

**Forest Management and Stump-to-Forest Gate Chain-of-Custody  
Certification Evaluation Report for the:**

**Kamehameha Schools' Hōnaunau Management Area**

**Conducted under auspices of the SCS Forest Conservation Program  
SCS is an FSC Accredited Certification Body**

**CERTIFICATION REGISTRATION NUMBER  
SCS-FM/COC-00089N**

**Submitted to:**

**Kamehameha Schools' Hōnaunau Management Area  
Hōnaunau, Hawaii**

**Lead Auditor:  
Robert Hrubes, Ph.D.**

**Lead Report Author:  
Brendan Grady**

**Date of Field Audit:  
June 1-3, 2005**

**Date of Report: December 13, 2005  
Updated March 2009 (see section 6.1)  
Updated January 2009 (see section 6.2)**

**Certified: December 31, 2005**

**By:**

**SCIENTIFIC CERTIFICATION SYSTEMS  
2000 Powell St. Suite Number 1350  
Emeryville, CA 94608, USA  
[www.scscertified.com](http://www.scscertified.com)**

**SCS Contact: Dave Wager [dwager@scscertified.com](mailto:dwager@scscertified.com)  
Kamehameha Schools Contact: Kamakani Dancil [kadancil@ksbe.edu](mailto:kadancil@ksbe.edu)**

## **Organization of the Report**

This report of the results of our evaluation is divided into two sections. Section A provides the public summary and background information that is required by the Forest Stewardship Council. This section is made available to the general public and is intended to provide an overview of the evaluation process, the management programs and policies applied to the forest, and the results of the evaluation. Section A will be posted on the SCS website ([www.scscertified.com](http://www.scscertified.com)) no less than 30 days after issue of the certificate. Section B contains more detailed results and information for the use of Kamehameha Schools.

## FOREWORD

Scientific Certification Systems, a certification body accredited by the Forest Stewardship Council (FSC), was retained by Kamehameha Schools to conduct a certification evaluation of its Hōnaunau Management Area (Hōnaunau). Under the FSC/SCS certification system, forest management operations meeting international standards of forest stewardship can be certified as “well managed”, thereby enabling use of the FSC endorsement and logo in the marketplace.

In June 2005 an interdisciplinary team of natural resource specialists was empanelled by SCS to conduct the evaluation. The team collected and analyzed written materials, conducted interviews and completed a 3 day field and office audit of the subject property as part of the certification evaluation. Upon completion of the fact-finding phase of the evaluation, the team determined conformance to the 56 FSC Criteria in order to determine whether award of certification was warranted.

This report is issued in support of a recommendation to award FSC-endorsed certification to Kamehameha Schools for the management of its Hōnaunau Management Area. As detailed below, certain pre-conditions (also known as Major Corrective Action Requests) that were stipulated by the audit team upon completion of the field audit were addressed by Kamehameha Schools and cleared by SCS prior to finalization of this report. In the event that a certificate is awarded, Scientific Certification Systems will post this public summary of the report on its web site ([www.scs-certified.com](http://www.scs-certified.com)).

|  |    |
|--|----|
| Foreword.....  | 1  |
| Section A- Public Summary and Background Information .....   | 3  |
| 1.0 GENERAL INFORMATION.....   | 3  |
| 1.1 FSC Data Request .....   | 3  |
| 1.2 Management Context .....   | 4  |
| 1.2.1 Environmental Context.....   | 6  |
| 1.2.2 Socioeconomic Context .....  | 8  |
| 1.3 Forest Management Enterprise .....   | 9  |
| 1.3.1 Land Use .....   | 9  |
| 1.3.2 Land Outside Scope of Certification.....   | 9  |
| 1.4 Management Plan.....   | 9  |
| 1.4.1 Management Objectives.....   | 9  |
| 1.4.2 Forest Composition.....  | 10 |
| 1.4.3 Silvicultural Systems .....  | 10 |
| 1.4.4 Management Systems .....   | 10 |
| 1.4.5 Monitoring System.....   | 11 |
| 1.4.6 Estimate of Maximum Sustainable Yield .....  | 11 |
| 1.4.7 Estimated, Current and Projected Production.....   | 11 |
| 1.4.8 Chemical Pesticide Use.....  | 11 |
| 1.5 SLIMF Qualifications .....   | 12 |
| 2.0 Guidelines/Standards Employed.....   | 12 |
| 3.0 THE CERTIFICATION ASSESSMENT PROCESS.....  | 13 |
| 3.1 Assessment Dates.....  | 13 |
| 3.2 Assessment Team.....   | 13 |
| 3.3 Assessment Process .....   | 13 |
| 3.3.1 Itinerary.....   | 13 |
| 3.3.2 Stakeholder Consultation .....   | 15 |
| 3.4 Total Time Spent on audit.....   | 17 |
| 3.5 Process of Determining Conformance .....   | 17 |
| 4.0 Results of the Evaluation .....  | 18 |
| Table 4.1 Notable strengths and weaknesses of the forest management enterprise relative to the P&C | 19 |
| 4.2 Preconditions.....   | 21 |
| 5.0 Certification Decision .....   | 24 |
| 5.1 Certification Recommendation .....   | 24 |
| 5.2 Initial Corrective Action Requests.....  | 25 |
| 6.0 Surveillance evaluations .....   | 28 |

## SECTION A- PUBLIC SUMMARY AND BACKGROUND INFORMATION

### 1.0 GENERAL INFORMATION

#### 1.1 FSC Data Request

|   |  |
|---|--|
| Applicant entity  | Kamehameha Schools   |
| Contact person  | Kamakani Dancil, Land Asset Manager  |
| Address   | 78-631 Ali'i Drive, Suite 232<br>Kailua-Kona, HI 96740   |
| Telephone   | 808-322-5307   |
| Fax   | 808-322-9446   |
| E-mail  | kadancil@ksbe.edu  |
| Certificate Type  | Single Forest Management Unit  |
| SLIMF   | a low intensity SLIMF certificate  |
| Location of certified forest area   |  |
| Latitude  | 19:27:54N  |
| Longitude   | 155:52:27W   |
| Forest zone   | Tropical   |
| Total forest area in scope of certificate which is included in FMUs that:   |  |
| are less than 100 ha in area  | 0  |
| are between 100 ha and 1000 ha in area  | 0  |
| meet the eligibility criteria as <i>low intensity</i> SLIMF FMUs  | 34,600   |
| Total forest area in scope of certificate which is:   |  |
| privately managed <sup>1</sup>  | 34,600   |
| state managed   | 0  |
| Community managed <sup>2</sup>  | 0  |
| Number of forest workers (including contractors) working in forest within scope of certificate                                      | 16   |
| Area of forest and non-forest land protected from commercial harvesting of timber and managed primarily for conservation objectives | 16,783 ac  |
| Area of forest protected from commercial harvesting of timber and managed primarily for the production of NTFPs or services         | 16,783 ac  |
| Area of forest classified as 'high conservation value forest'   | No acreage currently designated as exclusively HCVF  |
| List of high conservation values present <sup>3</sup>   | HCV 1- Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values.<br>HCV 6 - Forest areas critical to local communities' traditional cultural identity. |
| Chemical pesticides used  | Roundup, Escort, Cimarron, Garlon 3a, Oust, Arsenal AC, Velpar DF, Garlon 4, Remedy, Fusilade, Transline   |
| Total area of production forest (i.e. forest from   | 17,546 ac (270 ac in infrastructure)   |

<sup>1</sup> The category of 'private management' includes state owned forests that are leased to private companies for management, e.g. through a concession system.

<sup>2</sup> A community managed forest management unit is one in which the management and use of the forest and tree resources is controlled by local communities.

<sup>3</sup> High conservation values should be classified following the numbering system given in the ProForest High Conservation Value Forest Toolkit (2003) available at [www.ProForest.net](http://www.ProForest.net)

|  |   |
|--|---|
| which timber may be harvested)   |   |
| Area of production forest classified as 'plantation' for the purpose of calculating the Annual Accreditation Fee (AAF)   | 0 ac  |
| Area of production forest regenerated primarily by replanting <sup>4</sup>   | 0 ac  |
| Area of production forest regenerated primarily by natural regeneration  | 17,546 ac   |
| List of main commercial timber and non-timber species included in scope of certificate (botanical name and common trade name)  | Koa ( <i>Acacia koa</i> ), 'Ōhi'a ( <i>Metrosideros polymorpha</i> ), tropical white ash ( <i>Fraxinus uhdei</i> ), Queensland maple ( <i>Flindersia brayleyana</i> ), Australian red cedar ( <i>Toona ciliata</i> ), and other species |
| Approximate annual allowable cut (AAC) of commercial timber  | Allowable harvest based on area, not volume   |
| Approximate annual commercial production of non-timber forest products included in the scope of the certificate, by product type   | Unknown, not yet determined   |
| List of product categories included in scope of joint FM/COC certificate and therefore available for sale as FSC-certified products (include basic description of product - e.g. round wood, pulp wood, sawn timber, kiln-dried sawn timber, chips, resin, non-timber forest products, etc.) | Logs  |

## 1.2 Management Context

As a private landowner located in the South Kona region of the island of Hawai'i, management of the Hōnaunau Forest Management Area is subject to a host of state and federal regulations. The principal regulations of greatest relevance to private forest managers in Hawai'i are associated with the following statutes that apply to all lands, regardless of ownership:

### **Pertinent Regulations at the Federal Level:**

Endangered Species Act of 1973, as amended  
Clean Water Act (Section 404 wetland protection)  
Occupational Safety and Health Act  
National Historic Preservation Act  
Archaeological and Historic Preservation Act  
Americans with Disabilities Act  
U.S. ratified treaties, including CITES

In the case where the action is federally funded, provisions of Section 7 of the Endangered Species Act apply, as does the Executive order of 1999 pertaining to Invasive Species.

### **Pertinent Regulations at State and Local Level:**

---

<sup>4</sup> The area is the *total* area being regenerated primarily by planting, *not* the area which is replanted annually. NB this area may be different to the area defined as a 'plantation' for the purpose of calculating the Annual Accreditation Fee (AAF) or for other purposes.

Hawai‘i laws governing forest management activities are found in the Hawai‘i Revised Statutes and Hawaii Administrative Rules. The following tables identify the applicable laws:

| <b><u>Hawai‘i Revised Statutes</u></b> |   |
|--|---|
| <b>Chapter</b>                         | <b>Description</b>  |
| 4                                      | Boundaries  |
| 6D                                     | Protection of Caves   |
| 6E                                     | Historic Preservation   |
| 7                                      | Miscellaneous Rights of the People                            |
| 9                                      | Foundation on Culture and the Arts                            |
| 128                                    | Civil Defense and Emergency Act                               |
| 150                                    | Seeds   |
| 165                                    | Hawaii Right to Farm Act                                      |
| 174C                                   | State Water Code  |
| 183                                    | Forest Reserves Water Development Zoning                      |
| 183C                                   | Conservation District   |
| 183D                                   | Wildlife  |
| 185                                    | Land Fire Protection Law                                      |
| 195D                                   | Conservation of Aquatic Life, Wildlife, and Land Plants       |
| 195F                                   | Forest Stewardship  |
| 197                                    | General Provisions Relating to Aquatic Resources and Wildlife |
| 198D                                   | Hawaii Trail and Access System                                |
| 205                                    | Land Use Commission   |
| 342D                                   | Water Pollution   |
| 342E                                   | Nonpoint Source Pollution Management and Control              |
| 343                                    | State Environmental Review Law                                |
| 344                                    | State Environmental Policy                                    |
| 377                                    | Hawaii Employment Relations Act                               |
| 378                                    | Employment Practices  |
| 387                                    | Wage and Hour Law   |
| 396                                    | Occupational Safety and Health                                |
| 481                                    | Fair Trade Regulations  |
| 520                                    | Landowners' Liability   |

| <b><u>Hawai‘i Administrative Rules</u></b> |  |
|--|--|
| <b>Chapter</b>                             | <b>Description</b>   |
| 13-104                                     | Rules Regulating Activities Within Forest Reserves                                 |
| 13-107                                     | Threatened and Endangered Plants   |
| 13-121                                     | Rules Regulating Hunting of Wildlife on Public and Other Lands                     |
| 13-122                                     | Rules Regulating Game Bird Hunting   |
| 13-123                                     | Rules Regulating Game Mammal Hunting   |
| 13-124                                     | Indigenous Wildlife, Endangered and Threatened Wildlife, and Introduced Wild Birds |

**Regulatory Context for State and Local Regulations:**

On private lands, the State Department of Land and Natural Resources Service Forester may monitor forestry operations within the Conservation District if such monitoring or involvement is a requirement of the Conservation District Use Permit issued by the Board of Land and Natural Resources.

