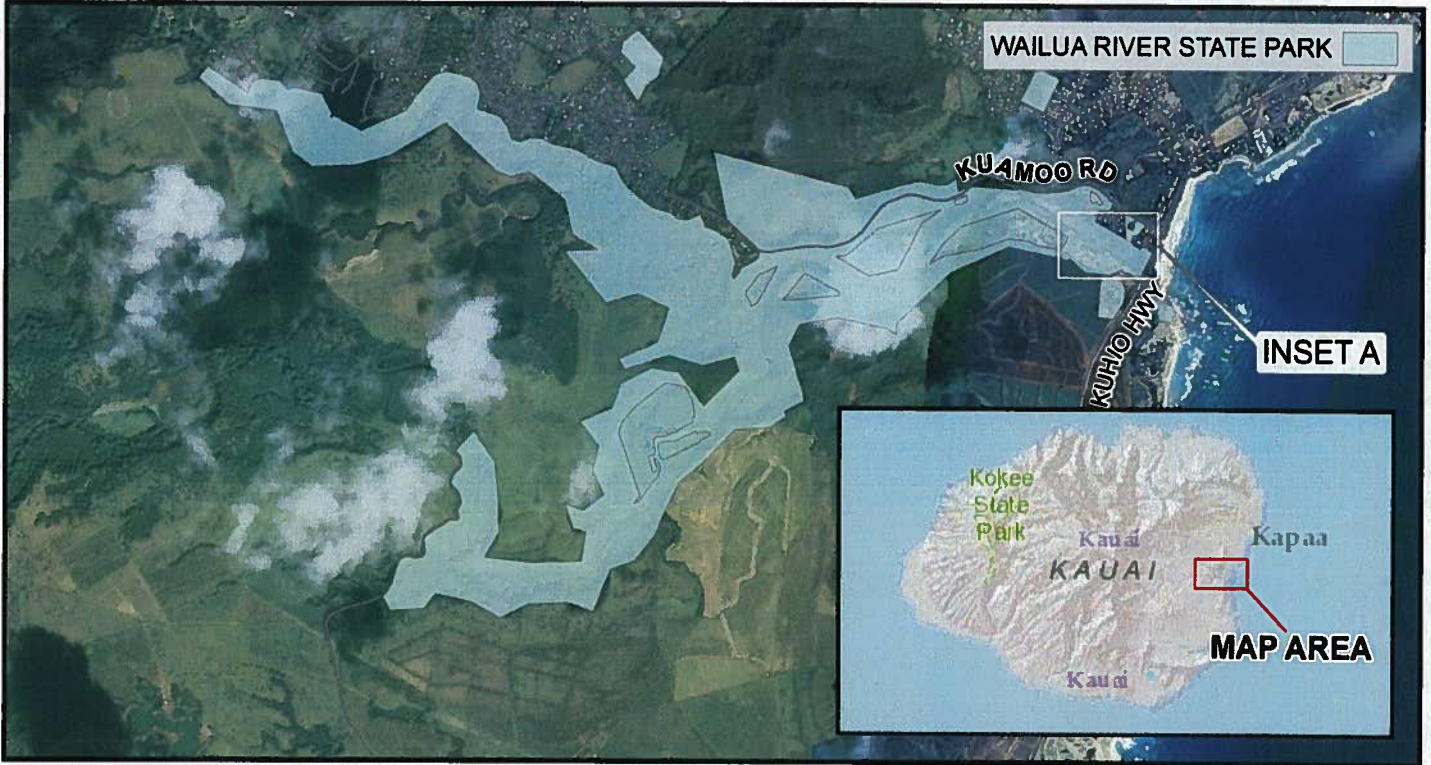
Station: KA00042 Danger - Falling Rocks Leave (DRLS)

