



Appendices



Top left: Mahukona, N. Kohala; top right: Opae Ula, Kaloko-Honokōhau NHP; bottom: Trail, 1801 Lava Flow, N. Kona. NPS photos

Appendices

Appendix A: Relevant Legislation

ALA KAHAKAI NATIONAL HISTORIC TRAIL ACT

NATIONAL TRAILS SYSTEM ACT, AS AMENDED

NATIONAL PARKS OMNIBUS MANAGEMENT ACT OF 1998 (THOMAS ACT)

STATE OF HAWAII LIABILITY LAW, HAWAII REVISED STATUTES 520

HAWAII STATEWIDE TRAILS AND ACCESS SYSTEM, HAWAII REVISED STATUTES 198D

ACT 50 OF THE STATE OF HAWAII (HRS CH. 343)

ALA KAHAKAI NATIONAL HISTORIC TRAIL ACT

Public Law 106-509--Nov. 13, 2000
November 13, 2000
[S. 700]

114 Stat.2361

One Hundred Sixth Congress
of the
United States of America
AT THE SECOND SESSION

Begun and held at the City of Washington on Monday,
the twenty-fourth day of January, two thousand

An Act
To amend the National Trails System Act to designate the Ala Kahakai Trail
as a National Historic Trail.

Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Ala Kahakai National Historic
Trail Act".

SEC. 2. FINDINGS.

Congress finds that--

(1) the Ala Kahakai (Trail by the Sea) is an important
part of the ancient trail known as the "Ala Loa" (the long
trail), which circumscribes the island of Hawaii;

(2) the Ala Loa was the major land route connecting 600
or more communities of the island kingdom of Hawaii from
1400 to 1700;

(3) the trail is associated with many prehistoric and historic
housing areas of the island of Hawaii, nearly all the royal
centers, and most of the major temples of the island;

(4) the use of the Ala Loa is also associated with many
rulers of the kingdom of Hawaii, with battlefields and the
movement of armies during their reigns, and with annual tax-
ation;

(5) the use of the trail played a significant part in events
that affected Hawaiian history and culture, including--

(A) Captain Cook's landing and subsequent death in
1779;

(B) Kamehameha I's rise to power and consolidation
of the Hawaiian Islands under monarchical rule; and

(C) the death of Kamehameha in 1819, followed by
the overthrow of the ancient religious system, the Kapu,
and the arrival of the first western missionaries in 1820;
and

(6) the trail--

(A) was used throughout the 19th and 20th centuries
and continues in use today; and

(B) contains a variety of significant cultural and nat-
ural resources.

SEC. 3. AUTHORIZATION AND ADMINISTRATION.

Section 5(a) of the National Trails System Act (16 U.S.C.
1244(a)) is amended--

[S. 700--2]

(1) by designating the paragraphs relating to the California
National Historic Trail, the Pony Express National Historic
Trail, and the Selma to Montgomery National Historic Trail

as paragraphs (18), (19), and (20), respectively; and
(2) by adding at the end the following:

“(21) ALA KAHAKAI NATIONAL HISTORIC TRAIL.--

“(A) IN GENERAL.--The Ala Kahakai National Historic Trail (the Trail by the Sea), a 175 mile long trail extending from 'Upolu Point on the north tip of Hawaii Island down the west coast of the Island around Ka Lae to the east boundary of Hawaii Volcanoes National Park at the ancient shoreline temple known as 'Waha'ula', as generally depicted on the map entitled 'Ala Kahakai Trail', contained in the report prepared pursuant to subsection (b) entitled 'Ala Kahakai National Trail Study and Environmental Impact Statement', dated January 1998.

“(B) MAP.--A map generally depicting the trail shall be on file and available for public inspection in the Office of the National Park Service, Department of the Interior.

“(C) ADMINISTRATION.--The trail shall be administered by the Secretary of the Interior.

“(D) LAND ACQUISITION.--No land or interest in land outside the exterior boundaries of any federally administered area may be acquired by the United States for the trail except with the consent of the owner of the land or interest in land.

“(E) PUBLIC PARTICIPATION; CONSULTATION.--The Secretary of the Interior shall--

“(i) encourage communities and owners of land along the trail, native Hawaiians, and volunteer trail groups to participate in the planning, development, and maintenance of the trail; and

“(ii) consult with affected Federal, State, and local agencies, native Hawaiian groups, and landowners in the administration of the trail.”.