Relevant laws that otherwise apply include the Hawai‘i State Endangered Species Law HRS 195D, which prohibits take of endangered species listed as threatened or endangered without a permit. The Hawai‘i State law protects plants and animals throughout their natural ranges.

### **1.2.1 Environmental Context**

There are no surface streams that occur within the Hōnaunau Forest Management Area, or within adjacent areas. Hydrology of the Hōnaunau Forest Management Area is connected with that of the South Kona region and the larger freshwater hydrologic patterns of the island. The porous and well-drained lava soils allow rapid infiltration of rainwater into the groundwater system underlying the island. High rainfall events that occur under saturated conditions result in overland flow; however these events are infrequent, usually occurring once or twice annually. Percolated water either recharges the deep freshwater lens or drains below the surface toward coastal areas, where it mixes with saltwater in nearshore areas.

Represented within the Hōnaunau Forest Management Area are most of the biomes that occur within the South Kona region. The lower boundary of the Hōnaunau Forest Management Area at approximately 2,500 ft. elevation corresponds roughly with the lower extent of the rainforest zone. Within the South Kona region, rainforest extends upslope well into the montane zone, eventually giving way to a narrow band of mesic forest characterized by afternoon cloud cover. This cloud band between 4,500 and 5,000 ft. represents an inversion layer above which the climate becomes substantially drier and cooler and vegetation becomes low in stature dominated by native shrubs and trees and the exotic pasture grasses. The upper one third of the Forest management Unit is sparsely vegetated to barren. These vegetations zones extend in a similar pattern 15 miles to the southward toward the Kau district in the southern region of the island, where a change in aspect creates a drier climate. These patterns also extend northward approximately 10 miles, where the rainforest band bends around the seaward side of Hualalai Volcano. In both directions, these patterns of zonation are broken by ribbons of younger sparsely vegetated or barren flows that run toward the ocean.

The Hōnaunau Forest Management Area lies on Mauna Loa substrate, the mountain that comprises the majority of surface lavas on the island. Mauna Loa soils are generally young and rough and most of the mountain lacks roads into upper elevations. The large land mass and geologically young lavas have contributed to the relative intactness of the ecosystems it supports. Underlying Mauna Loa volcanic substrates are predominately of the 750 to 1,500 year old age class, however there exist several patches of much older lava, classified within the 5,000 to 10,000 years old. The younger substrates that dominate most of the Hōnaunau Forest Management Area represent a mid- to early-successional sere of plant community development that also occurs further South on a broad flow that runs through portions of the of Upper Hookena, Waiea, and Honokua sections. The Hōnaunau Forest Management Area does captures approximately one third of the older Mauna Loa age class represented by the 5,000 to 10,000 year old age group. The 5,000 to 10,000 year old age class represents the oldest Mauna Loa surface lavas and where intact, support the oldest successional seres. Within the 2,500 ft. to 8,000 ft. elevation zone in South Kona, this Mauna Loa age class is restricted to the Kealakekua and Hōnaunau areas. Hōnaunau does not have any lavas less than 750 years in age.

Several rare and endangered animals are known from the Hōnaunau area. According to the U.S. Fish and Wildlife Service's rare and endangered species database, 3 federally endangered plant species and 5 federally endangered birds have been sighted within the Hōnaunau Forest Management Area parcels within the last 27 years. Some of these species are known to no longer occur within the area, such as the endangered Alala (*Corvus hawaiiensis*), which utilized the area heavily during the middle to late part of the 20<sup>th</sup> century, but is now extinct in the wild. Still extant in other parts of the island, the Akiapoloa'au (*Hemignanthus munroi*) and the Hawai'i Creeper (*Oreomystis mana*) were last observed in the Hōnaunau forest in 1973 and 1978, respectively. According to the database, the Akepa (*Loxops coccineus*) was last observed at Hōnaunau in 1987, but may still utilize the area. The 'Io, or Hawaiian Hawk (*Buteo solitarius*), and the 'ōpe'ape'a, or Hawaiian Bat, (*Lasiurus cinereus semotus*), are known to currently inhabit the forests of Hōnaunau and surrounding areas. Also known to occur at Hōnaunau is the endemic fruit fly *Dryosopylla heteroneura*, currently proposed for listing.

Endangered plants previously identified in Hōnaunau include *Asplenium fragile* (1997), *Cyanea hamatiflora carlsonii* (1969), *Cyanea playtphylla* (1916), *Cyanea stictophylla* (1958), and *Nothoestrum brevilorum* (1980). Also known are two candidates for listing, *Ranunculus hawaiiensis* and *Sicyos macrophyllus*. Other rare plant species known from Hōnaunau that are being monitored by the US fish and Wildlife Service as Species of Concern include *Cyanea marksii*, *Cyrtandra manzesii*, *Hesperocnide sandwicensis*, *Phyllostegia vestigia*, *Phytollacca sandwicensis*, *Sicyos quaquamarinus*, *Stenogyne micrantha*, and *Stenogyne scrophularioides*.

Other notable species from Hōnaunau include four native forest birds that are relatively common and do not have endangered status, including the 'apapane (*Himatione sanguinea*), 'amakihi (*Henignathus virens virens*), 'elepaio (*Chasiempis sandwichensis sandwichensis*), and 'i'iwi (*Vestaria coccinea*). Exotic game animals include feral sheep (*Ovis aries*), pigs (*Sus scrofa*), and goats (*Capra hircus*). Exotic game birds such as the Kaleej pheasant (*Lophura leucomelana*), Erckel's francolin (*Francolinus erckelii*), North Indian Gray Francolin (*F. pondicerianus interpositus*), Indian Black Francolin (*F. asiae*) Chukar (*Alectoris chukar*), California Valley Quail (*Lophortyx californicus*), Indian Peafowl (*Pavo cristatus*), and Domestic Turkeys (*Meleagris gallopavo*) also occur or may occur at Hōnaunau.

Ecologically, the Hōnaunau Forest Management Area supports relatively intact (partially native) stands of native lowland and montane rainforest that serve as habitat for a range of native plant and animal species in a semi-natural forest structure. Included in the forest are old lavas that support successional older plant communities with varying complexity in vegetation structure and plant and animal species composition. In addition, the steep elevation and rainfall gradients created by the sloping terrain add variation in structure and composition over short distances. This range of ecological variation over a relatively small area supports a complex system of plants, vertebrates, and invertebrates that cycle carbon and other elements, purify air, recharge the ground water aquifer, generate nutrients that supply corral reefs, and buffer against extreme weather events such as flooding. The complex ecosystem of Hōnaunau forest enhances the ecological stability of the larger landscape, thereby maintaining its ability to continue to provide these and other ecological services that contribute to the nature and climate of South Kona's environment.

## 1.2.2 Socioeconomic Context

In ancient Hawai‘i, elements of the natural world were woven into every aspect of the social, economic, and religious structure of society. Lands were managed according to the Ahupua‘a system, which divided districts into sections, or ahupua‘a, that typically extended from mountain summits down through lowlands to the outer edge of the ocean reefs. Ahupua‘a were often wedge-shaped and narrow at higher elevations and wider along the coast. Each ahupua‘a sustained its inhabitants through a sustainable system of coastal fishing, agriculture in lowland areas, and gathering from lowland and upland areas. Mountainous regions, known as Wao Akua, were respected and believed to be inhabited only by spirits. Inhabitants of each ahupua‘a generated annual offerings of tribute to gods and high chiefs.

Prior to the death of Princess Bernice Pauahi Bishop in 1884, the ahupua‘a of Hōnaunau, as well as many other land sections throughout the islands, were endowed to her private trust founded for the perpetual benefit and education of people of Hawaiian ancestry. The lands within the Hōnaunau Forest Management Area represent the majority of the upper section of the Hōnaunau ahupua‘a, which extended downslope to include Hōnaunau bay and the area now managed as the Puu o Hōnaunau National Historic Park.

Revenues generated during the middle to late part of the 20<sup>th</sup> century were primarily resource-based, having come from harvested forest products such as Koa timber and Hapu‘u fiber, and from ranching. During that period, Koa harvesting supported a sector of the then land-based economies of rural parts of the islands of Hawai‘i and Kaua‘i.

Koa harvesting on Kamehameha Schools Bishop Estate lands and other privately owned lands throughout the state contributed significantly to the State’s economy throughout this period. At that time, Kamehameha Schools staffed a sufficient number of employees necessary to manage and administer agricultural leases and manage contract timber harvesting activities. Revenues from these activities helped support Kamehameha Schools teaching staff, construct and maintain facilities, and pay Bishop Estate Trustees through the 1980’s. Harvesting of Koa on Kamehameha Schools lands subsided during the late 1980’s and, since that time, revenues derived from timber harvest and other agriculture-based activities have declined. The region is currently undergoing a shift from historical agricultural and extractive natural resource economy to one based upon development and tourism. Nevertheless the wood products industry continues to help support a small proportion of the rural community of the South Kona region. Currently, there is a small, but growing demand for locally-produced value-added wood products.

Directly down slope from the Hōnaunau Forest Management Area lie the communities of Hōnaunau and Napo‘opo‘o. Portions of these communities conduct small-scale diversified agriculture within some lowland portions of this area, primarily coffee, and fruit and flower orchards. Traditionally a subsistence activity, coastal fishing is now mainly a recreational activity and occurs in conformance with marine life conservation designations and rules. Recreational off-shore and near-shore sport fishing, kayaking, and snorkeling are rapidly

growing in popularity among new island residents and tourists. In addition, the Puu Honua o Hōnaunau National Historical Park is a popular tourist destination.

### **1.3 Forest Management Enterprise**

#### **1.3.1 Land Use**

Hōnaunau is a 34,600 acre property stretching up the side of Mauna Loa on the Southeast coast of the island of Hawaii. The property can be divided into upper and lower sections, with the forest thinning into an open forest and rangeland as elevation increases. The upper most portion of the property is covered by fresh lava flows lacking any vegetation. Limited timber harvesting took place on the forest throughout the 20<sup>th</sup> century, culminating around 1980. There has been no significant harvesting on the property since, but Kamehameha Schools plans on resuming harvesting in the near future, hence the reason for certification.

The lack of harvesting does not mean the land has been unused. Hōnaunau is one of the few remaining intact forest areas in South Kona, with its neighboring properties devoted to commercial grazing (cattle). There are limited portions of the property used primarily for grazing, which will continue at a lessened amount under the new management plan.

Perhaps the main extraction activity currently taking place on the forest is hunting. Two hunting clubs, one private club and one tourist hunting outfitter, operate on the property with the focus on the hunting of feral goats. Local hunters also use the property for feral pig hunting, which is regulated by KS.

#### **1.3.2 Land Outside the Scope of this Certification Evaluation**

Kamehameha Schools is the largest non-governmental landowner in Hawaii, consisting of the former royal lands in Hawaii bequeathed to the Bishop Estate, which now manages them for the benefit of native Hawaiians. The ownership includes both commercial and undeveloped land throughout the state. The Land Assets division manages their agricultural and forest land, including Hōnaunau. Most of these lands are agricultural, and forest management has not been a primary management activity. This is the first FSC certification project in Hawaii, and KS has expressed interest in having their other forestland undergo the certification process in the future. However, timber harvesting only takes place on a limited portion of the overall ownership, and it remains to be determined whether or not FSC certification makes economic sense for any of the other KS properties. FSC claims made by KS will be scrutinized by SCS in order to prevent confusion as to which KS activities and lands are certified.

### **1.4 Management Plan**

#### **1.4.1 Management Objectives**

The stated management objectives for the Hōnaunau Management Area are:

- 1) To maintain healthy forest cover on the land in perpetuity, through sustainable forest management practices.
- 2) To encourage the recovery of native forest areas damaged through previous management practices.
- 3) To eliminate or preclude the spread of existing exotic weed species, and prevent the establishment of new ones through a proactive control, prevention, and monitoring program.
- 4) To explore recreational and maintain hunting opportunities, such that these continue to provide both a positive cash flow for the landowner, serve as a means to control feral ungulates, and serve to increase community awareness of activities in the forest.
- 5) To encourage educational opportunities within the forest, through student participation in certain management activities, such as monitoring and inventory.