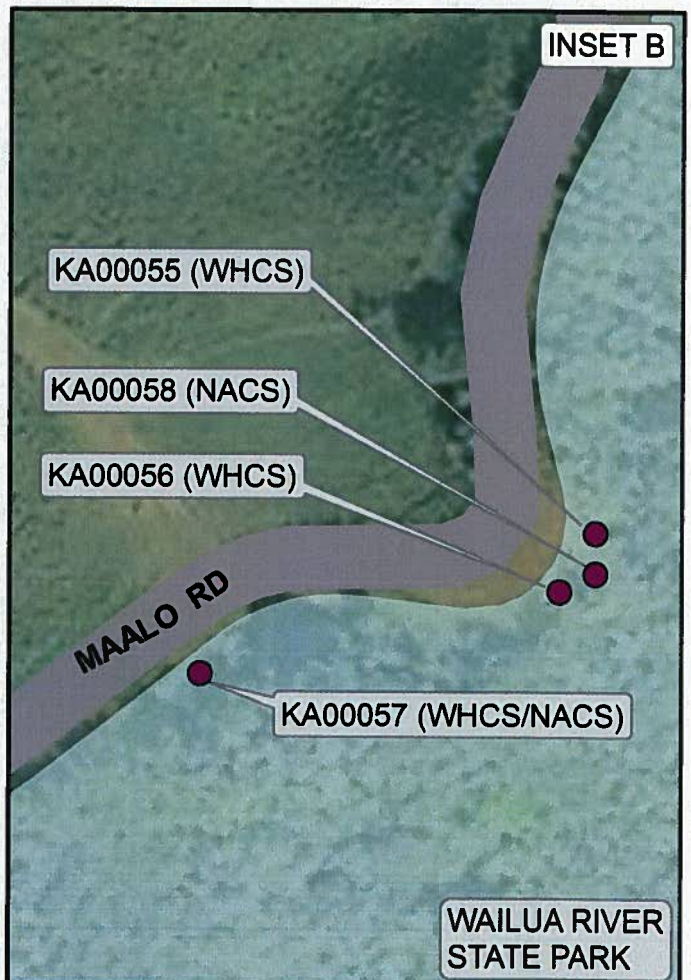
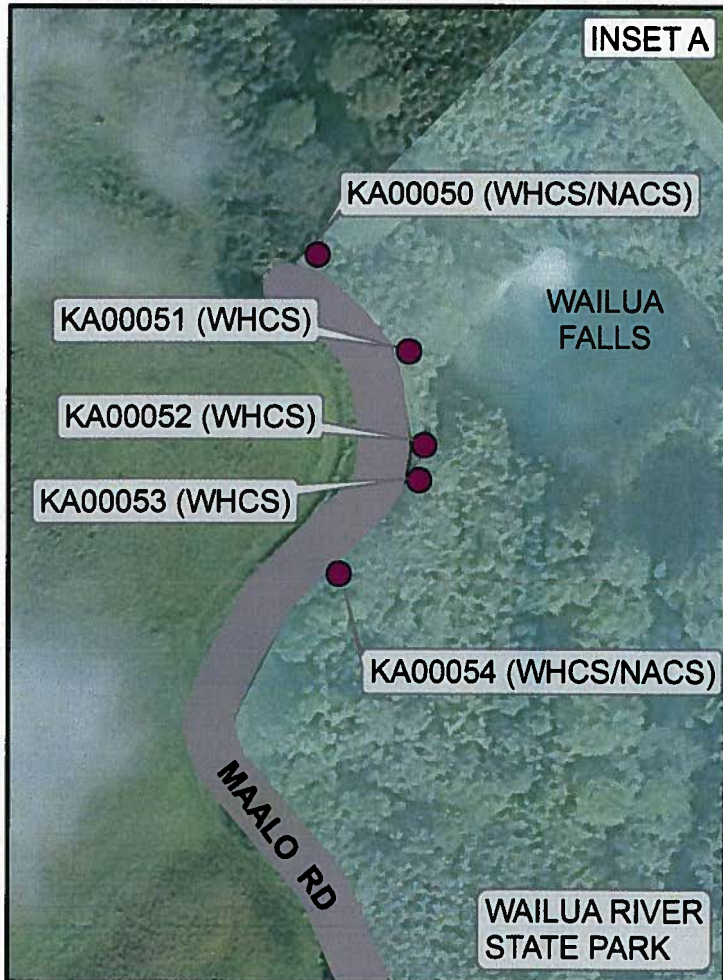
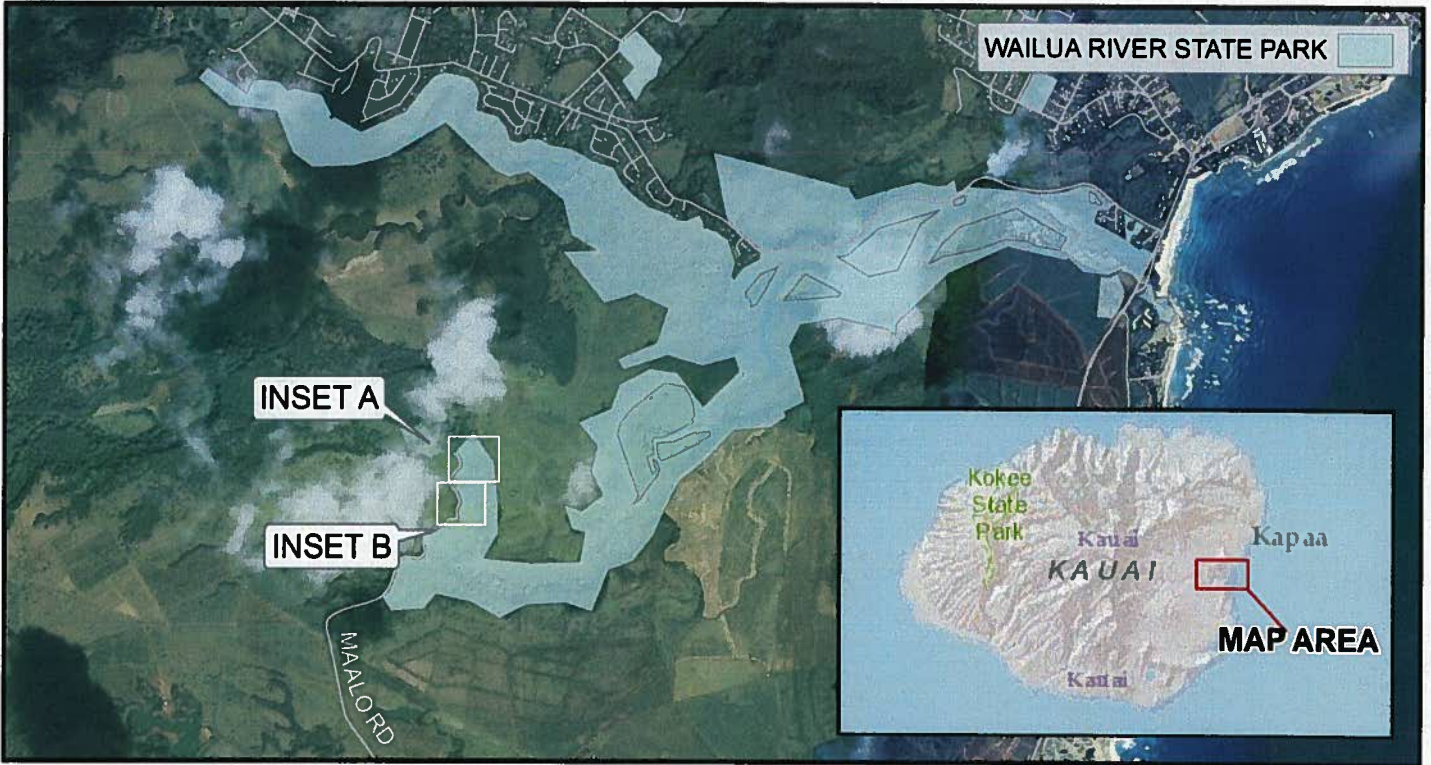
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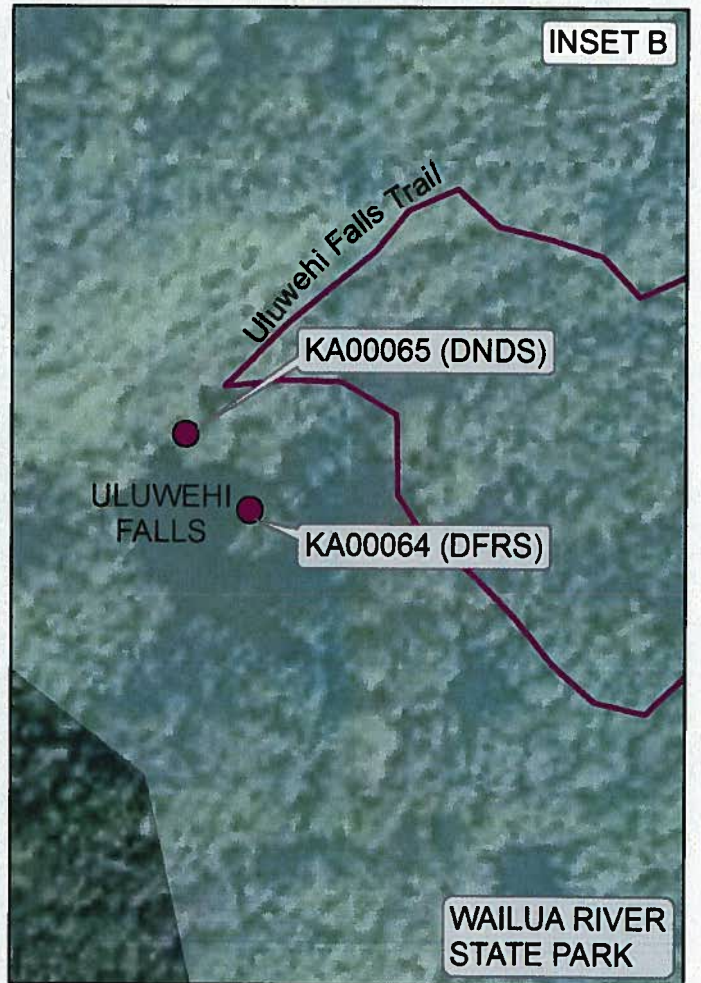
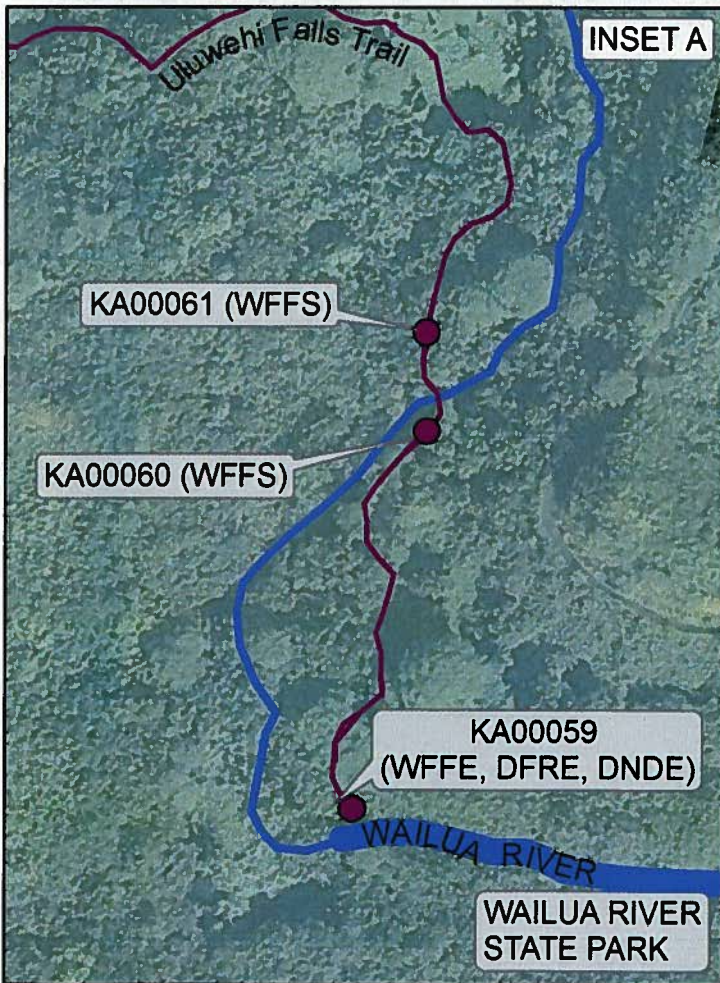
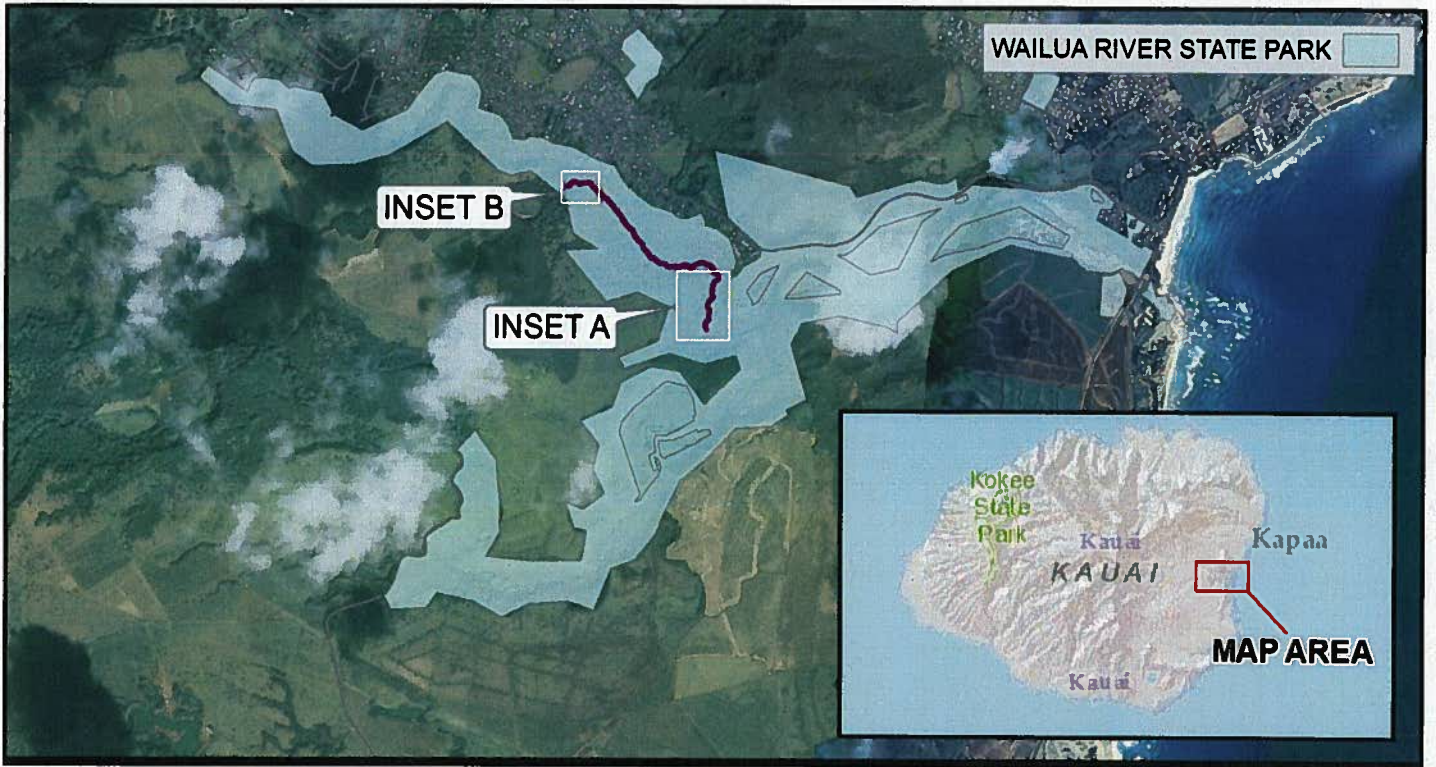
Station: KA00087 Danger - Falling Rocks Leave (DRLS)