Speaker of the House of Representatives.
Vice President of the United States and
President of the Senate.

NATIONAL TRAILS SYSTEM ACT, AS AMENDED (SELECTED SECTIONS)

(P.L. 90-543, as amended through P.L. 107-325, December 4, 2002)
(also found in *United States Code*, Volume 16, Sections 1241-1251)

AN ACT

To establish a national trails system, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION I. This Act may be cited as the “National Trails System Act”.

STATEMENT OF POLICY

SEC. 2. [16USC1241]

(a) In order to provide for the ever-increasing outdoor recreation needs of an expanding population and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation, trails should be established (i) primarily, near the urban areas of the Nation, and (ii) secondarily, within scenic areas and along historic travel routes of the Nation which are often more remotely located.

(b) The purpose of this Act is to provide the means for attaining these objectives by instituting a national system of recreation, scenic and historic trails, by designating the Appalachian Trail and the Pacific Crest Trail as the initial components of that system, and by prescribing the methods by which, and standards according to which, additional components may be added to the system.

(c) The Congress recognizes the valuable contributions that volunteers and private, nonprofit trail groups have made to the development and maintenance of the Nation's trails. In recognition of these contributions, it is further the purpose of this Act to encourage and assist volunteer citizen involvement in the planning, development, maintenance, and management, where appropriate, of trails.

NATIONAL TRAILS SYSTEM

SEC. 3. [16USC1242] (a) The national system of trails shall be composed of the following:

(1) National recreation trails, established as provided in section 4 of this Act, which will provide a variety of outdoor recreation uses in or reasonably accessible to urban areas.

(2) National scenic trails, established as provided in section 5 of this Act, which will be extended trails so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass. National scenic trails may be located so as to represent desert, marsh, grassland, mountain, canyon, river, forest, and other areas, as well as landforms which exhibit significant characteristics of the physiographic regions of the Nation.

(3) National historic trails, established as provided in section 5 of this Act, which will be extended trails which follow as closely as possible and practicable the original trails or routes of travel of national historic significance. Designation of such trails or routes shall be continuous, but the established or developed trail, and the acquisition thereof, need not be continuous onsite. National historic trails shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment. Only those selected land and water based components of a historic trail which are on federally owned lands and which meet the national historic trail criteria established in this Act are included as Federal protection components of a national historic trail. The appropriate Secretary may certify other lands as protected segments of an historic trail upon application from State or local governmental agencies or private interests involved if such segments meet the national historic trail criteria established in this Act and such criteria supplementary thereto as the appropriate Secretary may prescribe, and are administered by such agencies or interests without expense to the United States.

(4) Connecting or side trails, established as provided in section 6 of this Act, which will provide additional points of public access to national recreation, national scenic or national historic trails or which will provide connections between such trails.

The Secretary of the Interior and the Secretary of Agriculture, in consultation with appropriate governmental agencies and public and private organizations, shall establish a uniform marker for the national trails system.

(b) For purposes of this section, the term 'extended trails' means trails or trail segments which total at least one hundred miles in length, except that historic trails of less than one hundred miles may be designated as extended trails. While it is desirable that extended trails be continuous, studies of such trails may conclude that it is feasible to propose one or more trail segments which, in the aggregate, constitute at least one hundred miles in length.

NATIONAL RECREATION TRAILS

SEC. 4. [16USC1243]

(a) The Secretary of the Interior, or the Secretary of Agriculture where lands administered by him are involved, may establish and designate national recreation trails, with the consent of the Federal agency, State, or political subdivision having jurisdiction over the lands involved, upon finding that—

- (i) such trails are reasonably accessible to urban areas, and, or
- (ii) such trails meet the criteria established in this Act and such supplementary criteria as he may prescribe.