#### **1.4.2 Forest Composition**

The primary native timber species on the forest is koa, *Acacia koa*. The forest composition changes with elevation, beginning with ‘Ōhi‘a (*Metrosideros polymorpha*) -dominated forest, and changing to koa-mamane (*Sophora chrysophylla*), open mamane, and pukiaawe (*Styphelia tameiameia*) scrub as elevation increases. ‘Ōhi‘a occurs throughout the Hōnaunau tract.

Hōnaunau also has legacy exotic plantation areas interspersed throughout the property, consisting of Eucalyptus species, toon (*Toona ciliate*), tropical ash (*Fraxinus uhdei*), and other species.

#### **1.4.3 Silvicultural Systems**

Hōnaunau presents a unique set of forest management challenges, and a wide array of silvicultural techniques and systems are planned to be used by Forest Solutions, Inc. (FSI) in order to meet these challenges. One of the goals of the management is to rehabilitate the native forest from the effects of previous management activities. A large portion of the native forest is infested with exotic invasive species, and the management plan calls for the creation of a buffer strip of aggressively managed exotic plantations at lower elevation to prevent the spread of exotic weeds into the native upper forests. Currently, other exotic plantation stands exist at higher elevations which will be converted to native stands resulting in only a small net increase in exotic plantations. Weed infested upland areas and former grazing land will be rehabilitated into native stands. According the management plan, in 50 years weed infested and over-grazed land will be converted to either exotic plantations managed on a 25 year even aged rotation over roughly 10 percent of the property or un-even aged native forests (primarily koa) with an estimated stand re-entry period of 30 years over roughly 40 percent of the property. The remaining 50% of the property will not be harvested.

#### **1.4.4 Management Systems**

The forest area for which certification is sought consists of a single forest management unit owned by Kamehameha Schools. Many of the management activities on the forest, especially those related to timber management, have been delegated to a single contractor, Forest Solutions,

Inc., a private forestry consulting company based in Hawaii. In practice, the audit team observed a positive, collaborative relationship between the two management groups, with the KS staff providing the management vision and FSI providing technical expertise. Using FSI’s GIS expertise, the forest area has been broken down into smaller stands of similar composition to ease the planning and management process.

**1.4.5 Monitoring System**

FSI has the elements of a strong monitoring system in place. Protocols exist for performing periodic timber resource inventories, which include monitoring growth rates, regeneration, and overall forest condition. Pre-harvest assessments in conjunction with tallying of harvest yields will be analyzed in order to track the amount of volume removed from the forest. FSI is an experienced forest management company, and routinely monitors the cost efficiency of their management actions. A flora monitoring program has already been implemented, which will be essential to controlling invasive exotics on the forest.

However, some elements of monitoring required by the FSC were found lacking, particularly dealing with the social impact of management and fauna monitoring. It is also not clear how monitoring results will be made publicly available, as required under the FSC. Appropriate corrective action requests, see below, were issued in response to these non-conformances.

**1.4.6 Estimate of Maximum Sustainable Yield**

Due to the current lack of knowledge about the growth rates and timber inventory on the forest, harvest regulation on the Hōnaunau Management Area will be done by area control rather than volume control. The current plan calls for an average of 625 acres per year to be entered for harvest during the first 5 years, with a variety of harvest prescriptions based on the desired future condition of each stand (e.g. native koa forest, plantation).

**1.4.7 Estimated, Current and Projected Production**

As stated above, Hōnaunau will initially be managed on an area control rather than a volume control system. As more reliable inventory data is gathered, KS plans to move towards a volume based system, which will allow a more accurate estimation of maximum sustainable yield. A permanent plot system has been set up on the forest in order to move towards this goal. Additionally, a timber inventory program has been set up and will be completed in the next ten years. KS is involved in numerous silvicultural trials throughout Hawaii to address the current dearth of information regarding basic growth and yield data for native species in the islands.

**1.4.8 Chemical Pesticide Use**

| Trade name | Active Ingredient | Type           |
|------------|-------------------|----------------|
| Roundup    | glyphosate        | Broad spectrum |
| Escort     | Metsulfuron       | Woody plants   |

|            |                     |                |
|------------|---------------------|----------------|
|            | methyl              |                |
| Cimarron   | Metsulfuron methyl  | Woody plants   |
| Garlon 3a  | Triclopyr           | Woody plants   |
| Oust       | Sulfometuron methyl | Woody plants   |
| Arsenal AC | Imazapyr            | Woody plants   |
| Velpar DF  | Hexazinone          | Broad spectrum |
| Garlon 4   | Triclopyr           | Woody plants   |
| Remedy     | Triclopyr           | Woody plants   |
| Fusilade   | Fluazifop-P-butyl   | Grass specific |
| Transline  | Clopyralid          | Broadleaves    |

Pesticide use occurs on Hōnaunau, particularly as a means to combat invasive exotic weed species. No chemical pesticide being used on Hōnaunau violates the FSC chemical policy (FSC-POL-30-601 *FSC Chemical Pesticides Policy*). Chemical application is performed by trained applicators and proper safety precautions are taken. The forest managers showed a particular interest in holding field trials on the efficacy of pesticides against various weed species. Pesticide use was a frequent topic during the field audit, and while pesticides may never be totally eliminated due to the problem of exotic species in Hawaii, the audit team was satisfied that Hōnaunau’s management and silvicultural strategy is aimed at reducing the overall need for pesticides by creating stand conditions unfavorable to the growth of weed species.

### 1.5 SLIMF Qualifications

No harvesting is currently taking place on Hōnaunau, hence the FMU easily qualifies as a low-intensity forest under the FSC definitions and protocols. Harvests are currently planned by area control instead of volume control, making it difficult to estimate the exact amount of volume that will be harvested. The current plan calls for an average of 625 acres per year to be harvested during the first 5 years. In our judgment, this harvest level stands a good likelihood of continuing to fall below the SLIMF threshold. However, Hōnaunau’s qualification as a SLIMF will need to be evaluated in future audits once harvesting resumes and more reliable volume data has been collected.

## 2.0 GUIDELINES/STANDARDS EMPLOYED

The SCS Draft Interim Standard for Hawaii was developed by modifying the SCS’ Generic Interim Standard to reflect management of natural and plantation forests in Hawaii and then incorporating relevant components of the US National Indicators. Guidance from FSC-International on creating SLIMF indicators was also used. More than one month prior to the start of the field evaluation, the Draft Interim Standard was sent out for comment to 40 stakeholders. Prior to the field assessment, and considering input received during the comment

period, the Hawaiian interim standard was finalized. The final interim standard is available on the SCS website ([www.scs-certified.com](http://www.scs-certified.com)).

## **3.0 THE CERTIFICATION ASSESSMENT PROCESS**

### **3.1 Assessment Dates**

Preliminary Audit: April 28-29, 2004

Certification Audit: June 1-3, 2005

### **3.2 Assessment Team**

**Dr. Robert J. Hrubes, Team Leader:** Dr. Hrubes is Senior Vice-President of Scientific Certification Systems. He is a registered professional forester and forest economist with 28 years of professional experience in both public and private forest management issues. He served as team leader for the initial MRC Forest certification evaluation. Dr. Hrubes worked in collaboration with SCS to develop the programmatic protocol that guide all SCS Forest Conservation Program evaluations. Dr. Hrubes has led numerous SCS Forest Conservation Program evaluations of North American (U.S. and Canada) industrial forest ownerships, as well as operations in Scandinavia, Chile, and Japan. He also has professional work experience in Brazil, Germany, Guam (U.S.), Hawaii (U.S.), and Malaysia. Dr. Hrubes is the principal author of this audit report.

**J. Michael Castillo** is Principal Consultant with the private consulting firm Hawaii Natural Resource Services, based on the island of Hawai'i. Mr. Castillo has 14 years experience working in watershed and forest management in the Hawai'ian (U.S.) and Mariana Islands (CNMI). His experience includes 6 years experience as a wildlife biologist with the US Fish and Wildlife Service implementing wildlife and endangered species conservation programs, and 7 years experience as a research biologist with Colorado State University conducting species surveys and related ecological research on U.S. Army lands. Mr. Castillo obtained a Masters of Science degree in Forest Ecosystem Management from Colorado State University in 1997.

#### **Brendan Grady, Certification Forester:**

Brendan Grady is a staff forester with Scientific Certification Systems, focusing on the Forest Conservation Program. He received his B.S. in Forestry from the University of California, Berkeley, in 2004. His previous experience includes forestry work with the California Department of Forestry and Fire Protection and research on tropical plantations in Moorea, French Polynesia, with the Service du Developement Rurale.

### **3.3 Assessment Process**

#### **3.3.1 Itinerary**

April 28-29, 2004 - Preliminary Evaluation

Dr. Hrubes traveled to Hawaii to conduct a preliminary evaluation, including meetings with the forest management staff and a field tour of Hōnaunau. The pre-evaluation was particularly necessary because Hōnaunau will be the first FSC certificate issued in Hawaii.

May 31<sup>st</sup>, 2005

P.M.- Audit team convened for review of certification process and initial findings on Hōnaunau.

June 1-3, 2005 - Main Evaluation

June 1<sup>st</sup> – Kamehameha Schools Land Assets Offices

A.M.- The audit team met with members of Kamehameha Schools and Forest Solutions, Inc. for the opening meeting. SCS reviewed the evaluation process, the FSC standard, and gaps that were observed during the preliminary evaluation. Staff members from KS and FSI discussed the management plan for Hōnaunau

**Individuals Present:**

Robert Hrubes, SCS  
Mick Castillo, SCS  
Brendan Grady, SCS  
Peter Simmons, KS  
Kamakani Dancil, KS  
Namaka Whitehead, KS  
Guy Cellier, FSI  
Marius Ellis, FSI  
Nicholas Koch, FSI  
William Rice, FSI

**P.M. Stakeholder Discussion**

The audit team interviewed stakeholders confidentially about their views on Kamehameha Schools and Hōnaunau.

June 2<sup>nd</sup>, Hōnaunau Management Area

The forest management staff led the audit team on a day-long field tour of Hōnaunau. Stops focused on subjects such as exotic weed invaded areas, converting exotic stands to native stands and vice-versa, a tropical ash reduction trial, a pre-commercial thinning trial, grazing areas within Hōnaunau, and snag retention policies. The audit team took the opportunity to discuss various aspects of the forest management operation during the day, including monitoring, harvest layout, endangered species protection, worker and neighbor relations, hunting policies, etc.

**Individuals present:**

Robert Hrubes, SCS  
Mick Castillo, SCS  
Brendan Grady, SCS  
Kamakani Dancil, KS  
Guy Cellier, FSI

Marius Ellis, FSI  
Nicholas Koch, FSI  
William Rice, FSI

June 3<sup>rd</sup>, Kamehameha Schools Land Assets Offices  
AM - Team Deliberation

The audit team convened in private to review their findings, make judgements of conformance to the standard, and formulate basic corrective action requests.

PM – Closing Meeting

The audit team reviewed the findings of the audit with KS and FSI staff.

Individuals Present –  
Robert Hrubes, SCS  
Mick Castillo, SCS  
Brendan Grady, SCS  
Peter Simmons, KS  
Kamakani Dancil, KS  
Marius Ellis, FSI  
Nicholas Koch, FSI  
William Rice, FSI

### **3.3.2 Stakeholder Consultation**

Pursuant to SCS protocols, consultations with key stakeholders were an integral component of the evaluation process. Consultation took place prior to, concurrent with, and following the field evaluation. The following were distinct purposes to the consultations:

To solicit input from key stakeholders as to the applicability of the SCS interim draft standard, as modified to reflect forest management in Hawaii

To solicit input from affected parties as to the strengths and weaknesses of Kamehameha Schools' management, relative to the standard, and the nature of the interaction between the company and the surrounding communities.

To solicit input on whether the forest management operation has consulted with stakeholders regarding identifying any high conservation value forests.