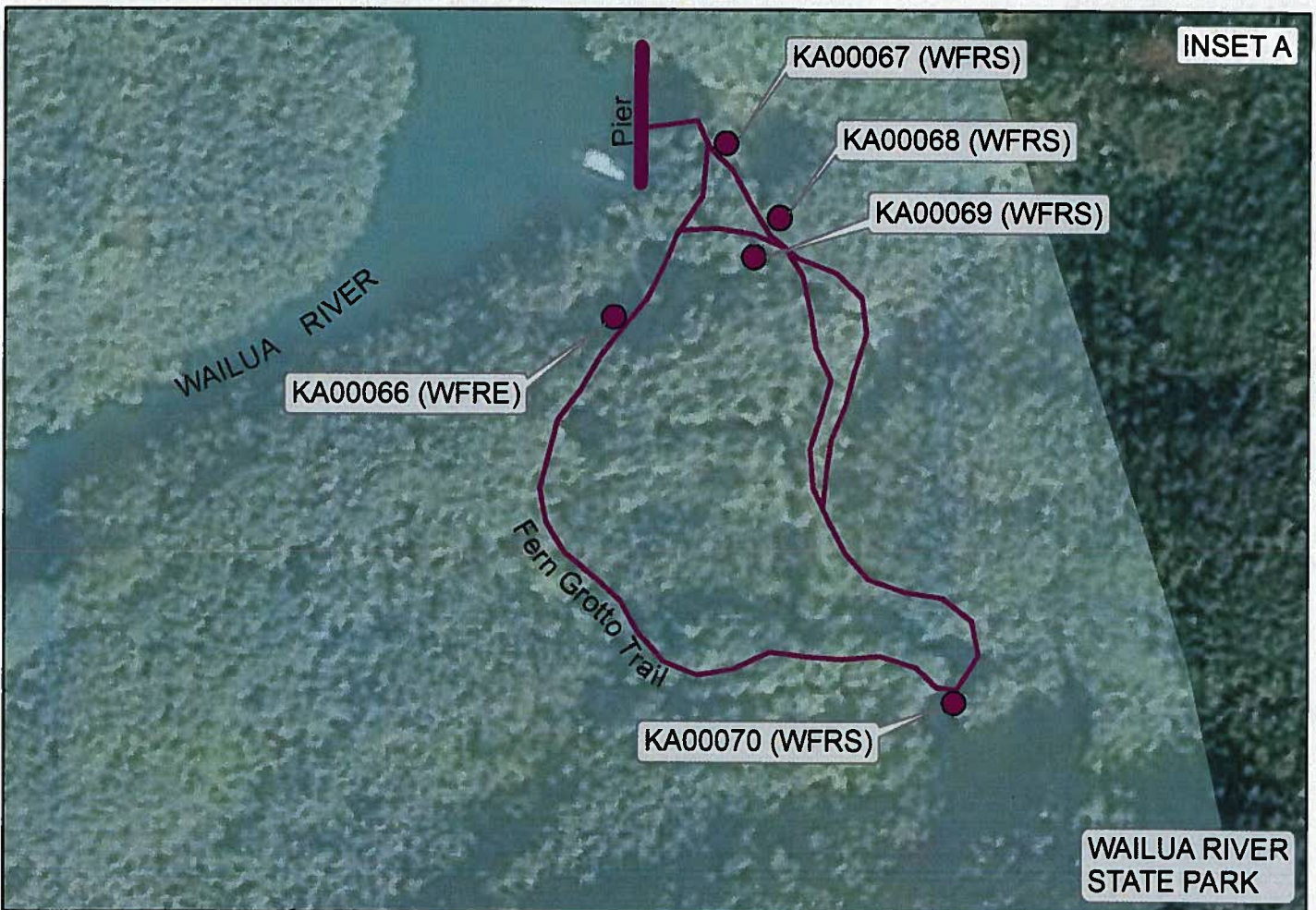
Station: KA00088 Danger - Falling Rocks Leave (DRLS)

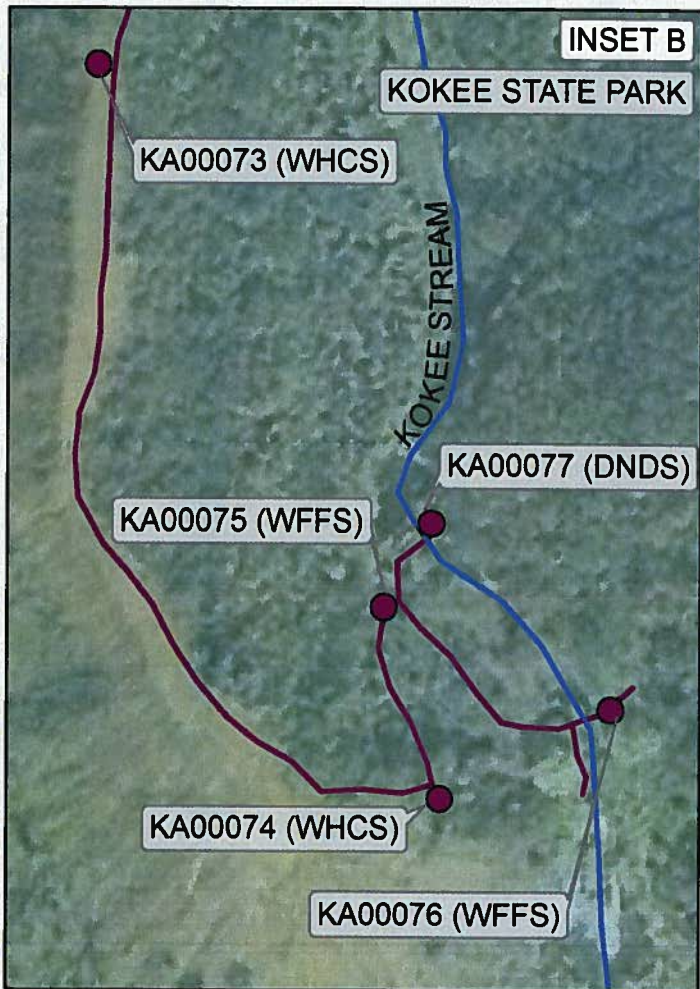
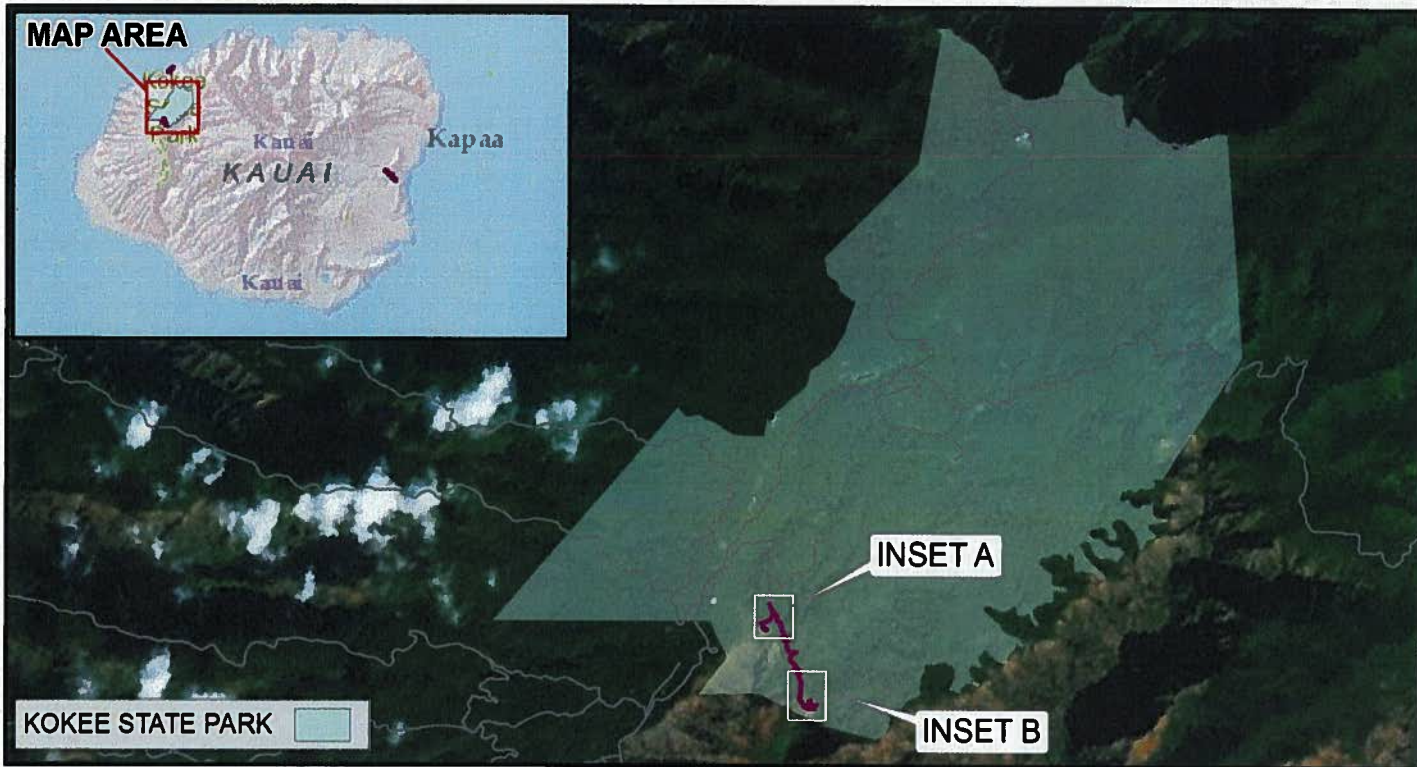
Station: KA00089 Danger - Falling Rocks Leave (DRLS)