(b) As provided in this section, trails within park, forest, and other recreation areas administered by the Secretary of the Interior or the Secretary of Agriculture or in other federally administered areas may be established and designated as "National Recreation Trails" by the appropriate Secretary and, when no Federal land acquisition is involved —

- (i) trails in or reasonably accessible to urban areas may be designated as "National Recreation Trails" by the appropriate Secretary with the consent of the States, their political subdivisions, or other appropriate administering agencies;
- (ii) trails within park, forest, and other recreation areas owned or administered by States may be designated as "National Recreation Trails" by the appropriate Secretary with the consent of the State; and
- (iii) trails on privately owned lands may be designated 'National Recreation Trails' by the appropriate Secretary with the written consent of the owner of the property involved.

NATIONAL SCENIC AND NATIONAL HISTORIC TRAILS

SEC. 5. [16USC1244] (a) National scenic and national historic trails shall be authorized and designated only by Act of Congress. There are hereby established the following National Scenic and National Historic Trails: *[Trail descriptions are omitted except for the Ala Kahakai NHT.]*

- (1) The Appalachian National Scenic Trail,
- (2) The Pacific Crest National Scenic Trail
- (3) The Oregon National Historic Trail,
- (4) The Mormon Pioneer National Historic Trail
- (5) The Continental Divide National Scenic Trail,
- (6) The Lewis and Clark National Historic Trail,
- (7) The Iditarod National Historic Trail,
- (8) The North Country National Scenic Trail
- (9) The Overmountain Victory National Historic Trail,
- (10) The Ice Age National Scenic Trail
- (11) The Potomac Heritage National Scenic Trail,
- (12) The Natchez Trace National Scenic Trail,
- (13) The Florida National Scenic Trail,
- (14) The Nez Perce National Historic Trail
- (15) The Santa Fe National Historic Trail,
- (16) The Trail of Tears National Historic Trail,
- (17) The Juan Bautista de Anza National Historic Trail
- (18) The California National Historic Trail
- (19) The Pony Express National Historic
- (20) The Selma to Montgomery National Historic Trail,
- (21) El Camino Real de tierra adentro
- (22) Ala Kahakai National Historic Trail

(A) IN GENERAL - The Ala Kahakai National Historic Trail (the Trail by the Sea), a 175 mile long trail extending from 'Upolu Point on the north tip of Hawaii Island down the west coast of the

Island around Ka Lae to the east boundary of Hawaii Volcanoes National Park at the ancient shoreline temple known as 'Waha'ula,' as generally depicted on the map entitled 'Ala Kahakai Trail,' contained in the report prepared pursuant to subsection (b) entitled 'Ala Kahakai National Trail Study and Environmental Impact Statement,' dated January, 1998.

(B) MAP - A map generally depicting the trail shall be on file and available for public inspection in the Office of the National Park Service, Department of the Interior.

(C) ADMINISTRATION - The trail shall be administered by the Secretary of the Interior.

(D) LAND ACQUISITION - No land or interest in land outside the exterior boundaries of any federally administered area may be acquired by the United States for the trail except with the consent of the owner of the land or interest in land.

(E) PUBLIC PARTICIPATION; CONSULTATION - The Secretary of the Interior shall —

(i) encourage communities and owners of land along the trail, native Hawaiians, and volunteer trail groups to participate in the planning, development, and maintenance of the trail; and

(ii) consult with affected Federal, State, and local agencies, native Hawaiian groups, and landowners in the administration of the trail.

(23) Old Spanish National Historic Trail —

(b) The Secretary of the Interior, through the agency most likely to administer such trail, and the Secretary of Agriculture where lands administered by him are involved, shall make such additional studies as are herein or may hereafter be authorized by the Congress for the purpose of determining the feasibility and desirability of designating other trails as national scenic or national historic trails. Such studies shall be made in consultation with the heads of other Federal agencies administering lands through which such additional proposed trails would pass and in cooperation with interested interstate, State, and local governmental agencies, public and private organizations, and landowners and land users concerned. The feasibility of designating a trail shall be determined on the basis of an evaluation of whether or not it is physically possible to develop a trail along a route being studied, and whether the development of a trail would be financially feasible. The studies listed in subsection (c) of this section shall be completed and submitted to the Congress, with recommendations as to the suitability of trail designation, not later than three complete fiscal years from the date of enactment of their addition to this subsection, or from the date of enactment of this sentence, whichever is later. Such studies, when submitted, shall be printed as a House or Senate document, and shall include, but not be limited to:

(1) the proposed route of such trail (including maps and illustrations);