Principal stakeholder groups of relevance to this evaluation were identified based upon results from the scoping evaluation, lists of stakeholders from Kamehameha Schools, and additional stakeholder contacts from other sources. The following types of groups and individuals were determined to be principal stakeholders:

- Kamehameha Schools and Forest Solutions Incorporated employees, including headquarters and field
- contractors
- adjacent property owners
- Pertinent Tribal members and or representatives
- Members of the FSC-US National Initiative
- FSC International
- Local and regionally-based environmental organizations and conservationists
- Local and regionally-based social interest organizations
- Forest industry groups and organizations
- Purchasers of logs to be harvested on Hōnaunau
- Local, State and Federal regulatory agency personnel
- User groups, such as hikers, ATV users, and others
- Other relevant groups

### 3.3.2.1 Summary of Stakeholder Concerns and Perspectives and Responses from the Team Where Applicable

#### Economic Comments

| Comment/Concern   | Response  |
|---|---|
| The access roads to Hōnaunau do not currently allow log trucks. | KS has proposed alternate roads into Hōnaunau and is willing to cover the cost of road improvement so that the burden does not fall on the contractors. |

#### Social Comments

| Comment/Concern  | Response  |
|--|---|
| How does KS interact with Hōnaunau’s neighboring landowners and lessees concerning road issues (e.g. log trucks, maintenance, etc.)? | KS and FSI are in frequent contact with the road associations on the two roads leading Hōnaunau. The audit team is satisfied that neighborhood concerns are being informally addressed, but a CAR was issued addressing the evaluation of the social impact of forest management. |

#### Environmental Comments

| Comment/Concern   | Response   |
|---|--|
| Hōnaunau is currently in a State Conservation District that does not allow harvesting. How do the Hōnaunau managers plan to address this? | Kamehameha Schools is in active dialogue with the DLNR and contend that they have the legal right to harvest on the land. This issue has arisen before, and KS believes they can legally and appropriately invoke a grandfather clause that allows harvesting on areas that were cut prior to the creation of the Conservation District, as was done for harvesting that occurred during the 1980’s. KS will resolve the issue prior to the start of harvesting on Hōnaunau. |

|  |   |
|--|---|
| How will resumption of harvesting impact drainage on lands below Hōnaunau?               | The audit team is satisfied that the limited resumption of harvesting combined with new road maintenance planned by KS will not contribute to increased erosion on down slope properties. |
| How will endangered species be protected by the forest managers once harvesting resumes? | The audit team found that KS was not addressing endangered species to the level required by the standard, and CAR 2005.8 was issued in response.  |

### 3.4 Total Time Spent on audit

A total of 10.5 person days were spent by the auditors during the field portion of the audit. An additional 10 days were spent preparing for the audit, including the pre-evaluation.

### 3.5 Process of Determining Conformance

FSC accredited forest stewardship standards consist of a three-level hierarchy: Principles, then the Criteria that elaborate upon each Principle, then the Indicators that elaborate upon each Criterion. Consistent with SCS Forest Conservation Program evaluation protocols, the team collectively determines whether or not the subject forest management operation is in conformance with every applicable Indicator of the relevant forest stewardship standard. Each non-conformance must be evaluated to determine whether it constitutes a major or minor non-conformance at the level of the associated criterion or sub-criterion. Not all indicators are equally important, and there is no simple numerical formula to determine whether an operation is in non-conformance. The team must use their collective judgment to assess each criterion and determine if it is in conformance. If the forest management operation is determined to be in non-conformance at the criterion level, then at least one of the indicators must be in major non-conformance.

Corrective action requests (CAR's) are issued for every instance of non-conformance. Major non-conformances trigger major CAR's and minor non-conformances trigger minor CAR's

#### *Interpretations of Major CAR's (Preconditions), Minor CARs and Recommendations*

*Major CARs/Preconditions:* Major non-conformances, either alone or in combination with non-conformances of other indicators, result (or are likely to result) in a fundamental failure to achieve the objectives of the relevant FSC Criterion given the uniqueness and fragility of each forest resource. These are corrective actions that must be resolved or closed out prior to award of the certificate. If major CAR's arise after an operation is certified, the timeframe for correcting these non-conformances is typically shorter than for minor CAR's. Certification is contingent on the certified operations response to the CAR within the stipulated time frame.

*Minor CARs:* These are corrective action requests in response to minor non-conformances, which are typically limited in scale or can be characterized as an unusual lapse in the system. Corrective actions must be closed out within a specified time period of award of the certificate.

*Recommendations:* These are suggestions that the audit team concludes would help the company move even further towards exemplary status. Action on the recommendations is voluntary and does not affect the maintenance of the certificate. Recommendations can be changed to CARs if performance with respect to the criterion triggering the recommendation falls into non-conformance.

#### **4.0 RESULTS OF THE EVALUATION**

Table 4.1 below, contains the evaluation team's findings as to the strengths and weaknesses of the subject forest management operation relative to the FSC Principles of forest stewardship. The table also presents the Corrective Action Request (CAR) numbers related to each Principle.

**Table 4.1 Notable strengths and weaknesses of the forest management enterprise relative to the P&C**

| Principle/Subject Area                                    | Strengths Relative to the Standard   | Weaknesses Relative to the Standard  | CAR/REC #s  |
|---|--|--|---|
| <b>P1: FSC Commitment and Legal Compliance</b>            | <ul style="list-style-type: none"> <li>▪ KS and FSI are experienced land managers in the region and are conversant in applicable state laws</li> <li>▪ The management plan contains express language about the value of their active management in preventing any unauthorized activities from taking place on the forest, and the entire property has been fenced.</li> </ul> | <ul style="list-style-type: none"> <li>▪ A written register of applicable laws, statues, and international agreements is not available</li> <li>▪ KS needs to make a formal statement of commitment to the FSC</li> </ul>        | <ul style="list-style-type: none"> <li>▪ <b>CAR 2005.1</b></li> <li>▪ <b>CAR 2005.2</b></li> <li>▪ <b>CAR 2005.3</b></li> </ul> |
| <b>P2: Tenure &amp; Use Rights &amp; Responsibilities</b> | <ul style="list-style-type: none"> <li>▪ KS land is made up of the former land of the Hawaiian Royal family and there is no doubt as to their tenure rights and legal claim on the land.</li> <li>▪ Local tenure rights have been maintained, such as hunting and collection of non-timber forest products</li> </ul>  | <ul style="list-style-type: none"> <li>▪ No observed weaknesses</li> </ul>   | <ul style="list-style-type: none"> <li>▪ <b>No CAR's issued</b></li> </ul>  |
| <b>P3: Indigenous Peoples' Rights</b>                     | <ul style="list-style-type: none"> <li>▪ KS is actively involved in identifying and resolving Native Hawaiian concerns about their land management.</li> <li>▪ Procedures are in place to survey for cultural sites (arch sites, ethno-botanical plants, etc.) prior to harvest activities and to take proper protection measures if any sites are discovered.</li> </ul>      | <ul style="list-style-type: none"> <li>▪ There is currently little knowledge about the existence of cultural sites on Hōnaunau</li> <li>▪ Forest workers need better training in the identification of cultural sites</li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>CAR 2005.4</b></li> </ul>   |

|  |  |  |   |
|--|--|--|---|
| <b>P4: Community Relations &amp; Workers' Rights</b> | <ul style="list-style-type: none"> <li>▪ KS is committed to hiring and training local contractors.</li> <li>▪ Forest education is considered a primary goal of resuming management on Hōnaunau</li> <li>▪ Forest managers are well versed in safety laws; safety equipment and safety procedures are in place</li> <li>▪ The forestry staff has the linguistic expertise to deal with Spanish speaking workers.</li> </ul>   | <ul style="list-style-type: none"> <li>▪ KS needs to show how the social impact of management decisions is being considered in the management plan.</li> </ul>   | <ul style="list-style-type: none"> <li>▪ <b>CAR 2005.5</b></li> </ul>   |
| <b>P5: Benefits from the Forest</b>                  | <ul style="list-style-type: none"> <li>▪ The landowners have more than sufficient financial resources to manage the forest</li> <li>▪ It is expected that Hōnaunau will yield multiple timber species, and the forest managers are active in efforts to revitalize the timber industry in Hawaii</li> <li>▪ Annual growth will far exceed harvest volume.</li> </ul>   | <ul style="list-style-type: none"> <li>▪ KS needs a more formal plan for managing non-timber forest product collection, especially considering it is one of the primary economic activities currently taking place on the forest.</li> </ul>   | <ul style="list-style-type: none"> <li>▪ <b>CAR 2005.6</b></li> </ul>   |
| <b>P6: Environmental Impact</b>                      | <ul style="list-style-type: none"> <li>▪ Rehabilitation of natural forest (especially from invasive exotic weeds) is one of the main goals of the Hōnaunau management plan.</li> <li>▪ Sites of ecological significance will be protected.</li> <li>▪ Harvesting guidelines include provisions for protecting water and soil resources and minimizing damage to vegetation remaining after harvest.</li> <li>▪ GMO's and biological control agents are not being used.</li> <li>▪ Exotic weed species are aggressively combated.</li> <li>▪ The forest management plan includes forest fire prevention.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Assurances need to be made that the strategy to convert weed infested native stands into exotic plantations in order to protect the upslope native forest does not result in a net loss to biodiversity.</li> <li>▪ More specific endangered species protection measures need to be taken</li> <li>▪ While a large portion of the property will not be harvested, KS needs to better understand how their reserves will augment reserve areas at a landscape level</li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>CAR 2005.7</b></li> <li>▪ <b>CAR 2005.8</b></li> <li>▪ <b>CAR 2005.9</b></li> <li>▪ <b>CAR 2005.10</b></li> <li>▪ <b>CAR 2005.11</b></li> <li>▪ <b>CAR 2005.12</b></li> </ul> |

|  |  |   |  |
|--|--|---|--|
| <b>P7: Management Plan</b>                               | <ul style="list-style-type: none"> <li>▪ KS has created comprehensive planning documents prior to beginning harvesting activities.</li> <li>▪ Forest workers are appropriately trained to implement the management plan</li> <li>▪ The plan is scheduled to be revised every 5 years to incorporate new information</li> </ul> | <ul style="list-style-type: none"> <li>▪ Some elements of the FSC standard have not been addressed by the plan, including evaluations of social impact and endangered species protection.</li> </ul>  | <ul style="list-style-type: none"> <li>▪ No CAR's specific to P7 were issued, non-conformances were addressed in other Principles</li> </ul> |
| <b>P8: Monitoring &amp; Assessment</b>                   | <ul style="list-style-type: none"> <li>▪ Monitoring procedures are in place for plant surveys, exotic weeds, timber growth and yield, harvest volumes, management efficiency, etc.</li> <li>▪ Adaptive management is used; results of monitoring are used to inform future planning.</li> </ul>                                | <ul style="list-style-type: none"> <li>▪ Social impact monitoring needs to be more formally addressed in the plan</li> <li>▪ A documented control system needs to be implemented to track certified material</li> <li>▪ Procedures for making a summary of monitoring results public need to be clarified.</li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>CAR 2005.13</b></li> <li>▪ <b>CAR 2005.14</b></li> <li>▪ <b>CAR 2005.15</b></li> </ul>           |
| <b>P9: Maintenance of High Conservation Value Forest</b> | <ul style="list-style-type: none"> <li>▪ The management plan contains some language regarding the importance of high conservation values</li> </ul>  | <ul style="list-style-type: none"> <li>▪ High conservation values have not been identified or specifically protected on the Hōnaunau management area.</li> </ul>  | <ul style="list-style-type: none"> <li>▪ <b>CAR 2005.16</b></li> </ul>   |
| <b>P10: Plantations</b>                                  | <ul style="list-style-type: none"> <li>▪ The use of plantations in the forest plan is designed to protect natural forest by creating a zone difficult for exotic species to cross.</li> <li>▪ Plantations constitute a low percentage of the overall forest management area.</li> </ul>  | <ul style="list-style-type: none"> <li>▪ It is not clear how biodiversity will be maintained in the plantation areas of Hōnaunau, especially in regards to the proposed plan to convert weed infested native forest to exotic plantations</li> </ul>  | <ul style="list-style-type: none"> <li>▪ <b>CAR 2005.17</b></li> <li>▪ <b>CAR 2005.18</b></li> <li>▪ <b>CAR 2005.19</b></li> </ul>           |

#### 4.2 Preconditions/ Major CARs

Preconditions are major corrective action requests that are placed on a forest management operation after the initial evaluation and before the operation is certified. Certification cannot be awarded if open preconditions exist.