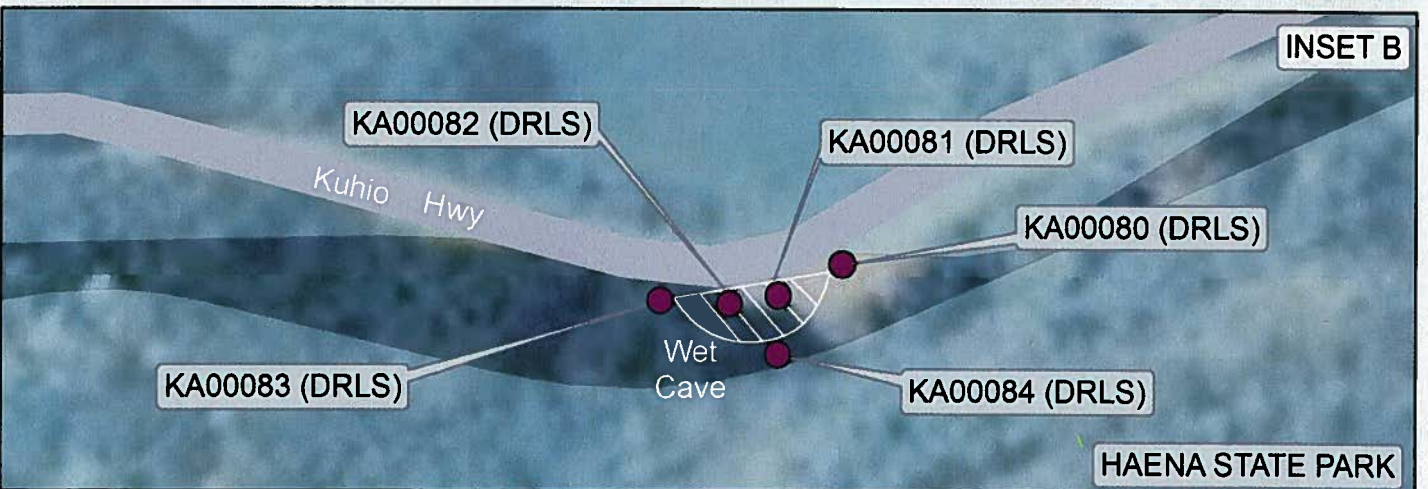
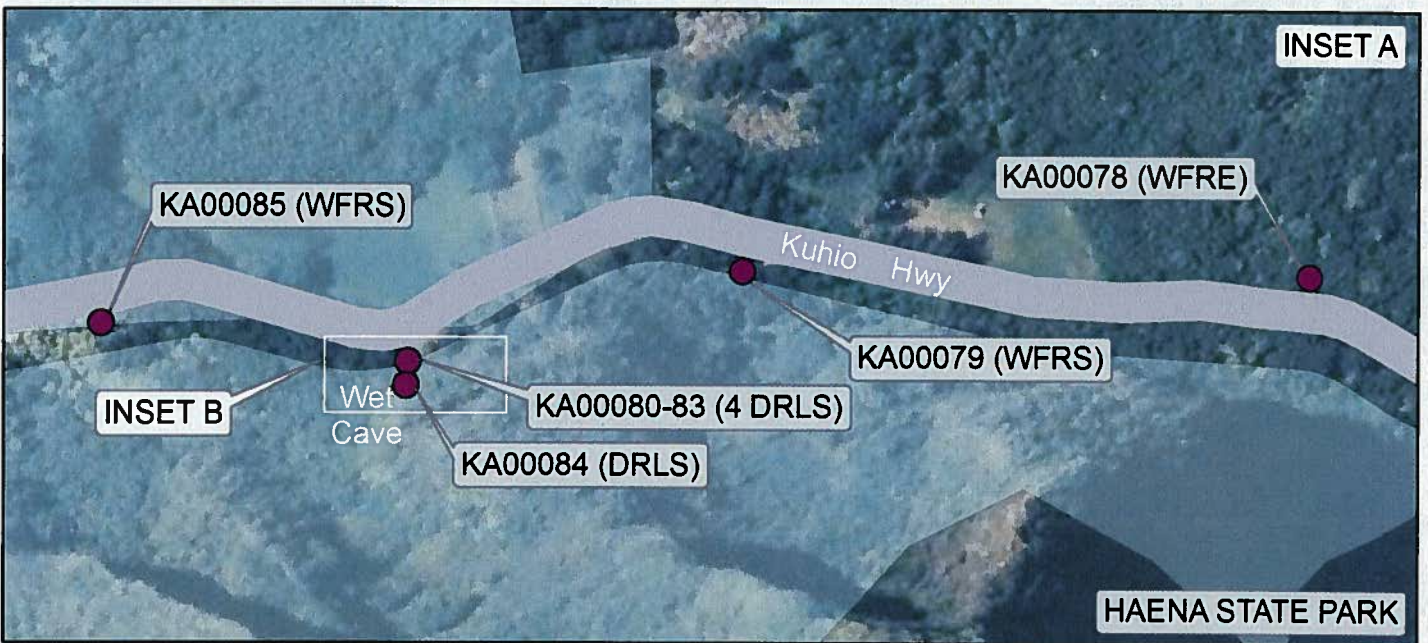
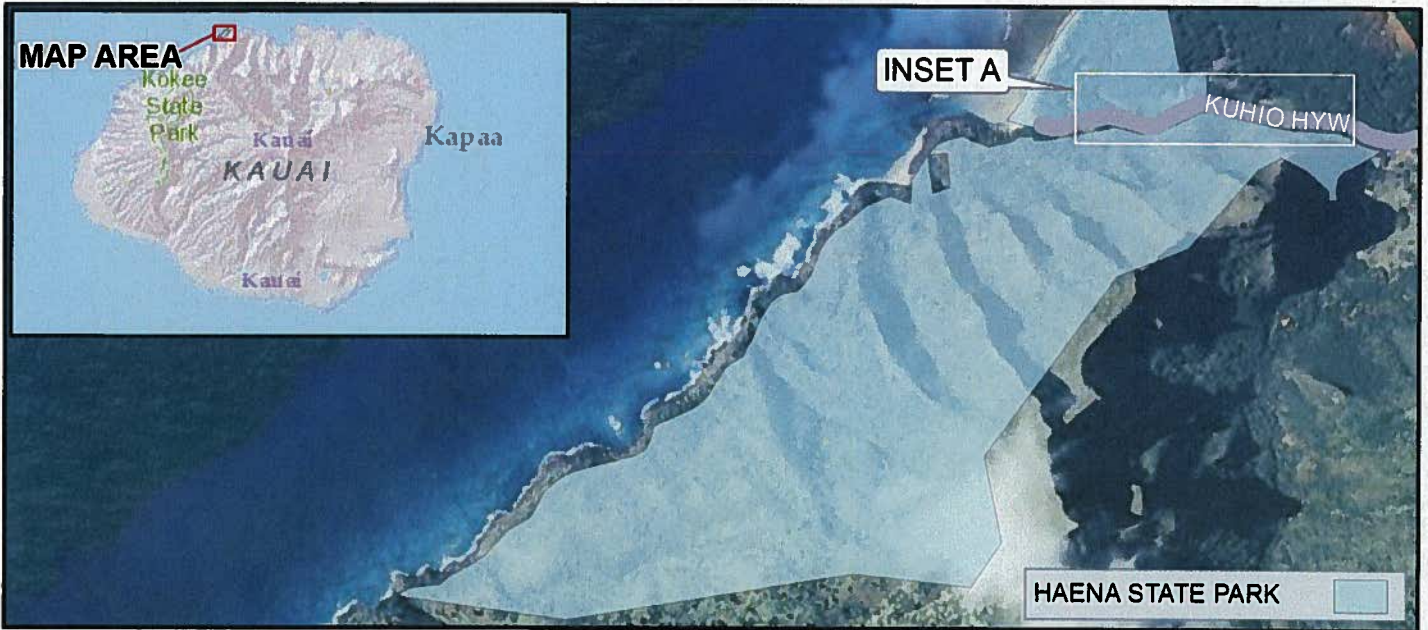


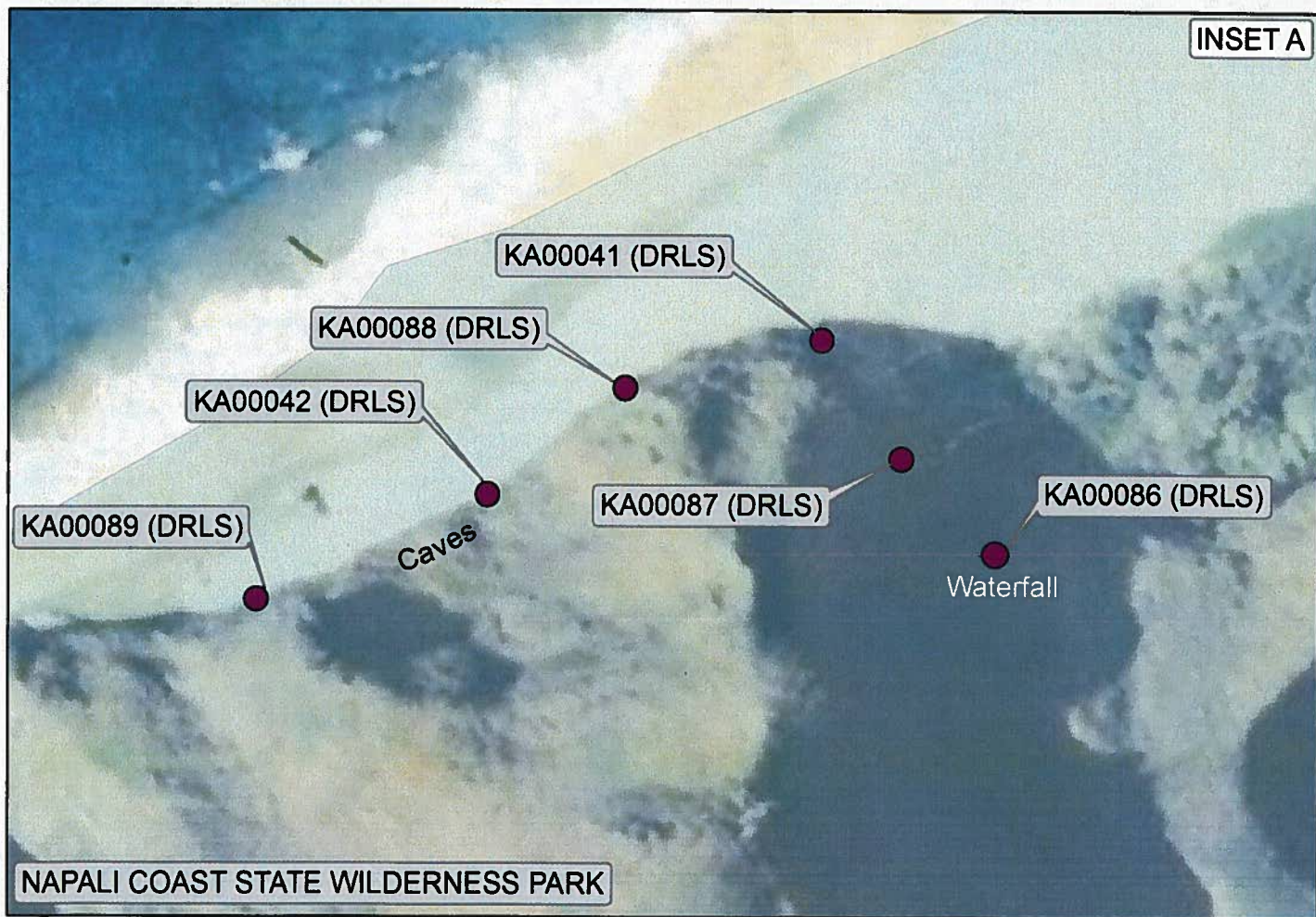












Exhibit

A

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Forestry and Wildlife
Honolulu, Hawaii 96813

February 9, 2007

Chairperson and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Land Board Members:

SUBJECT: Request for Approval of the Design and Placement of Warning Signs on Improved Public Lands. (Pursuant to Act 82, Session Laws Hawaii, 2003)

Act 82, 2003 Session Laws Hawaii, Relating to Public Land Liability, 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 the dangerous natural conditions that are identified through the signage. Improved public lands, as defined by Act 82, are designated as part of the DLNR State Park system, parks, and parkways under Chapter 184 HRS, or as part of a county's park system, and lands which are part of the Hawaii Statewide Trail and Access System (Na Ala Hele) under Chapter 198D HRS. Act 82 contained a provision for the promulgation of Hawaii Administrative Rules (HAR) to guide the Act 82 Risk Assessment Working Group (RAWG) and DLNR in the design and placement of warning signs. The signs have been designed and the locations identified pursuant to Chapter 8 of Title 13, Hawaii Administrative Rules (HAR), entitled "The Design and Placement of Warning Signs on Improved Public Lands" (Exhibit 1). The design guidelines embedded in Chapter 8, HAR are based substantially on the sign design guidelines of the America National Standards Institute (ANSI).