(2) the areas adjacent to such trails, to be utilized for scenic, historic, natural, cultural, or developmental purposes;

(3) the characteristics which, in the judgment of the appropriate Secretary, make the proposed trail worthy of designation as a national scenic or national historic trail; and in the case of national historic trails the report shall include the recommendation of the Secretary of the Interior's National Park System Advisory Board as to the national historic significance based on the criteria developed under the Historic Sites Act of 1935 (40 Stat. 666; 16 U.S.C. 461);

(4) the current status of land ownership and current and potential use along the designated route;

(5) the estimated cost of acquisition of lands or interest in lands, if any;

(6) the plans for developing and maintaining the trail and the cost thereof;

(7) the proposed Federal administering agency (which, in the case of a national scenic trail wholly or substantially within a national forest, shall be the Department of Agriculture);

(8) the extent to which a State or its political subdivisions and public and private organizations might reasonably be expected to participate in acquiring the necessary lands and in the administration thereof;

(9) the relative uses of the lands involved, including: the number of anticipated visitor-days for the entire length of, as well as for segments of, such trail; the number of months which such trail, or segments thereof, will be open for recreation purposes; the economic and social benefits which might accrue from alternate land uses; and the estimated man-years of civilian employment and expenditures expected for the purposes of maintenance, supervision, and regulation of such trail;

(10) the anticipated impact of public outdoor recreation use on the preservation of a proposed national

historic trail and its related historic and archeological features and settings, including the measures proposed to ensure evaluation and preservation of the values that contribute to their national historic significance; and

(11) To qualify for designation as a national historic trail, a trail must meet all three of the following criteria:

(A) It must be a trail or route established by historic use and must be historically significant as a result of that use. The route need not currently exist as a discernible trail to qualify, but its location must be sufficiently known to permit evaluation of public recreation and historical interest potential. A designated trail should generally accurately follow the historic route, but may deviate somewhat on occasion of necessity to avoid difficult routing through subsequent development, or to provide some route variations offering a more pleasurable recreational experience. Such deviations shall be so noted on site. Trail segments no longer possible to travel by trail due to subsequent development as motorized transportation routes may be designated and marked onsite as segments which link to the historic trail.

(B) It must be of national significance with respect to any of several broad facets of American history, such as trade and commerce, exploration, migration and settlement, or military campaigns. To qualify as nationally significant, historic use of the trail must have had a far reaching effect on broad patterns of American culture. Trails significant in the history of native Americans may be included.

(C) It must have significant potential for public recreational use or historical interest based on historic interpretation and appreciation. The potential for such use is generally greater along roadless segments developed as historic trails and at historic sites associated with the trail. The presence of recreation potential not related to historic appreciation is not sufficient justification for designation under this category.

(c) The following routes shall be studied in accordance with the objectives outlined in subsection (b) of this section.
[Names of 34 trails are omitted.]

(35) Ala Kahakai Trail in the State of Hawaii, an ancient Hawaiian trail on the island of Hawaii extending from the northern tip of the Island of Hawaii approximately 175 miles along the western and southern coasts to the northern boundary of Hawaii Volcanoes National Park.

[Names of six trails are omitted.]

(d) The Secretary charged with the administration of each respective trail shall, within one year of the date of the addition of any national scenic or national historic trail to the system, and within sixty days of the enactment of this sentence for the Appalachian and Pacific Crest National Scenic Trails, establish an advisory council for each such trail, each of which councils shall expire ten years from the date of its establishment, except that the Advisory Council established for the Iditarod Historic Trail shall expire twenty years from the date of its establishment. If the appropriate Secretary is unable to establish such an advisory council because of the lack of adequate public interest, the Secretary shall so advise the appropriate committees of the Congress. The appropriate Secretary shall consult with such council from time to time with respect to matters relating to the trail, including the selection of rights-of-way, standards for the erection and maintenance of markers along the trail, and the administration of the trail. The members of each advisory council, which shall not exceed thirty-five in number, shall serve for a term of two years and without compensation as such, but the Secretary may pay, upon vouchers signed by the chairman of the council, the expenses reasonably incurred by the council and its members in carrying out their responsibilities under this section. Members of each council shall be appointed by the appropriate Secretary as follows:

(1) the head of each Federal department or independent agency administering lands through which the trail route passes, or his designee;

(2) a member appointed to represent each State through which the trail passes, and such appointments shall be made from recommendations of the Governors of such States;

(3) one or more members appointed to represent private organizations, including corporate and individual landowners and land users, which in the opinion of the Secretary, have an established and recognized interest in the trail, and such appointments shall be made from recommendations of the heads of such organizations: Provided, That the Appalachian Trail Conference shall be represented by a sufficient number of persons to represent the various sections of the country through which the Appalachian Trail passes; and

(4) the Secretary shall designate one member to be chairman and shall fill vacancies in the same manner as the original appointment.