The following pre-conditions (Major CARs) were issued as a result of and shortly following the field evaluation. On the basis of corrective actions undertaken by the Hōnaunau forest managers, with documentation supplied to SCS, all pre-conditions been addressed to the satisfaction of the audit team and, accordingly, *have been closed*.

|   |  |
|---|--|
| <b>Background/Justification:</b> Forest management must conform to all applicable international treaties and agreements. While the forest management staff showed knowledge of some international agreements, the auditors were not convinced that the full scope of the international agreements to which the U.S. is a party have been addressed. |  |
| <b>Major CAR 2005.2</b>   | <p>Prior to award of certification:</p> <ul style="list-style-type: none"> <li>• Annex 2 of the FSC/SCS Interim Standard for Forest Certification in Hawaii must be incorporated into the Hōnaunau Forest Management Plan</li> <li>• An analysis must be completed of the applicability to Hōnaunau Forest of the international conventions and agreements listed in Annex 2.</li> </ul> |
| <b>Reference</b>  | Criterion 1.3  |
| <b>Company Response:</b> A detailed analysis was provided to SCS, showing how the international agreements listed in the standard apply to the management of Hōnaunau. Based on this analysis, SCS determined that KS is not in violation of any international agreements   |  |
| <b>Status:</b> This Major CAR has been closed.  |  |

|  |  |
|--|--|
| <b>Background/Justification:</b> The audit team has determined that planned forest management activities have not adequately considered and addressed potential impacts to rare, threatened and endangered species and their habitats.   |  |
| <b>Major CAR 2005.8</b>  | <p>a) Prior to award of certification, the Hōnaunau Forest Management Plan must be augmented with a cohesive and expanded section on endangered species issues, addressing both pertinent species and their habitats.</p> <p>b) Prior to commencement of harvesting/new road construction operations, protocols must be designed and put in place for surveying for and avoiding adverse impacts to hawk nest trees.</p> |
| <b>Reference</b>   | Criterion 6.2  |
| <b>Company Response:</b> The management plan has been updated to include a section describing rare, threatened and endangered species likely to occur on the Hōnaunau management area. Protection measures on a species specific basis are described.  |  |
| <b>Status:</b> Partially closed and the remaining components have been downgraded to status as a Minor CAR. Part A of this Major CAR has been closed, but additional work is needed on part B prior to beginning harvesting. Award of certification is no longer contingent on closing this, now, Minor CAR. |  |

|  |   |
|--|---|
| <b>Background/Justification:</b> As a significant landowner within the region, Kamehameha Schools has the ability to add to the level of forest reserves and representative areas at a landscape scale. While portions of the Hōnaunau Management Area are already in reserve status, it is not clear how these areas were selected and whether they fill current regional gaps in ecological reference areas. |   |
| <b>Major CAR 2005.10</b>   | a) Prior to award of certification, Hōnaunau Forest managers must design and institute a process for conducting a “gap analysis” of the ecological representativeness of the current reserve or |

|   |   |
|---|---|
|   | <p>“reference areas” within the larger Kona forest region. The purpose of this gap analysis is to determine if contributions can be made on Hōnaunau Forest in terms of establishing reference areas that will contribute to improved representativeness. Such analysis ought to consider the occurrence of older substrate age classes (3,000 to 5,000 ft. and 5,000 to 10,000 year old Mauna Loa) and associated plant communities at mid to upper elevation ranges within the region.</p> <p>b) By the time of the first annual audit, the gap analysis required in Part (a) must be completed and a brief report submitted to SCS that describes what representative samples of existing ecosystems have been established on Hōnaunau Forest.</p> |
| Reference   | Criterion 6.4 and Indicators 6.3.2 and 6.3.3  |
| <p><b>Company Response:</b> SCS has received an update to the Hōnaunau management plan that describing an initial screening of the landbase for ecological reference areas and a description of future work. The management team’s knowledge of the Hōnaunau area is still quite limited, and additional opportunities for conservation will be investigated as more survey work is done. The management plan also calls for the creation of a working group comprised of local experts to help identify additional representative areas.</p> |   |
| <p><b>Status:</b> Partially closed. Part A of this CAR has been closed. Part B will be addressed during the first annual audit. That is, the Major CAR has been downgraded to a Minor CAR.</p>  |   |

|  |   |
|--|---|
| <p><b>Background/Justification:</b> SCS needs to review the list of pesticides being used by Hōnaunau in order to ensure none of the pesticides they use are prohibited by the FSC.</p>  |   |
| Major CAR 2005.11  | <p>Prior to the award of certification, Hōnaunau Forest managers must submit to SCS a written list (trade names and active ingredients) of all chemicals pesticides/herbicides now in use or intended to be used on Hōnaunau Forest over the next year. This list must be updated annually in advance of the annual surveillance audit.</p> |
| Reference  | Indicators 6.6.2  |
| <p><b>Company Response:</b> A list of chemicals and their intended use was provided to the auditors, and no chemicals currently being used violate the current FSC pesticide policy.</p> |   |
| <p><b>Status:</b> Closed</p>   |   |

|  |  |
|--|--|
| <p><b>Background/Justification:</b> As required in the FSC standards, a summary of monitoring activities performed on Honauanu must be made public. Kamehameha Schools has an excellent opportunity to improve forestry practice in Hawaii by making the monitoring results available to academics and other interested parties.</p> |  |
| Major CAR 2005.15  | <p>Prior to award of certification, a written protocol for the preparation and periodic (e.g., annual) update of a public summary of monitoring results must be developed and conveyed to SCS. The first such public summary must be made publicly available prior to the first annual audit after award of certification.</p> |

|   |               |
|---|---------------|
| Reference   | Criterion 8.5 |
| <b>Company Response:</b> A protocol for describing monitoring results was presented to SCS, including specific monitoring elements and the procedure by which they would be updated. All elements required by the standard will be included in a public summary of the management plan, available from the Kamehameha Schools' offices. |               |
| <b>Status:</b> Closed. The monitoring summary will be evaluated during the first annual audit.  |               |

**Background/Justification:** Currently, High Conservation Values have not been identified or specifically protected on the Hōnaunau Management Area.

|                          |  |
|--------------------------|--|
| <b>Major CAR 2005.16</b> | <p>Prior to award of certification, Hōnaunau Forest managers must:</p> <ul style="list-style-type: none"> <li>a) Add a section to the Forest Management Plan that compiles and describes the actions taken and programs presently in place that demonstrate, to the extent possible, conformance to the high conservation value analysis and management requirements contained in Principle 9</li> <li>b) Develop and convey to SCS a written Action Plan for how full conformance with the requirements of Principle 9 will be met by the time of the first annual audit after of certification.</li> </ul> |
|--------------------------|--|

|           |                              |
|-----------|------------------------------|
| Reference | Criterion 9.1, 9.2, 9.3, 9.4 |
|-----------|------------------------------|

**Company Response:** SCS was presented with the additional management plan sections and the action plan required by the CAR. Initial high conservation values were identified, and procedure was laid out for analyzing other HCV's. Central to this effort will be the creation of a working group composed of local experts and stakeholders to identify potential HCV's on the Hōnaunau Management Area.

**Status:** Closed. Kamehameha Schools has mapped out a comprehensive plan for identifying and protecting HCVF on Hōnaunau, complete with internal recommendations for addressing limited knowledge on each high conservation value. But as much of the work is still in the conceptual stage, this issue will need to be carefully monitored during subsequent annual audits.

## 5.0 CERTIFICATION DECISION

### 5.1 Certification Recommendation

As determined by the full and proper execution of the SCS *Forest Conservation Program* evaluation protocols, the evaluation team hereby recommends that Kamehameha Schools be awarded FSC certification as a “Well-Managed Forest” subject to the corrective action requests stated in Section 5.2. Kamehameha Schools has demonstrated that their system of management is capable of ensuring that all of the requirements of the SCS Interim Standard for Hawaii are met over the forest area covered by the scope of the evaluation. Kamehameha Schools has also demonstrated that the described system of management is being implemented consistently over the forest area covered by the scope of the certificate.

## 5.2 Initial Corrective Action Requests (at the time of award of certification)

|  |  |
|--|--|
| <b>Background/Justification:</b> Criterion 1.1 requires forest management to follow all applicable laws and regulations. As part of this requirement, staff must have access to all applicable laws and regulations.   |  |
| <b>CAR 2005.1</b>  | A written register of all pertinent statutes and bodies of regulations must be completed and then periodically updated. The register should be available to all personnel involved in the management of Hōnaunau Forest. |
| <b>Deadline</b>  | 30 days after the award of certification   |
| <b>Reference</b>   | Indicator 1.1.1  |
| <b>Company Response:</b> Prior to the award of certification, SCS was presented with a list of all applicable local, state, and federal laws governing forest management in Hawaii. Future audits should investigate whether or not this register is being used by forest management personnel in their planning activities. |  |
| <b>Status:</b> Closed.   |  |

|   |   |
|---|---|
| <b>Background/Justification:</b> Forest managers must make a public statement of commitment to the FSC. |   |
| <b>CAR 2005.3</b>   | A written statement of Kamehameha School's commitment to the FSC Principles & Criteria must be made publicly available. |
| <b>Deadline</b>   | Within 30 days after the award of certification   |
| <b>Reference</b>  | Indicator 1.6.1   |

|  |   |
|--|---|
| <b>Background/Justification:</b> The Hōnaunau Management Area covers land historically used by native Hawaiians, and as such caution must be taken to ensure that cultural resources (archeological sites, plants with ethno-botanical use) are protected on the site. The forest managers have made commitments to protect any such site that is located, but the long absence of activity on the forest has contributed to a lack of knowledge about the existence of cultural sites. More training needs to be done for forest workers to ensure that sites are properly identified in the first place. |   |
| <b>CAR 2005.4</b>  | Prior to the commencement of timber harvesting and new road construction, field personnel must have undergone a training program focusing on identifying and appropriately protecting cultural resources that may exist on Hōnaunau Forest. |
| <b>Deadline</b>  | Prior to the commencement of timber harvesting and new road construction  |
| <b>Reference</b>   | Indicator 3.3.3   |

|   |  |
|---|--|
| <b>Background/Justification:</b> Assessment and monitoring must be completed on the social impacts resuming forest management on Hōnaunau. While the managers keep in close contact with neighboring land owners, the results of this communication and other social evaluations need to be incorporated into the plan. |  |
| <b>CAR 2005.5</b>   | A social impact assessment/monitoring protocol must be designed and implemented. The protocols must be incorporated into the |

|                  |   |
|------------------|---|
|                  | Hōnaunau Forest Management Plan. Prior to the first annual audit after award of certification, a written summary of the results of social impact monitoring must be prepared and made publicly available. |
| <b>Deadline</b>  | Within 6 months after award of certification  |
| <b>Reference</b> | Indicators 4.4.1 and 8.2.6  |

|   |  |
|---|--|
| <b>Background/Justification:</b> Non-timber forest products are currently being harvested on Hōnaunau, especially culturally important plants and game animals. Some guidance is currently given to interested collectors, but this process needs to be formalized. |  |
| <b>CAR 2005.6</b>   | Written guidelines must be developed and implemented for the removal of non-timber forest products from Hōnaunau Forest. The guidelines must be incorporated into the Management Plan. |
| <b>Deadline</b>   | The first annual audit.  |
| <b>Reference</b>  | Indicator 5.2.4  |

|   |   |
|---|---|
| <b>Background/Justification:</b> Impacts of proposed strategy to convert “weed infested” lowland rainforest to “Exotic Sawlog” over the first 25 year harvest period needs to be based upon accurate scientific information pertaining to the current condition of the subject area and the ecology of each species of weed. Justification of strategy should consider rates of spread and dispersal mechanisms for each species, and predict the probable effects of proposed action on subject weed species based on best available scientific information. |   |
| <b>CAR 2005.7</b>   | Prior to harvesting operations in compartments classed as weed infested, consultation must be completed with KS staff experts (and, as appropriate, outside experts) on the ecological appropriateness of the proposed harvesting prescriptions in those compartments. A briefing report that summarizes this consultation and the resulting modifications to the planned harvesting prescriptions, if any, must be conveyed to SCS prior to harvesting operations. |
| <b>Deadline</b>   | Prior to harvesting operations  |
| <b>Reference</b>  | Indicators 6.1.7 and 6.10.2   |

|   |   |
|---|---|
| <b>Background/Justification:</b> It is not clear that forest biodiversity values and ecological functions have been expressly considered in designing the management strategy for Hōnaunau. |   |
| <b>CAR 2005.9</b>   | Within one year of award of certification, the Management Plan must be augmented to include a section that describes known ecological functions and values associated with Hōnaunau Forest and that identifies gaps in knowledge. This section of the Management Plan must also contain an elaboration of the goals for biological diversity on the Forest. |
| <b>Deadline</b>   | The first annual audit.   |
| <b>Reference</b>  | Indicators 6.3.1 and 6.3.5  |