Pursuant to Act 82, the Board is to review and approve of the design and placement of these signs:

"Conclusive presumptions relating to duty of public entities to warn of dangers on improved public lands. (a) A sign or signs warning of dangerous natural conditions on improved public lands shall be conclusively presumed to be legally adequate warning of the dangerous natural conditions of which the sign or signs warn, if the State or a county posts a sign or signs warning of the dangerous natural conditions and the design and placement of the warning sign or signs are approved by the board. The board shall consult the risk assessment working group established by chapter 171, prior to approving the design and placement of a warning sign pursuant to this section."

The RAWG has approved the sign design and the conceptual placement as delineated in Chapter 8, HAR.

There are three types of signs for your review:

1. Trailhead or Park Area Entrance Hazard Signs

Pursuant to Chapter 8 HAR, these signs are to be located at the entrances to trails and park areas to alert the user that they will encounter a potentially dangerous natural condition along the trail or in the interior of the park area. These signs are based on the design guidelines, but due to the fact that they are located away from an actual hazard, the text simply reflects that the trail or park contains the hazard and the possibility of injury.

2. Site Specific Hazard Signs

Pursuant to Chapter 8 HAR, these signs are to be located as close as possible to the potentially dangerous natural condition and depict the hazard, the degree of injury, and means to avoid the hazard.

3. Site Specific Management Signs

These signs are not a component of Act 82. During the evaluation of public exposure to dangerous natural conditions along trails and in State Parks, it was determined that *uniform signage that directed public behavior away from a location or indicated a closure would be also necessary to either protect public safety or the natural or culture resources*. Management signs are intended to modify public behavior and attention, and have been designed pursuant to the ANSI criteria, but are not specifically included in the Chapter 8, HAR. However, staff determined that it would be effective to also create uniform management signs based upon the same national standards and criteria delineated in Chapter 8 HAR.

Staff has selected two priority locations and have prepared two prototype maps for your review and approval that delineate the placement of the warranted signage. If this method is clear and acceptable for determining the placement, these maps will be the prototype for future Board approval on the placement of signage pursuant to Chapter 8, HAR.

Sign Placement Criteria

The following guidelines have been used for determination of the placement of signage:

1. Traffic patterns and managed access points of people accessing the improved public lands shall be considered when placing signs. 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.
2. The signs shall be placed at or near access points, 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

3. Sign dimensions at managed entrances to improved public land adjacent to parking areas and other locations accessible by vehicles shall be a minimum of eighteen inches by twenty-four inches. Sign dimensions at remote, interior locations and boundaries accessible by pedestrians of improved public land shall be a minimum of twelve inches by eighteen inches.

Types of Environmental Conditions and the Related Sign Design Identified

Site Specific Hazard Signs (These signs have ancillary Entrance signs)

Hazard Signs are intended to warn of potentially dangerous natural conditions and/or modify public behavior

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

This sign is to be posted along trails or access roads that cross streams where there is the potential for the water to rise quickly



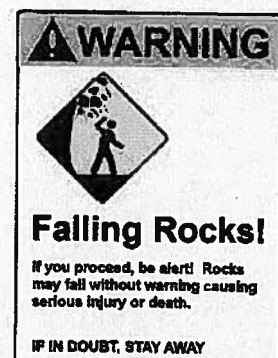
2. Danger
Flash Flood!
Be alert, water may rise without warning
Fast moving water in this stream has killed people

This sign is to be posted along streams where there is the potential for the water to rise quickly and there has been a documented fatality



3. Warning
Falling Rocks!
If you proceed, be alert! Rocks may fall without warning causing serious injury or death.
IF IN DOUBT, STAY AWAY

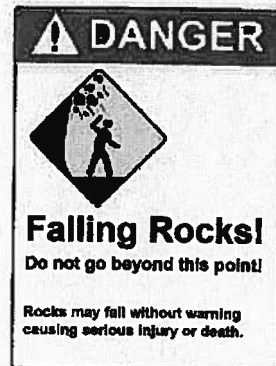
Trail or park area is open and the user is provided an informed choice There may be trail locations where observation indicates habitual rockfall, and a sign may be posted even though the user is generally in motion along the rockfall area



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 severe at this location, use is restricted

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



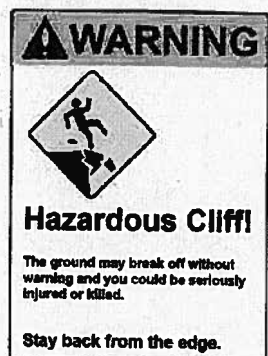
5. **Danger**
No Diving or Jumping!
 You may strike submerged objects
 and be seriously injured or killed.

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



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 at trail and park situations that have steep cliffs, such as scenic lookouts and trail areas where there is narrow or unstable trail or cliff structure.



Site Specific Management Signs

Management signs are intended to convey information to modify and inform public behavior – not warn of specific dangerous conditions.

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 the end of the trail experience is to occur but there is 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.

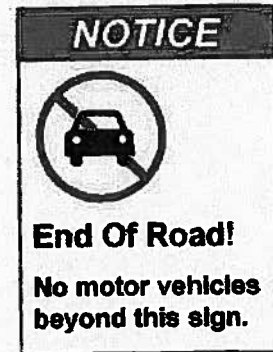
3. Notice
Area Closed!
Do not go beyond this sign.

This sign is to be posted along areas where there is no authorized or established trail or access route, and where public access is prohibited for either resource management or safety issues and staff has knowledge that the public traverses the area. This sign was intended to delineate the end of managed park, arboreta or other types of public land management 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



RECOMMENDATION:

That the Board:

1. Approve the design of the signs for the : a) Entrance, b) Site Specific Hazard and c) Site Specific Management signs as shown on Exhibit 2
2. Approve the placement of the signs at Manoa Falls Trail and Kealakekua Bay State Park as depicted on the maps showing the placement of signs in Exhibits 3 and 4.

Respectfully submitted,

Paul J. Conry
 PAUL J. CONRY
 Administrator

Attachments:

- Exhibit 1: Chapter 8 of Title 13, Hawaii Administrative Rules, The Design and Placement of Warning Signs on Improved Public Lands.
- Exhibit 2 Entrance Hazards Signs, Site Specific Hazards Signs and Site Specific Management Signs (Contains the Codes for Identification of Sign Placement for Exhibits 3 and 4)
- Exhibit 3 Map depicting the placement of signs at Manoa Falls Trail.
- Exhibit 4 Map depicting the placement of signs at Kealakekua Bay State Park.

APPROVED FOR SUBMITTAL:

Peter T. Young
 PETER T. YOUNG, Chairperson
 Board of Land & Natural Resources

DEPARTMENT OF LAND AND NATURAL REOSURCES

Adoption of Chapter 13-8
Hawaii Administrative Rules

November 18, 2005

1. Chapter 8 of Title 13, Hawaii Administrative Rules, entitled "The Design and Placement of Warning Signs on Improved Public Lands" is adopted to read as follows:

"HAWAII ADMINISTRATIVE RULES

TITLE 13

DEPARTMENT OF LAND AND NATURAL RESOURCES

SUBTITLE 1

CHAPTER 8

THE DESIGN AND PLACEMENT OF WARNING SIGNS ON IMPROVED
PUBLIC LANDS

Subchapter 1. General Provisions

- \$13-8-1 Purpose
- \$13-8-2 Definitions
- \$13-8-3 Severability

Subchapter 2. Standards for Sign Design

- \$13-8-4 American National Standards Institute
- \$13-8-5 Hazard labels
- \$13-8-6 Pictogram symbols
- \$13-8-7 Sign text
- \$13-8-8 Sign dimensions

Subchapter 3. Standards for Sign Placement

- \$13-8-9 Public use and exposure
- \$13-8-10 Placement
- \$13-8-11 Multiple signs

SUBCHAPTER 1

GENERAL PROVISIONS

\$13-8-1 Purpose. The purpose of these rules is to establish standards to guide the department of land and natural resources and the risk assessment working group in the general design and placement of signs warning of dangerous natural conditions on improved public lands.
[Eff. _____] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

§13-8-2 Definitions. As used in this chapter, unless otherwise provided or required by context:

"Alert symbol" means the triangular symbol with an exclamation mark that appears to the left of the signal word.

"ANSI" means the American National Standards Institute.

"Board" means the board of land and natural resources.

"Caution", when used as a signal word on a hazard label, means the potential for encountering a natural condition which if not monitored, could result in a minor or moderate injury. This signal word is intended to alert the user to be more vigilant.

"Danger", when used as a signal word on a hazard label, means the potential for encountering a natural condition, which, if not monitored or avoided, could result in severe injury or death. This signal word is for the most extreme conditions or actions where foreseeable harm is severe or a fatality has been documented at a specific location due to the natural condition.

"Hazard label" means a specific label on the upper portion of the sign that uses the signal words "danger, warning, or caution" in conjunction with the "alert symbol".

"Improved public lands" means lands designated as part of the state park system, parks, and parkways under chapter 184, Hawaii Revised Statutes, or as part of a county's park system, and lands which are part of the Hawaii statewide trail and access system under chapter 198D, Hawaii Revised Statutes, excluding buildings and structures constructed upon such lands.

"Pictogram symbol" means a graphic symbol that illustrates the dangerous natural condition and its potential risk of harm.

"Risk assessment working group" means

- (1) The chairperson of the board, or designee;
- (2) The mayor of each county, or designee;
- (3) The administrators of the department's division of forestry and wildlife and the division of state parks, 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.

"Signal word" means the word located on a hazard label that calls attention to the sign and designates a degree or level of hazard seriousness.

"Warning", when used as a signal word on a hazard label, indicates the potential for encountering a natural condition, which, if not monitored or avoided, may result in a moderate to serious injury, or death.

[Eff.] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

§13-8-3 Severability. If any provision of this chapter or the application thereof to any person or circumstance is held invalid, this invalidity shall not affect other provisions or applications of this chapter that can be given effect without the invalid provision or application, and to this end, the provisions of this chapter are severable. [Eff.] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

SUBCHAPTER 2

STANDARDS FOR SIGN DESIGN

§13-8-4 American National Standard Institute. ANSI product safety sign and label standards for format, content, and font currently in effect shall be considered in the design of the warning signs. The board and the risk assessment working group, at their discretion and if consistent with the purposes of these rules and in the public interest, may deviate from these standards.