(e) Within two complete fiscal years of the date of enactment of legislation designating a national scenic trail, except for the Continental Divide National Scenic Trail and the North Country National Scenic Trail, as part of the

system, and within two complete fiscal years of the date of enactment of this subsection for the Pacific Crest and Appalachian Trails, the responsible Secretary shall, after full consultation with affected Federal land managing agencies, the Governors of the affected States, the relevant advisory council established pursuant to section 5(d), and the Appalachian Trail Conference in the case of the Appalachian Trail, submit to the Committee on Interior and Insular Affairs of the House of Representatives and the Committee on Energy and Natural Resources of the Senate, a comprehensive plan for the acquisition, management, development, and use of the trail, including but not limited to, the following items:

- (1) specific objectives and practices to be observed in the management of the trail, including the identification of all significant natural, historical, and cultural resources to be preserved (along with high potential historic sites and high potential route segments in the case of national historic trails), details of any anticipated cooperative agreements to be consummated with other entities, and an identified carrying capacity of the trail and a plan for its implementation;
- (2) an acquisition or protection plan, by fiscal year for all lands to be acquired by fee title or lesser interest, along with detailed explanation of anticipated necessary cooperative agreements for any lands not to be acquired; and
- (3) general and site-specific development plans including anticipated costs.

(f) Within two complete fiscal years of the date of enactment of legislation designating a national historic trail or the Continental Divide National Scenic Trail or the North Country National Scenic Trail as part of the system, the responsible Secretary shall, after full consultation with affected Federal land managing agencies, the Governors of the affected States, and the relevant Advisory Council established pursuant to section 5(d) of this Act, submit to the Committee on Interior and Insular Affairs of the House of Representatives and the Committee on Energy and Natural Resources of the Senate, a comprehensive plan for the management, and use of the trail, including but not limited to, the following items:

- (1) specific objectives and practices to be observed in the management of the trail, including the identification of all significant natural, historical, and cultural resources to be preserved, details of any anticipated cooperative agreements to be consummated with State and local government agencies or private interests, and for national scenic or national historic trails an identified carrying capacity of the trail and a plan for its implementation;
- (2) the process to be followed by the appropriate Secretary to implement the marking requirements established in section 7(c) of this Act;
- (3) a protection plan for any high potential historic sites or high potential route segments; and
- (4) general and site-specific development plans, including anticipated costs.

CONNECTING AND SIDE TRAILS

SEC. 6. [16USC1245] Connecting or side trails within park, forest, and other recreation areas administered by the Secretary of the Interior or Secretary of Agriculture may be established, designated, and marked by the appropriate Secretary as components of a national recreation, national scenic or national historic trail. When no Federal land acquisition is involved, connecting or side trails may be located across lands administered by interstate, State, or local governmental agencies with their consent, or, where the appropriate Secretary deems necessary or desirable, on privately owned lands with the consent of the landowners. Applications for approval and designation of connecting and side trails on non-Federal lands shall be submitted to the appropriate Secretary.

ADMINISTRATION AND DEVELOPMENT

SEC. 7. [16USC1246]

(a)

(1)

(A) The Secretary charged with the overall administration of a trail pursuant to section 5(a) shall, in administering and managing the trail, consult with the heads of all other affected State and Federal agencies. Nothing contained in this Act shall be deemed to transfer among Federal agencies any management responsibilities established under any other law for federally administered lands which are components of the National Trails System. Any transfer of management responsibilities may be carried out between the Secretary of the Interior and the Secretary of Agriculture only as provided under subparagraph (B).