**Background/Justification:** A key element of the Honauanu management plan is the

|   |   |
|---|---|
| creation of a buffer strip of exotic plantations at the lower elevation of the forest in order to prevent the spread of invasive species into the natural stands. Also, natural stands will be primarily replanted with a single native species, Acacia koa. The forest management staff needs to ensure that biodiversity is not lost with these actions and that single native species plantings do not create stands that would be considered a plantation under the FSC definition. |   |
| <b>CAR 2005.12</b>  | A brief written report must be submitted to SCS that summarizes steps taken to assure enhanced biological diversity within planted stands, both exotic and native. Such steps should include multi-species plantings and management, rather than elimination, of volunteer seedlings of native species within planted stands. |
| <b>Deadline</b>   | The first annual audit  |
| <b>Reference</b>  | Indicator 6.10.1  |

|  |  |
|--|--|
| <b>Background/Justification:</b> Routine monitoring of the social impact of forest management activities must be completed by the forest managers. |  |
| <b>CAR 2005.13</b>   | The Hōnaunau Forest monitoring protocols must be expanded to include social impact monitoring; prior to the first annual audit, a summary report of the results of social impact monitoring must be conveyed to SCS. |
| <b>Deadline</b>  | The first annual audit   |
| <b>Reference</b>   | Indicator 8.2.6  |

|  |  |
|--|--|
| <b>Background/Justification:</b> Forest Solutions Inc, does have a plan for tagging of logs, but their log control system needs to be improved in order to ensure protection of the chain-of-custody of their certified product. |  |
| <b>CAR 2005.14</b>   | A Documented Control System (DCS) for “stump to forest gate” chain-of-custody control must be conveyed to SCS. As part of the DCS, Kamehameha Schools must convey written notice to its two Hōnaunau harvesting licensees that they must also become FSC CoC certified, if the certified status of wood harvested on Hōnaunau is to be maintained. |
| <b>Deadline</b>  | Prior to commencement of timber harvesting operations  |
| <b>Reference</b>   | Indicator 8.3.1  |

|  |  |
|--|--|
| <b>Background/Justification:</b> Hōnaunau’s forest management plan includes a strategy to use exotic plantations as a buffer to protect biodiversity values of the native forest at higher elevations, but it is not clear how biodiversity will be considered in these exotic plantations themselves. |  |
| <b>CAR 2005.17</b>   | Hōnaunau Forest managers must establish written guidelines for assuring in-stand bio-diversity in compartments to be managed as “Exotic Sawlog.” |
| <b>Deadline</b>  | Prior to commencement of timber harvesting operations  |
| <b>Reference</b>   | Indicator 10.3.2   |

**Background/Justification:** The origin of seeds used to create exotic plantations must be

|  |   |
|--|---|
| expressly identified in the planning documents, as seed origin for native seedlings currently are. |   |
| <b>CAR 2005.18</b>   | The origin of all seed used to propagate exotic seedlings to be planted in Hōnaunau Forest must be identified in the management plan or another pertinent document. |
| <b>Deadline</b>  | Prior to the commencement of timber stand establishment (planting) operations   |
| <b>Reference</b>   | Indicator 10.4.4  |

|  |   |
|--|---|
| <b>Background/Justification:</b> Central to the Hōnaunau management plan is the creation of a buffer strip of exotic plantations along the lower elevation edge of the forest in order to prevent the spread of invasive exotics into the higher elevation native stands. While this is an innovative approach to a complicated problem, it is unclear whether the operation taken in whole will increase the overall ecological integrity of the forest area. |   |
| <b>CAR 2005.19</b>   | Before any timber management operations that entail conversion of natural stands/compartments to exotic saw log stands/compartments, Hōnaunau Forest managers must present to SCS a written justification supporting the premise that establishment of new “Exotic Sawlog” compartments will enhance the ecological integrity of Hōnaunau Forest. |
| <b>Deadline</b>  | Prior to described forest harvesting activities   |
| <b>Reference</b>   | Indicator 10.9.2  |

|  |  |
|--|--|
| <b>Background/Justification:</b> The audit team could not find procedures for preventing and containing spills or accidents involving oils, fuels, pesticides, and other toxic substances. This indicator is especially critical in Hōnaunau given the rapid sub-surface flow of water in the soils and the associated potential for groundwater contamination |  |
| <b>CAR 2005.20</b>   | Management procedures must be updated to include environmentally appropriate responses to containing toxic chemical spills, including oils, fuels, and pesticides. |
| <b>Deadline</b>  | The first annual audit   |
| <b>Reference</b>   | Indicator 6.7.2  |

## 6.0 SURVEILLANCE EVALUATIONS

If certification is awarded, surveillance evaluations will take place at least annually to monitor the status of any open corrective action requests and review the continued conformance of Kamehameha Schools to the SCS Interim Standard for Hawai‘i. Public summaries of surveillance evaluations will be posted separately on the SCS website ([www.scscertified.com](http://www.scscertified.com)). The first annual surveillance audit should take place in mid- to late 2006.

### 6.1 2007 AND 2008 SURVEILLANCE DECISION AND PUBLIC RECORD

#### 6.1.1 Assessment Dates

The office and field portions of the 2007 annual audit took place on June 27-28, 2007. In 2008- SCS conducted a desk audit.

### **6.1.2 Assessment Personnel**

This annual audit was conducted by Dr. Robert J. Hrubes. Dr. Hrubes was the audit team leader on the 2005 full certification evaluation, thus providing for good continuity. Dr. Hrubes is Senior Vice-President of Scientific Certification Systems. He is a registered professional forester and forest economist with 27 years of professional experience in both public and private forest management issues. Dr. Hrubes worked in collaboration with SCS to develop the programmatic protocol that guides all SCS Forest Conservation Program evaluations. Dr. Hrubes has led numerous SCS Forest Conservation Program evaluations of North American (U.S. and Canada) industrial forest ownerships, as well as operations in Scandinavia, Chile, and Japan. He also has professional work experience in Brazil, Germany, Guam (U.S.), Hawaii (U.S.), and Malaysia. Dr. Hrubes is the principal author of this audit report.

### **6.1.3 Assessment Process**

#### **6.1.3.1 Itinerary**

June 27<sup>th</sup>, 2007 - Kamehameha Schools Land Assets Offices

Dr. Hrubes met with members of Kamehameha Schools and Forest Solutions, Inc. for the opening meeting during which he reviewed the evaluation process, the FSC standard, and gaps that were observed during the certification evaluation. Staff members from Kamehameha Schools and Forest Solutions, Inc. provided an overview of Kamehameha Schools /Honaunau activities and CAR-related activity since June 2005.

#### **Individuals Present:**

Dr. Robert Hrubes, SCS  
Kamakani Dancil, KS  
Marius Ellis, FSI  
Nicholas Koch, FSI  
William Rice, FSI

June 28<sup>th</sup> - Hōnaunau Management Area

The forest management staff led Dr. Hrubes on a field tour of Hōnaunau. Stops focused on subjects relating to the 2005 field audit such as exotic weed invaded areas, converting exotic stands to native stands, the status of the tropical ash reduction trial and the pre-commercial thinning trial, grazing areas within Hōnaunau, and snag retention policies. Various aspects of the forest management operation were revisited, including monitoring, harvest layout, endangered species protection, worker and neighbor relations, and hunting policies.

#### 6.1.4 Status of Corrective Action Requests

##### 2007 & 2008

|   |   |
|---|---|
| <b>Background/Justification:</b> Forest managers must make a public statement of commitment to the FSC.   |   |
| <b>CAR 2005.3</b>   | A written statement of Kamehameha School's commitment to the FSC Principles & Criteria must be made publicly available. |
| <b>Deadline</b>   | Within 30 days after the award of certification   |
| <b>Reference</b>  | Indicator 1.6.1   |
| <b>Company Actions/Auditor Comments:</b> Kamehameha Schools posted an acceptable statement of commitment to the FSC Principles and Criteria on their website within the stated timeframe. |   |
| <b>Status:</b> Closed   |   |

|  |   |
|--|---|
| <b>Background/Justification:</b> The Hōnaunau Management Area covers land historically used by native Hawaiians, and as such caution must be taken to ensure that cultural resources (archeological sites, plants with ethno-botanical use) are protected on the site. The forest managers have made commitments to protect any such site that is located, but the long absence of activity on the forest has contributed to a lack of knowledge about the existence of cultural sites. More training needs to be done for forest workers to ensure that sites are properly identified in the first place. |   |
| <b>CAR 2005.4</b>  | Prior to the commencement of timber harvesting and new road construction, field personnel must have undergone a training program focusing on identifying and appropriately protecting cultural resources that may exist on Hōnaunau Forest. |
| <b>Deadline</b>  | Prior to the commencement of timber harvesting and new road construction  |
| <b>Reference</b>   | Indicator 3.3.3   |
| <b>Company Actions/Auditor Comments:</b> At the time of the 2007 audit timber harvesting and new road construction still had not started. As of Nov 2009 harvesting still has not started. A very small trial (1-acre) for harvesting ash and eucalyptus will be in 2010.  |   |
| <b>Status:</b> Open  |   |

|   |
|---|
| <b>Background/Justification:</b> Assessment and monitoring must be completed on the social impacts resuming forest management on Hōnaunau. While the managers keep in close |
|---|

|   |  |
|---|--|
| contact with neighboring land owners, the results of this communication and other social evaluations need to be incorporated into the plan.   |  |
| <b>CAR 2005.5</b>   | A social impact assessment/monitoring protocol must be designed and implemented. The protocols must be incorporated into the Hōnaunau Forest Management Plan. Prior to the first annual audit after award of certification, a written summary of the results of social impact monitoring must be prepared and made publicly available. |
| <b>Deadline</b>   | Within 6 months after award of certification   |
| <b>Reference</b>  | Indicators 4.4.1 and 8.2.6   |
| <b>Company Actions/Auditor Comments:</b> See page 120 of PMP & annual supplement, Kama is already involved in SIA (eg. He meets 6x per year with Kona Farmers Alliance)<br>+ road alliance<br>+ cultural guidelines |  |
| <b>Status:</b> Closed   |  |

|   |  |
|---|--|
| <b>Background/Justification:</b> Non-timber forest products are currently being harvested on Hōnaunau, especially culturally important plants and game animals. Some guidance is currently given to interested collectors, but this process needs to be formalized. |  |
| <b>CAR 2005.6</b>   | Written guidelines must be developed and implemented for the removal of non-timber forest products from Hōnaunau Forest. The guidelines must be incorporated into the Management Plan. |
| <b>Deadline</b>   | The first annual audit.  |
| <b>Reference</b>  | Indicator 5.2.4  |
| <b>Company Actions/Auditor Comments:</b> See TOC & page 90, Bottom line: NTFP activities are tightly managed.   |  |
| <b>Status:</b> Closed   |  |

|   |   |
|---|---|
| <b>Background/Justification:</b> Impacts of proposed strategy to convert “weed infested” lowland rainforest to “Exotic Sawlog” over the first 25 year harvest period needs to be based upon accurate scientific information pertaining to the current condition of the subject area and the ecology of each species of weed. Justification of strategy should consider rates of spread and dispersal mechanisms for each species, and predict the probable effects of proposed action on subject weed species based on best available scientific information. |   |
| <b>CAR 2005.7</b>   | Prior to harvesting operations in compartments classed as weed infested, consultation must be completed with KS staff experts (and, as appropriate, outside experts) on the ecological appropriateness of the proposed harvesting prescriptions in those compartments. A briefing report that summarizes this consultation and the resulting modifications to the planned harvesting prescriptions, if any, must be conveyed to SCS prior to harvesting operations. |
| <b>Deadline</b>   | Prior to harvesting operations  |
| <b>Reference</b>  | Indicators 6.1.7 and 6.10.2   |

|   |
|---|
| <b>Company Actions/Auditor Comments:</b> : At the time of the 2007 audit timber harvesting and new road construction still had not started. As of Nov 2009 harvesting still has not started. A very small trial (1-acre) for harvesting ash and eucalyptus will be in 2010. |
| <b>Status:</b> Open   |