[Eff.] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

§13-8-5 Hazard labels. Appropriate hazard labels as defined in this chapter (e.g. caution, warning, or danger) shall be used on the top of the warning sign. A triangular alert symbol with an exclamation mark shall appear to the left of the hazard label.

[Eff.] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

§13-8-6 Pictogram symbols. Appropriate Pictogram symbols as defined in this chapter shall be used and placed under the hazard label. [Eff.]
 (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

§13-8-7 Sign text. (a) Sign text shall be used to reinforce the hazard label and pictogram as follows:

- (1) Text shall be in a headline style that uses simple and direct words;
- (2) Active rather than passive verbs shall be used. Action oriented phrases shall be put at the beginning of the sentence and not in the middle or at the end;
- (3) Adverbs that are difficult to interpret shall be avoided. There shall be no more than one clause in a sentence;
- (4) Upper case and centered type shall be avoided whenever possible;
- (5) Arial/Helvetica, Arial/Helvetica Black, Folio Medium, Franklin Gothic, Futura, or a similar style of font shall be used for the sign text;
- (6) Colored background shall not be used for the text portion of warning signs; and
- (7) Agency identification and other agency markings shall not be placed on the front of the sign but may be placed on reverse side of sign.

(b) The board and the risk assessment working group, at their discretion and if consistent with the purposes of these rules and in the public interest may deviate from these standards. [Eff.] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

§13-8-8 Sign dimensions. Sign dimensions at managed entrances to improved public land adjacent to parking areas and other locations accessible by vehicles shall be a minimum of eighteen inches by twenty four inches. Sign dimensions at remote, interior locations and boundaries accessible by pedestrians of improved public land shall be a minimum of twelve inches by eighteen inches.
 [Eff.] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

SUBCHAPTER 3

STANDARDS FOR SIGN PLACEMENT

§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.
 [Eff.] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

§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. [Eff.]
 (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

§13-8-11 Multiple signs. If multiple signs are installed they shall be on separate posts or in another manner that is rendered necessary due to the nature of the location and terrain. Whenever possible, installation shall attempt to minimize holes in the sign."
 [Eff.] (Auth: SLH 2003, Act 82, §2) (Imp: SLH 2003, Act 82, §2)

2. The adoption of chapter 13-8 Hawaii Administrative Rules, shall take effect ten days after filing with the Office of the Lieutenant Governor.

I certify that the foregoing copies of the rules drafted in the Ramseyer format, pursuant to the requirements of section 91-4.1, Hawaii Revised Statutes, which were adopted on November 18, 2005 and filed with the Office of the Lieutenant Governor.

Chairperson, Board of
Land and Natural Resources

APPROVED AS TO FORM:

Deputy Attorney General

Exhibit 2

Entrance Hazard Sign Codes



WFRE



WHCE



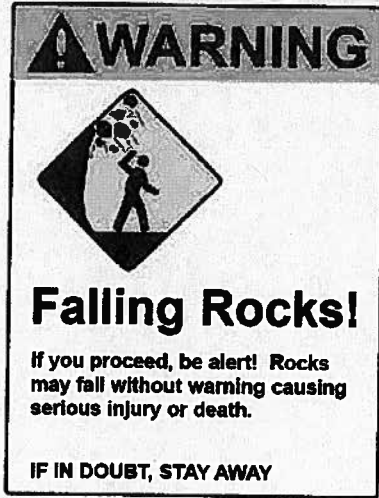
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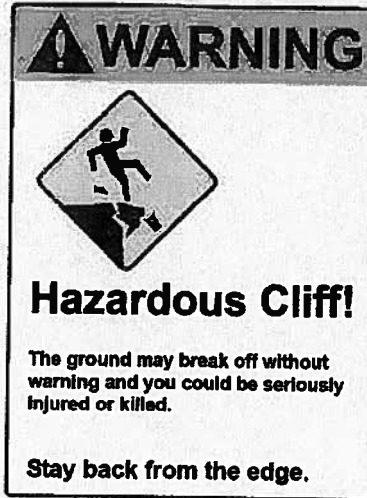
DNDE

Exhibit 2

Site-Specific Hazard Sign Codes



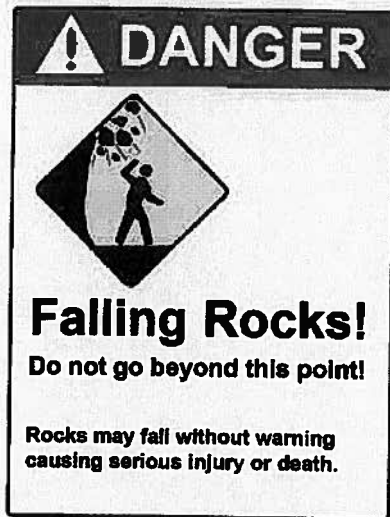
WFRS



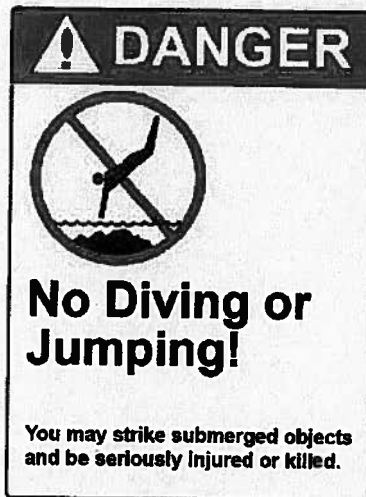
WHCS



WFFS



DFRS



DNDS



DFFS

Exhibit 2

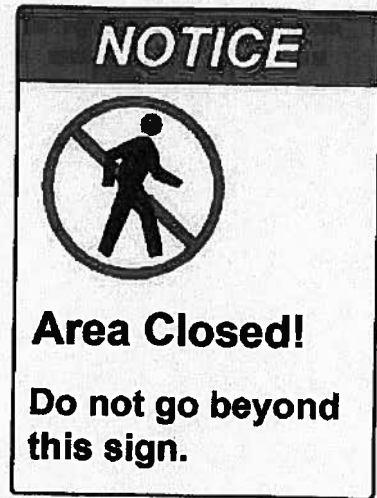
Site-Specific Management Sign Codes



NETS



NERS



NACS



CEMS

DLNR Division: DOFAW

Island: Oahu

Trail Name: Manoa Falls

Exposure to natural conditions: Stream crossings, falling rocks

Entrance Hazard Signs:

Station: OA00001

Warning-Falling Rocks

(WFRE)

Warning – Flash Floods

(WFFE)

Site Specific Hazard Signs:

Station: OA00002

Warning – Flash Floods

(WFFS)

Station: OA00003

Danger-Falling Rocks

(DFRS)

Site Specific Management

Signs:

End of Trail

(NETS)

Station: OA00003

Area Closed

(NACS)

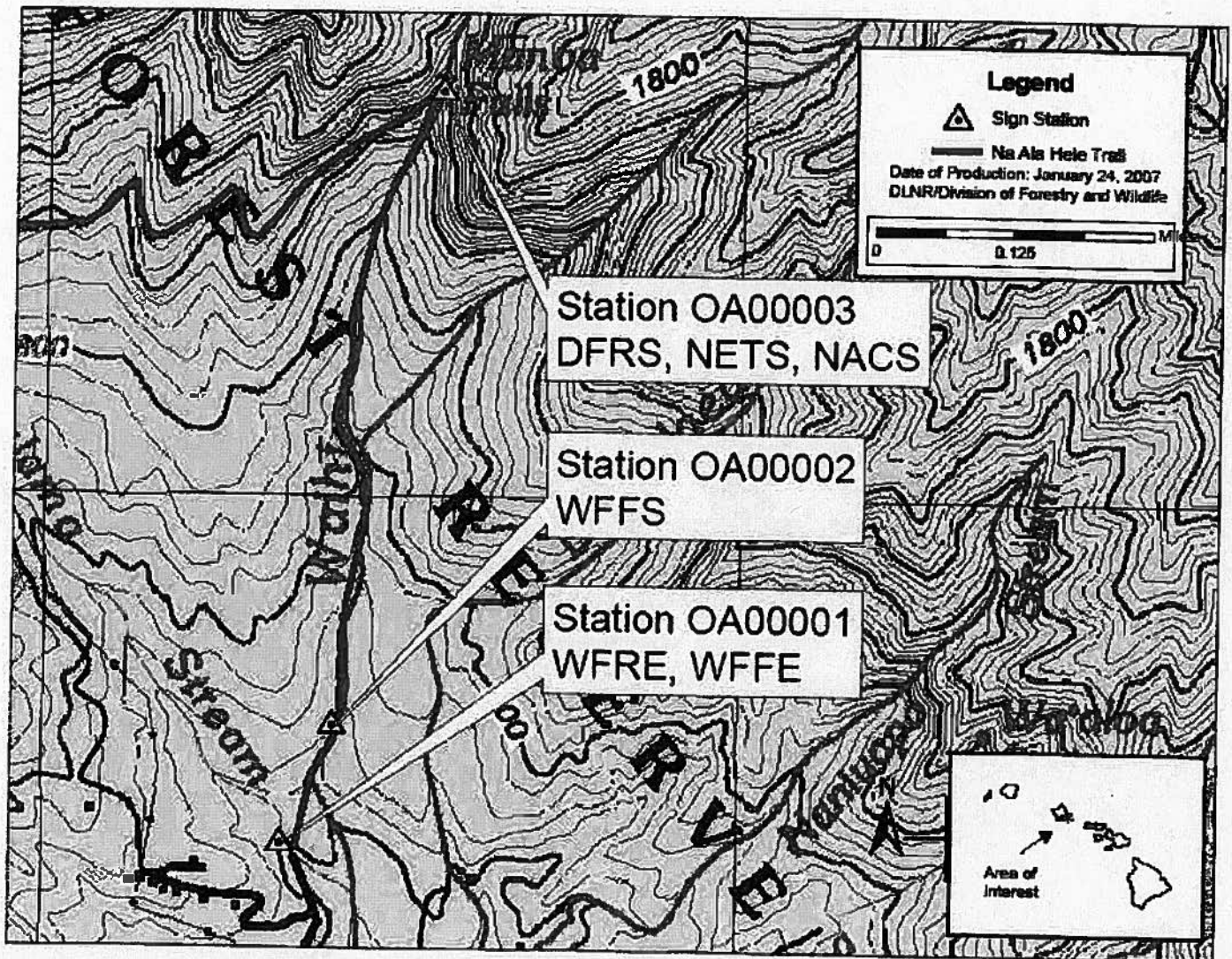


Exhibit 4

DLNR Division: State Parks

Island: Hawaii

**Park: Kealakekua Bay
State Historical Park**

Exposure to natural conditions: Falling rocks

Entrance Hazard Signs:

Station: HA00001

Warning-Falling Rocks

(WFRE)

Site Specific Hazard Signs:

Station: HA00002

Warning-Falling Rocks

(WFRS)

Station: HA00003

Warning-Falling Rocks

(WFRS)

Station: HA00004

Danger-Falling Rocks

(DFRS)

Station: HA00005

Danger-Falling Rocks

(DFRS)

Station: HA00006

Danger-Falling Rocks

(DFRS)

Station: HA00007

Danger-Falling Rocks

(DFRS)

Station: HA00008

Danger-Falling Rocks

(DFRS)

Station: HA00009

Danger-Falling Rocks

(DFRS)

Station: HA000010

Danger-Falling Rocks

(DFRS)

Station: HA000011

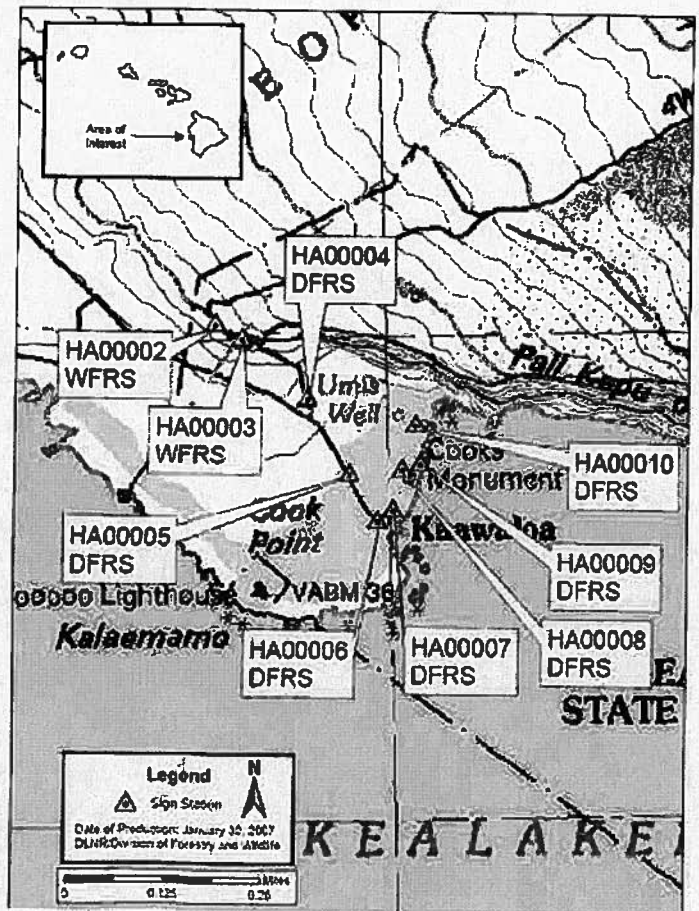
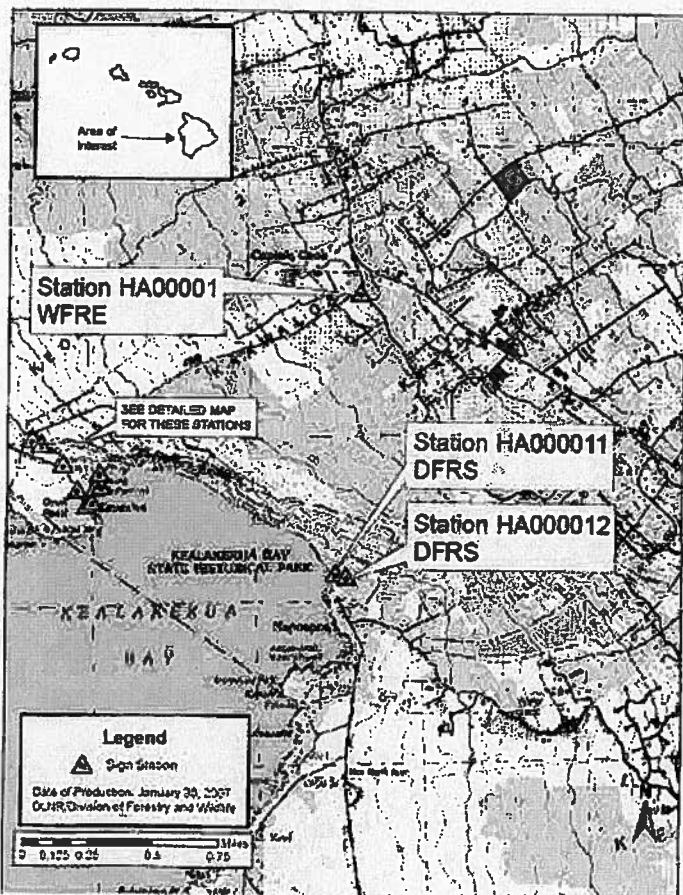
Danger-Falling Rocks

(DFRS)

Station: HA000012

Danger-Falling Rocks

(DFRS)



Exhibit

B

! DANGER



Falling Rocks!

Leave this area immediately!

**Rocks may fall without warning
causing serious injury or death.**

18 in

24 in

3.5 in

9 in

1.75 in letters

.75 in letters

.625 in letters

Exhibit

C

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

July 8, 2011

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

SUBJECT: Request for Approval of the Placement of Act 82, SLH 02, Warning and Management Signs at selected locations of the Napali Coast State Wilderness Park, Kauai.

Background Information on Act 82, SLH 02, Warning Signs:

Act 82, 2003 Session Laws Hawaii, relating to Public Land Liability, 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 the dangerous natural conditions that are identified through the signage. Pursuant to Act 82, the Board is to review and approve of the design and placement of these types of signs. The Board, following the recommendations of a Risk Assessment Working Group (RAWG) reviewed and approved the sign design as dictated by Chapter 13-8, Hawaii Administrative Rules (HAR). All subsequent sign placement at park and trail locations under the Department and County jurisdiction are submitted for review by the RAWG and approved by the Board.

Sign Placement Criteria: Pursuant to Chapter 13-8, HAR, the following guidelines have been used for determination of the placement of signage:

§ 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.

ITEM E-1

Background Information on Napali Coast State Wilderness Park

Napali Coast State Wilderness Park (Napali) comprises 6,175 acres of undeveloped land. It is situated adjacent to one of the wettest locations on the planet and the underlying landform is composed of highly erosive volcanic geology. The continual weathering of this location has resulted in the visually dramatic cliffs (*pali*) that jut westward into the ocean. Frequently, these stunning geologic features provide the stock imagery used for visitor related marketing. Hanakapi'ai, two miles into Napali from Ha'ena State Park along the Kalalau trail, has a calculated visitation of up to approximately 500,000 people per year. For the Kalalau camping area, at the end of the 11 mile trail, 3,075 camping permits were issued for approximately 9,840 campers from July 2009 to June 2010. From April 2010 to April 2011, 3,506 permits were issued to a patronage of approximately 12,000 campers. Kalalau is popular with both visitors and residents, and poses a continuous management challenge associated with a high percentage of unpermitted campers and squatters who stay for extended periods of time in both authorized and unauthorized camping locations – putting a seasonal strain on remote and limited facilities in portions of Kalalau and overcrowding authorized camping areas.

Act 82 Warning Sign Placement and Mitigative Actions at Napali

In 2008, a rock fall incident involving an unoccupied tent in a camping location in Kalalau that did not result in injury prompted a rapid DSP assessment of conditions and public use patterns in relation to rockfall exposure. This assessment resulted in the determination that warning and additional management signs must be installed, camping areas redefined, high rockfall exposure location be restricted and potential funding for rockfall mitigation study and scaling be requested.

In August 22, 2008 the Board approved the placement of 17 Act 82 warning and management signs at select locations in the Napali along the Kalalau trail and adjacent the Ho'ole'a waterfall at Kalalau. A variety of locations, where the public had been camping directly within areas subject to rockfall, were permanently closed and "area closed", "rockfall warning" and "rockfall danger" signs were installed.

From September 7 to October 31 2010, DSP initiated an unprecedented closure of the Kalalau Trail from Hanakapiai to Kalalau in order to initiate 1) a rock scaling project with contractors, 2) enforcement and clean-up operations directed towards a large number of illegal campers in various remote locations in Kalalau, 3) public hunting of feral animals with dogs and firearms and 4) campground and trail improvements. Following rock scaling and further evaluation of rockfall areas, revised warning sign locations were identified, particularly in relation to the public transit areas to and along the camping area to and from the Ho'ole'a falls, and to and from Kalalau Beach.

Upon the completion of the rock scaling project, staff went on site and reassessed the area, considering on the public transit patterns within the camping area, access to and from the beach and to the waterfall, and the seasonal disappearance of the beach in relation to pedestrian patterns and exposure to rockfall. Based upon this assessment, the Department is

requesting the approval of the posting of new warning and management signage in Kalalau and along several other sections of the Kalalau Trail, including the Hanakoa camping area, a section of the Kalalau Trail that is prone to severe weathering and erosion and difficult to regularly maintain due to its location (approximately 7 to 8 miles in), Hanakapi'ai and also the posting of signs at the trailhead relating to exposure to the reoccurring hazardous conditions along the Kalalau Trail and other areas within the park.

Conclusion

Due to the several decades of consistent, global public recreational demand, the remote, backcountry wilderness setting, and the recent evaluation and rock scaling, DSP is proposing updated hazard warning signs and locations. The goal is to balance warning the public of exposure to hazards in this remote wilderness, in recognition of that fact that the recreational setting is adjacent to steep, continually weathering cliffs and the unstable effects of feral animals. In addition, there is the implicit impossibility of 100% physical mitigation of rockfall on such a monumental scale that even if affordable, would also have detrimental aesthetic and cultural impacts upon a significant and highly valued public geologic setting. The "area closed" signs previously posted at Kalalau Beach and camping area have been replaced with "Danger - Falling Rocks" "Do not go beyond this point" to specifically warn and educate the users about the exposure to this hazard and to not proceed beyond the sign.

Due to seasonal fluctuation and reduction in the size and geomorphology of the Kalalau beach - pedestrian access adjacent to specific cliff areas of known rockfall is typically limited to the summer months. DSP intent is to post a seasonal sign warning when the beach and subsequent pedestrian exposure to rockfall, returns each spring, in addition to a permanent sign via a post embedded in the cliffs. (Exhibit 4). In addition to the on site sign posting, the DSP website and Wiki Camping Permit Reservation System also contain information relating to the possible exposure to rockfall, dangerous cliffs and flashfloods when traversing the Kalalau Trail throughout Napali.

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.