(B) The Secretary charged with the overall administration of any trail pursuant to section 5(a) may transfer management of any specified trail segment of such trail to the other appropriate Secretary pursuant to a joint memorandum of agreement containing such terms and conditions

as the Secretaries consider most appropriate to accomplish the purposes of this Act. During any period in which management responsibilities for any trail segment are transferred under such an agreement, the management of any such segment shall be subject to the laws, rules, and regulations of the Secretary provided with the management authority under the agreement except to such extent as the agreement may otherwise expressly provide.

(2) Pursuant to section 5(a), the appropriate Secretary shall select the rights-of-way for national scenic and national historic trails and shall publish notice thereof of the availability of appropriate maps or descriptions in the Federal Register; Provided, That in selecting the rights-of-way full consideration shall be given to minimizing the adverse effects upon the adjacent landowner or user and his operation. Development and management of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for the specific area in order to insure continued maximum benefits from the land. The location and width of such rights-of-way across Federal lands under the jurisdiction of another Federal agency shall be by agreement between the head of that agency and the appropriate Secretary. In selecting rights-of-way for trail purposes, the Secretary shall obtain the advice and assistance of the States, local governments, private organizations, and landowners and land users concerned.

(b) After publication of notice of the availability of appropriate maps or descriptions in the Federal Register, the Secretary charged with the administration of a national scenic or national historic trail may relocate segments of a national scenic or national historic trail right-of-way with the concurrence of the head of the Federal agency having jurisdiction over the lands involved, upon a determination that: (i) Such a relocation is necessary to preserve the purposes for which the trail was established, or (ii) the relocation is necessary to promote a sound land management program in accordance with established multiple-use principles: Provided, That a substantial relocation of the rights-of-way for such trail shall be by Act of Congress.

(c) National scenic or national historic trails may contain campsites, shelters, and related-public-use facilities. Other uses along the trail, which will not substantially interfere with the nature and purposes of the trail, may be permitted by the Secretary charged with the administration of the trail. Reasonable efforts shall be made to provide sufficient access opportunities to such trails and, to the extent practicable, efforts be made to avoid activities incompatible with the purposes for which such trails were established. The use of motorized vehicles by the general public along any national scenic trail shall be prohibited and nothing in this Act shall be construed as authorizing the use of motorized vehicles within the natural and historical areas of the national park system, the national wildlife refuge system, the national wilderness preservation system where they are presently prohibited or on other Federal lands where trails are designated as being closed to such use by the appropriate Secretary: Provided, That the Secretary charged with the administration of such trail shall establish regulations which shall authorize the use of motorized vehicles when, in his judgment, such vehicles are necessary to meet emergencies or to enable adjacent landowners or land users to have reasonable access to their lands or timber rights: Provided further, That private lands included in the national recreation, national scenic, or national historic trails by cooperative agreement of a landowner shall not preclude such owner from using motorized vehicles on or across such trails or adjacent lands from time to time in accordance with regulations to be established by the appropriate Secretary. Where a national historic trail follows existing public roads, developed rights-of-way or waterways, and similar features of man's nonhistorically related development, approximating the original location of a historic route, such segments may be marked to facilitate retracement of the historic route, and where a national historic trail parallels an existing public road, such road may be marked to commemorate the historic route. Other uses along the historic trails and the Continental Divide National Scenic Trail, which will not substantially interfere with the nature and purposes of the trail, and which, at the time of designation, are allowed by administrative regulations, including the use of motorized vehicles, shall be permitted by the Secretary charged with administration of the trail. The Secretary of the Interior and the Secretary of Agriculture, in consultation with appropriate governmental agencies and public and private organizations, shall establish a uniform marker, including thereon an appropriate and distinctive symbol for each national recreation, national scenic, and national historic trail. Where the trails cross lands administered by Federal agencies such markers shall be erected at appropriate points along the trails and maintained by the Federal agency administering the trail in accordance with standards established by the appropriate Secretary and where the trails cross non-Federal lands, in accordance with written cooperative agreements, the appropriate Secretary shall provide such uniform markers to cooperating agencies and shall require such agencies to erect and maintain them in accordance with the standards established. The appropriate Secretary may also provide for trail interpretation sites, which shall be located at historic sites along the route of any national scenic or national historic trail, in order to present information to the public about the trail, at the lowest possible cost, with emphasis on the portion of the trail passing through the State in which the site is located. Wherever possible, the sites shall be maintained by a State agency under a cooperative agreement between the appropriate Secretary and the State agency.