|  |   |
|--|---|
| <b>Background/Justification:</b> The audit team has determined that planned forest management activities have not adequately considered and addressed potential impacts to rare, threatened and endangered species and their habitats.   |   |
| <b>CAR 2005.8</b>  | <ul style="list-style-type: none"> <li>c) Prior to award of certification, the Hōnaunau Forest Management Plan must be augmented with a cohesive and expanded section on endangered species issues, addressing both pertinent species and their habitats.</li> <li>d) Prior to commencement of harvesting/new road construction operations, protocols must be designed and put in place for surveying for and avoiding adverse impacts to hawk nest trees.</li> </ul> |
| <b>Reference</b>   | Criterion 6.2   |
| <b>Company Response:</b> The management plan has been updated to include a section describing rare, threatened and endangered species likely to occur on the Hōnaunau management area. Protection measures on a species specific basis are described. See FMP, page 137, section 6.5 |   |
| <b>Status:</b> Part A & B of this CAR have been closed.  |   |

|   |   |
|---|---|
| <b>Background/Justification:</b> It is not clear that forest biodiversity values and ecological functions have been expressly considered in designing the management strategy for Hōnaunau. |   |
| <b>CAR 2005.9</b>   | Within one year of award of certification, the Management Plan must be augmented to include a section that describes known ecological functions and values associated with Hōnaunau Forest and that identifies gaps in knowledge. This section of the Management Plan must also contain an elaboration of the goals for biological diversity on the Forest. |
| <b>Deadline</b>   | The first annual audit.   |
| <b>Reference</b>  | Indicators 6.3.1 and 6.3.5  |
| <b>Company Actions/Auditor Comments:</b> HCFV, etc. is the focus of new Section 6, see FMP, page 121, section 6   |   |
| <b>Status:</b> Closed   |   |

|  |
|--|
| <b>Background/Justification:</b> As a significant landowner within the region, Kamehameha Schools has the ability to add to the level of forest reserves and representative areas at a landscape scale. While portions of the Hōnaunau Management Area are already in reserve status, it is not clear how these areas were selected and whether they fill current regional gaps in ecological reference areas. |
|--|

|   |   |
|---|---|
| CAR 2005.10   | <p>c) Prior to award of certification, Hōnaunau Forest managers must design and institute a process for conducting a “gap analysis” of the ecological representativeness of the current reserve or “reference areas” within the larger Kona forest region. The purpose of this gap analysis is to determine if contributions can be made on Hōnaunau Forest in terms of establishing reference areas that will contribute to improved representativeness. Such analysis ought to consider the occurrence of older substrate age classes (3,000 to 5,000 ft. and 5,000 to 10,000 year old Mauna Loa) and associated plant communities at mid to upper elevation ranges within the region.</p> <p>d) By the time of the first annual audit, the gap analysis required in Part (a) must be completed and a brief report submitted to SCS that describes what representative samples of existing ecosystems have been established on Hōnaunau Forest.</p> |
| Reference   | Criterion 6.4 and Indicators 6.3.2 and 6.3.3  |
| <p><b>Company Response:</b> SCS has received an update to the Hōnaunau management plan that describing an initial screening of the landbase for ecological reference areas and a description of future work. The management team’s knowledge of the Hōnaunau area is still quite limited, and additional opportunities for conservation will be investigated as more survey work is done. The management plan also calls for the creation of a working group comprised of local experts to help identify additional representative areas.</p> |   |
| <p><b>Status:</b> No list of reference areas yet - see section 6.2 &amp; 6.3<br/> <b>Given that harvesting still has not occurred we will make part b due prior to the start of harvesting.</b></p>   |   |

|   |  |
|---|--|
| <b>Background/Justification:</b> SCS needs to review the list of pesticides being used by Hōnaunau in order to ensure none of the pesticides they use are prohibited by the FSC.  |  |
| <b>Major CAR 2005.11</b>  | Prior to the award of certification, Hōnaunau Forest managers must submit to SCS a written list (trade names and active ingredients) of all chemicals pesticides/herbicides now in use or intended to be used on Hōnaunau Forest over the next year. This list must be updated annually in advance of the annual surveillance audit. |
| <b>Reference</b>  | Indicators 6.6.2   |
| <b>Company Response:</b> A list of chemicals and their intended use was provided to the auditors, and no chemicals currently being used violate the current FSC pesticide policy. |  |
| <b>Status:</b> Closed   |  |

|   |   |
|---|---|
| <b>Background/Justification:</b> A key element of the Honauanu management plan is the creation of a buffer strip of exotic plantations at the lower elevation of the forest in order to prevent the spread of invasive species into the natural stands. Also, natural stands will be primarily replanted with a single native species, Acacia koa. The forest management staff needs to ensure that biodiversity is not lost with these actions and that single native species plantings do not create stands that would be considered a plantation under the FSC definition. |   |
| <b>CAR 2005.12</b>  | A brief written report must be submitted to SCS that summarizes steps taken to assure enhanced biological diversity within planted stands, both exotic and native. Such steps should include multi-species plantings and management, rather than elimination, of volunteer seedlings of native species within planted stands. |
| <b>Deadline</b>   | The first annual audit  |
| <b>Reference</b>  | Indicator 6.10.1  |
| <b>Company Actions/Auditor Comments:</b> See FMP, section 4.7.3, page 114. Biological oversimplification of planted stands is practically impossible. Action item: KS must provide a statement in the FMP re: planted native stands.  |   |
| <b>Status:</b> Closed   |   |

|  |  |
|--|--|
| <b>Background/Justification:</b> Routine monitoring of the social impact of forest management activities must be completed by the forest managers. |  |
| <b>CAR 2005.13</b>   | The Hōnaunau Forest monitoring protocols must be expanded to include social impact monitoring; prior to the first annual audit, a summary report of the results of social impact monitoring must be conveyed to SCS. |
| <b>Deadline</b>  | The first annual audit   |
| <b>Reference</b>   | Indicator 8.2.6  |
| <b>Company Actions/Auditor Comments:</b> None  |  |
| <b>Status:</b> Closed  |  |

|   |  |
|---|--|
| <b>Background/Justification:</b> Forest Solutions Inc, does have a plan for tagging of logs, but their log control system needs to be improved in order to ensure protection of the chain-of-custody of their certified product.  |  |
| <b>CAR 2005.14</b>  | A Documented Control System (DCS) for “stump to forest gate” chain-of-custody control must be conveyed to SCS. As part of the DCS, Kamehameha Schools must convey written notice to its two Hōnaunau harvesting licensees that they must also become FSC CoC certified, if the certified status of wood harvested on Hōnaunau is to be maintained. |
| <b>Deadline</b>   | Prior to commencement of timber harvesting operations  |
| <b>Reference</b>  | Indicator 8.3.1  |
| <b>Company Actions/Auditor Comments:</b> Close if evidence is provided of changes in procedures:<br><ul style="list-style-type: none"> <li>- invoices and log tally sheets contain the cert #</li> <li>- maintain records of sales by customer and log species</li> </ul> |  |
| <b>Status:</b> : At the time of the 2007 audit timber harvesting and new road construction still had not started. As of Nov 2009 harvesting still has not started. A very small trial (1-acre) for harvesting ash and eucalyptus will being in 2010.                      |  |

|  |  |
|--|--|
| <b>Background/Justification:</b> Hōnaunau’s forest management plan includes a strategy to use exotic plantations as a buffer to protect biodiversity values of the native forest at higher elevations, but it is not clear how biodiversity will be considered in these exotic plantations themselves. |  |
| <b>CAR 2005.17</b>   | Hōnaunau Forest managers must establish written guidelines for assuring in-stand bio-diversity in compartments to be managed as “Exotic Sawlog.” |
| <b>Deadline</b>  | Prior to commencement of timber harvesting operations  |
| <b>Reference</b>   | Indicator 10.3.2   |
| <b>Company Actions/Auditor Comments:</b> Tied to CAR 12  |  |
| <b>Status:</b> : At the time of the 2007 audit timber harvesting and new road construction still had not started. As of Nov 2009 harvesting still has not started. A very small trial (1-acre) for harvesting ash and eucalyptus will being in 2010.   |  |

|   |   |
|---|---|
| <b>Background/Justification:</b> The origin of seeds used to create exotic plantations must be expressly identified in the planning documents, as seed origin for native seedlings currently are. |   |
| <b>CAR 2005.18</b>  | The origin of all seed used to propagate exotic seedlings to be planted in Hōnaunau Forest must be identified in the management plan or another pertinent document. |
| <b>Deadline</b>   | Prior to the commencement of timber stand establishment (planting) operations   |
| <b>Reference</b>  | Indicator 10.4.4  |
| <b>Company Actions/Auditor Comments:</b> See FMP, section 4.7.3, page 113   |   |
| <b>Status:</b> Closed   |   |

|  |   |
|--|---|
| <b>Background/Justification:</b> Central to the Hōnaunau management plan is the creation of a buffer strip of exotic plantations along the lower elevation edge of the forest in order to prevent the spread of invasive exotics into the higher elevation native stands. While this is an innovative approach to a complicated problem, it is unclear whether the operation taken in whole will increase the overall ecological integrity of the forest area. |   |
| <b>CAR 2005.19</b>   | Before any timber management operations that entail conversion of natural stands/compartments to exotic saw log stands/compartments, Hōnaunau Forest managers must present to SCS a written justification supporting the premise that establishment of new “Exotic Sawlog” compartments will enhance the ecological integrity of Hōnaunau Forest. |
| <b>Deadline</b>  | Prior to described forest harvesting activities   |
| <b>Reference</b>   | Indicator 10.9.2  |
| <b>Company Actions/Auditor Comments:</b>   |   |
| <b>Status:</b> : At the time of the 2007 audit timber harvesting and new road construction still had not started. As of Nov 2009 harvesting still has not started. A very small trial (1-acre) for harvesting ash and eucalyptus will be in 2010.  |   |

|  |  |
|--|--|
| <b>Background/Justification:</b> The audit team could not find procedures for preventing and containing spills or accidents involving oils, fuels, pesticides, and other toxic substances. This indicator is especially critical in Hōnaunau given the rapid sub-surface flow of water in the soils and the associated potential for groundwater contamination |  |
| <b>CAR 2005.20</b>   | Management procedures must be updated to include environmentally appropriate responses to containing toxic chemical spills, including oils, fuels, and pesticides. |
| <b>Deadline</b>  | The first annual audit   |
| <b>Reference</b>   | Indicator 6.7.2  |
| <b>Company Actions/Auditor Comments:</b> See FMP, section 4.7.4, pg 116  |  |
| <b>Status:</b> Closed  |  |

### 6.1.5 General Observations

The following are some brief observations from the 2007 annual audit:

- Hōnaunau Forest managers undertook some invasive species control work covering 606 acres. Efforts focused on Miconia and Strawberry guava. Efforts to reduce clademias are not going well.
- Forest pre-harvest assessments include:  
A thorough inventory, biological assessment (which could be enhanced) and cultural assessment.

- Monitoring Program- work continued on expanding the monitoring efforts. Three permanent sample plots installed in 2006
- Use summer students do the field work
- Research: thinning & ash reforestation

#### Road building in 2007

- 4.4 miles of access roads were put in
- There is active maintenance of existing roads (e.g. cable road, telephone exchange rd.)

In 2008, SCS conducted a desk audit because harvesting still had not occurred and it the project is a SLIMF.

### **6.1.6 General Conclusions of the Annual Audit**

As determined by the full and proper execution of the SCS *Forest Conservation Program* evaluation protocols, the evaluation team hereby concludes that Kamehameha Schools' management of the Hōnaunau Management Area continues to be in strong overall compliance with FSC Principles and Criteria. Kamehameha Schools has demonstrated that their system of management is capable of ensuring that all of the requirements of the SCS Interim Standard for Hawaii are met over the forest area covered by the scope of the evaluation. Kamehameha Schools has also demonstrated that the described system of management continues to be implemented consistently over the forest area covered by the scope of the certificate.

### **6.2.0 2009 SURVEILLANCE DECISION AND PUBLIC RECORD**

#### **6.2.1 Assessment Dates**

In 2009- SCS conducted a desk audit, which took place on December 17, 2009

#### **6.2.2 Assessment Personnel**

This annual audit was conducted by Dave Wager.

Mr. Wager is Director of Forest Management Certification for SCS. During his 9 years as Director, Mr. Wager has administered the program and led Forest Management and Chain-of-Custody evaluations throughout the world. Mr. Wager has led assessments of 30 forest management operations worldwide including Minnesota DNR, Pennsylvania State Forests, Massachusetts State Forests, Potlatch Corporation's Idaho Forestlands and Oregon Poplar Tree Farm, Wisconsin County Forests, Collins Pine Company, Department of Defense-Fort Lewis Installation, and operations in Brazil, Canada, Costa Rica, Japan, and Malaysia.