This current Board submittal is intended to replace the previous 2008 Board approval of sign placement for Napali - as there are now additional and replacement warning and management signs installed in numerous locations and additional Internet information to inform users due to changes in physical conditions and management policy. DSP has consulted with the RAWG, and is requesting Board approval of the current placement of signs at the Kalalau Trailhead and Hanakapiai, along the trail, Hanakoa camping area and at Kalalau Beach and camping area.

RECOMMENDATION

That the Board approves:

1. The placement of the warning signs as shown in Exhibits 1, 2, 3, and 4

Respectfully submitted,



DANIEL S. QUINN
State Parks Administrator

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson

EXHIBIT 1: Act 82 Sign Installation Guide

DLNR Division: State Parks Island: Kauai Site/State Park: Napali Coast State Wilderness Park

Exposure to natural conditions: Falling Rocks, Hazardous Cliffs, Flash Floods

Entrance Signs: Station KA00018	Warning Falling Rocks, Warning Hazardous Cliff, Warning Flash Flood	WFFE WHCE WFFE
Site Specific Signs: Station KA00019	2 Warning Flash Flood	WFFS
Site Specific Signs Station KA00020	2 Warning Flash Flood	WFFS
Site Specific Sign Station KA00021	Warning Hazardous Cliff	WHCS
Site Specific Sign Station KA00022	Warning Hazardous Cliff	WHCS
Site Specific Sign Station KA00023	2 Warning Flash Flood	WFFS
Site Specific Signs: Stations KA00024 KA00025 KA00025 KA00026 KA00027 KA00028 KA00029 KA00030 KA00031 KA00032 KA00033 KA00034	12 Warning – Falling Rocks	WFRS
Site Specific Signs: Stations KA00035 KA00036 KA00037 KA00038 KA00039 KA00040	6 Danger – Falling Rocks	DFRS
Seasonal Site Specific Signs: Station KA00041 KA00042	2 Danger – Falling Rocks	DFRS

Entrance Hazard Sign Codes



WFRE



WHCE



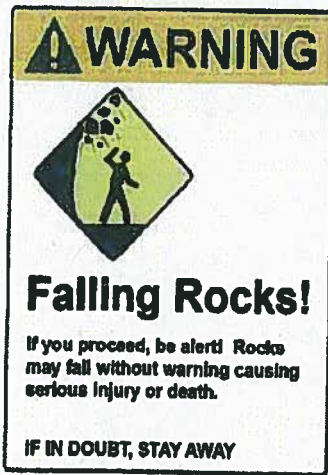
WFFE



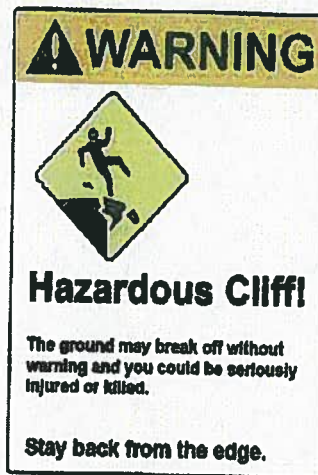
DNDE

Exhibit 1

Site-Specific Hazard Sign Codes



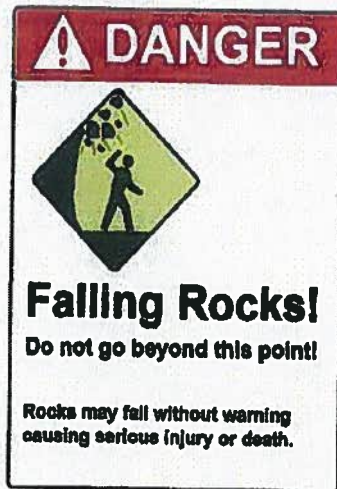
WFRS



WHCS



WFFS



DFRS



DNDS



DFFS

EXHIBIT 2

**Act 82 Signage
Napali Coast SWP**

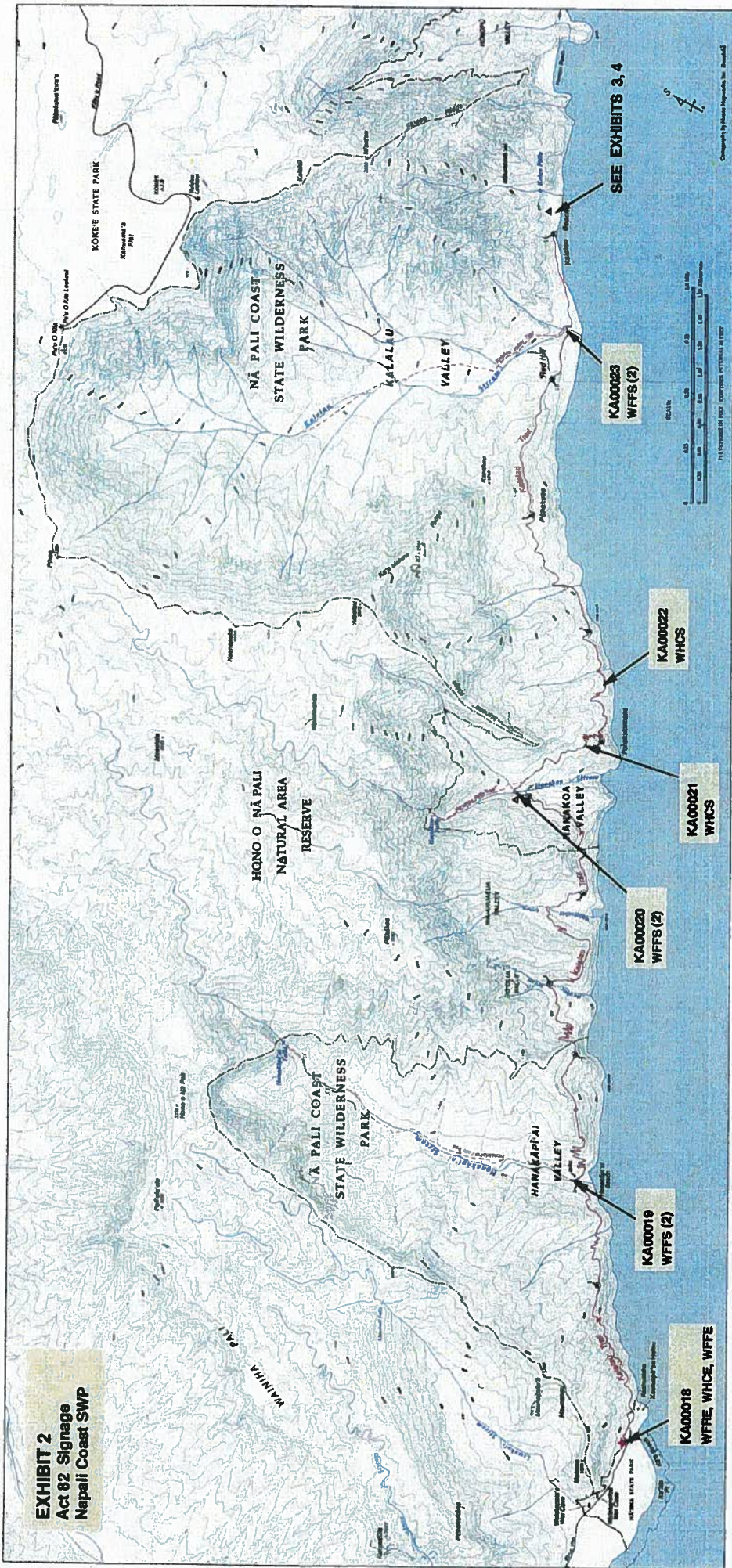


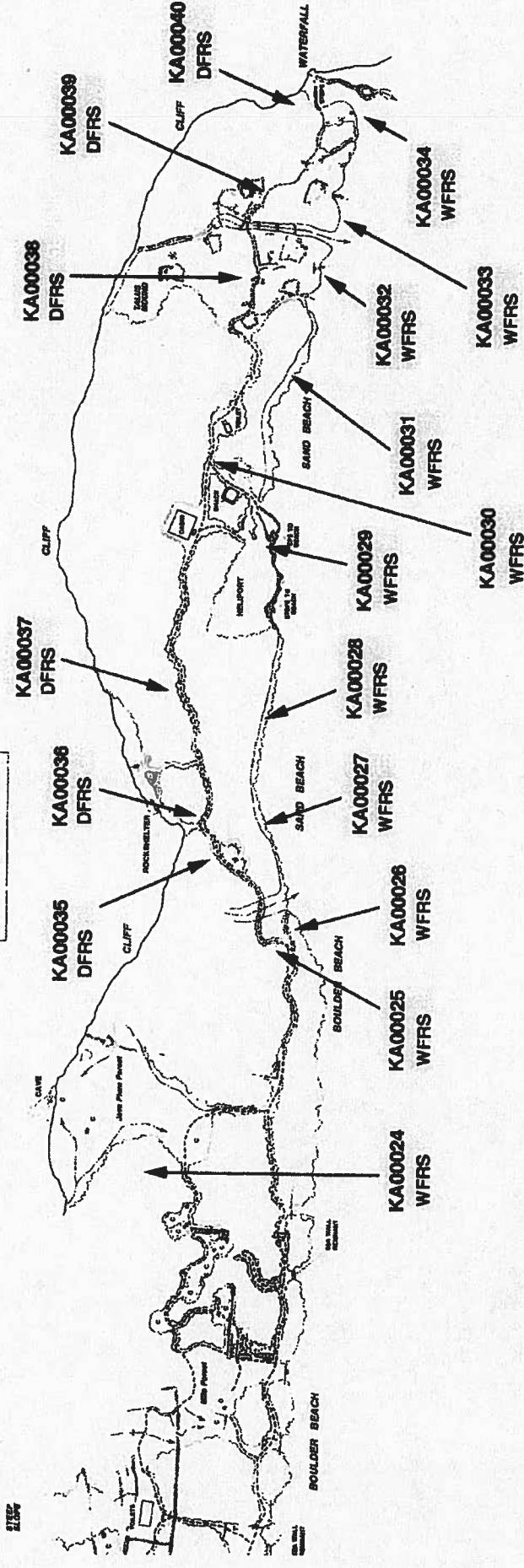
EXHIBIT 3
Act 82 Signage
Napali Coast SWP

KALALAU BEACH
NĀ PALI COAST STATE PARK



LEGEND:

- TRAIL
- DENSE VEGETATION
- ROCK WALL
- DRAINAGE
- CAMPSITE
- FIREPY (MODERN)



OCEAN

EXHIBIT 4
Seasonal Sign Placement at
Kalalau Beach

KA00042
DFRS (2)

KA00041
DFRS