In his role as Program Director, Mr. Wager oversees all first-time certification evaluations, annual audits, and contract renewal certifications on approximately 85 active certificate holders covering 30 million acres. In other natural resources work, Mr. Wager played a key role in the

development of Starbucks CAFE Practices- a program to ensure procurement of sustainably grown and processed coffee. Mr. Wager has expertise in business and forest ecology (B.S. business, Skidmore College; M.S. Forest Resources, Utah State University) and utilizes both in his position with SCS. While studying forest ecology at Utah State University, Mr. Wager was awarded a NASA Graduate Student Research Fellowship to develop dendrochronological techniques to assess Douglas-fir growth in Utah’s Central Wasatch Mountains.

**6.2.3 Assessment Process**

**6.2.3.1 Itinerary**

Dec 17- Phone based audit SCS/Kamehameha Schools and Forest Solutions, Inc

**Individuals Present:**

Dave Wager, SCS  
 Kamakani Dancil, KS  
 William Rice, FSI

**6.2.4 Status of Corrective Action Requests**

|   |   |
|---|---|
| <b>Background/Justification:</b> The Hōnaunau Management Area covers land historically used by native Hawaiians, and as such caution must be taken to ensure that cultural resources (archeological sites, plants with ethno-botanical use) are protected on the site. The forest managers have made commitments to protect any such site that is located, but the long absence of activity on the forest has contributed to a lack of knowledge about the existence of cultural sites. More training needs to be done for forest workers to ensure that sites are properly identified in the first place.  |   |
| <b>CAR 2005.4</b>   | Prior to the commencement of timber harvesting and new road construction, field personnel must have undergone a training program focusing on identifying and appropriately protecting cultural resources that may exist on Hōnaunau Forest. |
| <b>Deadline</b>   | Prior to the commencement of timber harvesting and new road construction  |
| <b>Reference</b>  | Indicator 3.3.3   |
| <b>Company Actions/Auditor Comments:</b> At the time of the 2009 audit timber harvesting and new road construction still had not started. A very small trial (1-acre) for harvesting ash and eucalyptus will begin in 2010. KS has taken numerous actions to address protection of cultural resources. These actions include: <ol style="list-style-type: none"> <li>1. KS crews receive informal training at various points throughout the year as they look at cultural sites.</li> <li>2. A Hōnaunau Management Area wide cultural survey is being done in partnership with the Kanakaole Foundation.</li> <li>3. KS procedures requires cultural site review in every pre-harvest assessment – including the 1-acre trial scheduled for 2010. A cultural expert will be involved in the pre-harvest site review.</li> </ol> |   |

Additionally a recent decision that only exotic plantations are currently eligible for harvests- greatly reduces any chance of damage to cultural or archeological resources because those sites were typically bulldozed clean prior to planting. Based on these observations, this CAR can be closed.

**Status: Closed**

**Background/Justification:** Impacts of proposed strategy to convert “weed infested” lowland rainforest to “Exotic Sawlog” over the first 25 year harvest period needs to be based upon accurate scientific information pertaining to the current condition of the subject area and the ecology of each species of weed. Justification of strategy should consider rates of spread and dispersal mechanisms for each species, and predict the probable effects of proposed action on subject weed species based on best available scientific information.

|                   |   |
|-------------------|---|
| <b>CAR 2005.7</b> | Prior to harvesting operations in compartments classed as weed infested, consultation must be completed with KS staff experts (and, as appropriate, outside experts) on the ecological appropriateness of the proposed harvesting prescriptions in those compartments. A briefing report that summarizes this consultation and the resulting modifications to the planned harvesting prescriptions, if any, must be conveyed to SCS prior to harvesting operations. |
|-------------------|---|

|                 |                                |
|-----------------|--------------------------------|
| <b>Deadline</b> | Prior to harvesting operations |
|-----------------|--------------------------------|

|                  |                             |
|------------------|-----------------------------|
| <b>Reference</b> | Indicators 6.1.7 and 6.10.2 |
|------------------|-----------------------------|

**Company Actions/Auditor Comments:** A decision was made in 2009 not to pursue forest management restoration in the weed infested harvest units in the short or medium term horizon (e.g., 10-20 years) As such this CAR is closed. KS is planning to update this change in the next version of the management plan.

**Status: Closed**

|  |   |
|--|---|
| <b>Background/Justification:</b> As a significant landowner within the region, Kamehameha Schools has the ability to add to the level of forest reserves and representative areas at a landscape scale. While portions of the Hōnaunau Management Area are already in reserve status, it is not clear how these areas were selected and whether they fill current regional gaps in ecological reference areas.   |   |
| <b>CAR 2005.10</b>   | <p>e) Prior to award of certification, Hōnaunau Forest managers must design and institute a process for conducting a “gap analysis” of the ecological representativeness of the current reserve or “reference areas” within the larger Kona forest region. The purpose of this gap analysis is to determine if contributions can be made on Hōnaunau Forest in terms of establishing reference areas that will contribute to improved representativeness. Such analysis ought to consider the occurrence of older substrate age classes (3,000 to 5,000 ft. and 5,000 to 10,000 year old Mauna Loa) and associated plant communities at mid to upper elevation ranges within the region.</p> <p>f) By the time of the first annual audit, the gap analysis required in Part (a) must be completed and a brief report submitted to SCS that describes what representative samples of existing ecosystems have been established on Hōnaunau Forest.</p> <p>Note at the 2008 audit- the deadline of the first annual audit was changed to prior to harvesting.</p> |
| Reference  | Criterion 6.4 and Indicators 6.3.2 and 6.3.3  |
| <b>Company Response:</b> SCS has received an update to the Hōnaunau management plan that describing an initial screening of the landbase for ecological reference areas and a description of future work. The management team’s knowledge of the Hōnaunau area is still quite limited, and additional opportunities for conservation will be investigated as more survey work is done. The management plan also calls for the creation of a working group comprised of local experts to help identify additional representative areas. In 2009 KS acquired legal interpretation as to what lands could currently be harvested. Having this interpretation- gives KS critical information needed to determine what areas may serve as representative sample areas. Additionally, in 2009- KS acquired new GAP information for Hawaii. As harvesting is scheduled for 2010- this CAR will be due at the 2010 surveillance audit. |   |
| <b>Status: Due 2010 audit</b>  |   |

|  |   |
|--|---|
| <b>Background/Justification:</b> Forest Solutions Inc, does have a plan for tagging of logs, but their log control system needs to be improved in order to ensure protection of the chain-of-custody of their certified product. |   |
| <b>CAR 2005.14</b>   | A Documented Control System (DCS) for “stump to forest gate” chain-of-custody control must be conveyed to SCS. As part of the DCS, Kamehameha Schools must convey written notice to its two |

|   |  |
|---|--|
|   | Hōnaunau harvesting licensees that they must also become FSC CoC certified, if the certified status of wood harvested on Hōnaunau is to be maintained. |
| <b>Deadline</b>   | Prior to commencement of timber harvesting operations  |
| <b>Reference</b>  | Indicator 8.3.1  |
| <b>Company Actions/Auditor Comments:</b> Close if evidence is provided of changes in procedures:<br><ul style="list-style-type: none"> <li>- invoices and log tally sheets contain the cert #</li> <li>- maintain records of sales by customer and log species</li> </ul> The DCS procedures will be finalized prior to the trial harvest in 2010. Thus, this will be assessed at the 2010 surveillance audit |  |
| <b>Status:</b> Due 2010 Surveillance  |  |

|  |  |
|--|--|
| <b>Background/Justification:</b> Hōnaunau’s forest management plan includes a strategy to use exotic plantations as a buffer to protect biodiversity values of the native forest at higher elevations, but it is not clear how biodiversity will be considered in these exotic plantations themselves. |  |
| <b>CAR 2005.17</b>   | Hōnaunau Forest managers must establish written guidelines for assuring in-stand bio-diversity in compartments to be managed as “Exotic Sawlog.” |
| <b>Deadline</b>  | Prior to commencement of timber harvesting operations  |
| <b>Reference</b>   | Indicator 10.3.2   |
| <b>Company Actions/Auditor Comments:</b> A decision was made in 2009 not to pursue forest management restoration in the weed (exotic) infested buffers for the medium term horizon (e.g., 10-20 years) As such this CAR is closed.   |  |
| <b>Status:</b> Closed  |  |

|  |   |
|--|---|
| <b>Background/Justification:</b> Central to the Hōnaunau management plan is the creation of a buffer strip of exotic plantations along the lower elevation edge of the forest in order to prevent the spread of invasive exotics into the higher elevation native stands. While this is an innovative approach to a complicated problem, it is unclear whether the operation taken in whole will increase the overall ecological integrity of the forest area. |   |
| <b>CAR 2005.19</b>   | Before any timber management operations that entail conversion of natural stands/compartments to exotic saw log stands/compartments, Hōnaunau Forest managers must present to SCS a written justification supporting the premise that establishment of new “Exotic Sawlog” compartments will enhance the ecological integrity of Hōnaunau Forest. |
| <b>Deadline</b>  | Prior to described forest harvesting activities   |
| <b>Reference</b>   | Indicator 10.9.2  |
| <b>Company Actions/Auditor Comments:</b> A decision was made in 2009 not to pursue forest management restoration in the weed (exotic) infested buffers for the medium term horizon (e.g., 10-20 years) As such this CAR is closed.   |   |

### 6.2.5 General Observations

The following are some brief observation from the 2009 annual audit:

- The forest management activities for 2009 on Hōnaunau Forest focused on invasive species control work. Efforts focused on
  - Herbicide treatment of Strawberry guava with Garlon 4
  - Herbicide treatment of Clademia- a spraying of round-up and metsulfuron
- Herbicide treatment of Ash that has invaded into native sawlog stands using imazapyr and metsulfuron in hack and squirt application.
- A Hōnaunau Management Area wide cultural survey is being done in partnership with the Kanakaole Foundation.
- Control of cattle damage through improved fencing and trapping

### 6.2.6 General Conclusions of the Annual Audit

As determined by the full and proper execution of the *SCS Forest Conservation Program* evaluation protocols, the evaluation team hereby concludes that Kamehameha Schools' management of the Hōnaunau Management Area continues to be in strong overall compliance with FSC Principles and Criteria. Kamehameha Schools has demonstrated that their system of management is capable of ensuring that all of the requirements of the SCS Interim Standard for Hawaii are met over the forest area covered by the scope of the evaluation. Kamehameha Schools has also demonstrated that the described system of management continues to be implemented consistently over the forest area covered by the scope of the certificate.

## **7.0 SUMMARY OF SCS COMPLAINT INVESTIGATION PROCEDURE**

The following is a summary of the SCS Complaint Investigation Procedure, the full version of the procedure is available from SCS upon request. The SCS Complaint Investigation Procedure is designed for and available to any individual or organization that perceives a stake in the affairs of the SCS Forest Conservation Program and that/who has reason to question either the actions of SCS itself or the actions of a SCS certificate holder.

The SCS Complaint Investigation Procedure is a first-stage forum and mechanism for hopefully resolving issues, thereby avoiding the need to involve the FSC. A complaint may come from either clients (e.g., forestland owner, mill owners, manufacturer or retailer, brokers) or from other parties such as interested stakeholders. To have standing under this Procedure, complaints must be in writing, accompanied by supporting evidence, and submitted within 30 days of the date in which the action triggering the complaint occurred.

The written complaint must:

- Identify and provide contact information for the complainant
- Clearly identify the aggrieved action (date, place, nature of action) and which parties or individuals are associated with the action
- Explain how the action is alleged to violate a FSC requirement, being as specific as possible with respect to the applicable FSC requirement
- In the case of complaints against the actions of a certificate holder, rather than SCS itself, the complainant must also describe efforts taken to resolve the matter directly with the certificate holder
- Propose what actions would, in the opinion of the complainant, rectify the matter.

Written complaints should be submitted to:

Dr. Robert J. Hrubes  
Senior Vice-President  
Scientific Certification Systems  
2200 Powell Street, Suite 725  
Emeryville, California, USA94608  
Email: [rhrubes@scscertified.com](mailto:rhrubes@scscertified.com)

As detailed in the *SCS-FCP Certification Manual*, investigation of the complaint will be confidentially conducted in a timely manner. As appropriate, corrective and preventive action and resolution of any deficiencies found in products or services shall be taken and documented.