(d) Within the exterior boundaries of areas under their administration that are included in the right-of-way selected for a national recreation, national scenic, or national historic trail, the heads of Federal agencies may use lands for trail purposes and may acquire lands or interests in lands by written cooperative agreement, donation, purchase with donated or appropriated funds or exchange.

(e) Where the lands included in a national scenic or national historic trail right-of-way are outside of the exterior boundaries of federally administered areas, the Secretary charged with the administration of such trail shall encourage the States or local governments involved (1) to enter into written cooperative agreements with landowners, private organizations, and individuals to provide the necessary trail right-of-way, or (2) to acquire such lands or interests therein to be utilized as segments of the national scenic or national historic trail: Provided, That if the State or local governments fail to enter into such written cooperative agreements or to acquire such lands or interests therein after notice of the selection of the right-of-way is published, the appropriate Secretary, may (i) enter into such agreements with landowners, States, local governments, private organizations, and individuals for the use of lands for trail purposes, or (ii) acquire private lands or interests therein by donation, purchase with donated or appropriated funds or exchange in accordance with the provisions of subsection (f) of this section: Provided further, That the appropriate Secretary may acquire lands or interests therein from local governments or governmental corporations with the consent of such entities. The lands involved in such rights-of-way should be acquired in fee, if other methods of public control are not sufficient to assure their use for the purpose for which they are acquired: Provided, That if the Secretary charged with the administration of such trail permanently relocates the right-of-way and disposes of all title or interest in the land, the original owner, or his heirs or assigns, shall be offered, by notice given at the former owner's last known address, the right of first refusal at the fair market price.

(f)

(1) The Secretary of the Interior, in the exercise of his exchange authority, may accept title to any non-Federal property within the right-of-way and in exchange therefor he may convey to the grantor of such property any federally owned property under his jurisdiction which is located in the State wherein such property is located and which he classifies as suitable for exchange or other disposal. The values of the properties so exchanged either shall be approximately equal, or if they are not approximately equal the values shall be equalized by the payment of cash to the grantor or to the Secretary as the circumstances require. The Secretary of Agriculture, in the exercise of his exchange authority, may utilize authorities and procedures available to him in connection with exchanges of national forest lands.

(2) In acquiring lands or interests therein for a National Scenic or Historic Trail, the appropriate Secretary may, with consent of a landowner, acquire whole tracts notwithstanding that parts of such tracts may lie outside the area of trail acquisition. In furtherance of the purposes of this act, lands so acquired outside the area of trail acquisition may be exchanged for any non-Federal lands or interests therein within the trail right-of-way, or disposed of in accordance with such procedures or regulations as the appropriate Secretary shall prescribe, including: (i) provisions for conveyance of such acquired lands or interests therein at not less than fair market value to the highest bidder, and (ii) provisions for allowing the last owners of record a right to purchase said acquired lands or interests therein upon payment or agreement to pay an amount equal to the highest bid price. For lands designated for exchange or disposal, the appropriate Secretary may convey these lands with any reservations or covenants deemed desirable to further the purposes of this Act. The proceeds from any disposal shall be credited to the appropriation bearing the costs of land acquisition for the affected trail.

(g) The appropriate Secretary may utilize condemnation proceedings without the consent of the owner to acquire private lands or interests, therein pursuant to this section only in cases where, in his judgment, all reasonable efforts to acquire such lands or interest therein by negotiation have failed, and in such cases he shall acquire only such title as, in his judgment, is reasonably necessary to provide passage across such lands: Provided, That condemnation proceedings may not be utilized to acquire fee title or lesser interests to more than an average of one hundred and twenty-five acres per mile. Money appropriated for Federal purposes from the land and water conservation fund shall, without prejudice to appropriations from other sources, be available to Federal departments for the acquisition of lands or interests in lands for the purposes of this Act. For national historic trails, direct Federal acquisition for trail purposes shall be limited to those areas indicated by the study report or by the comprehensive plan as high potential route segments or high potential historic sites. Except for designated protected components of the trail, no land or site located along a designated national historic trail or along the Continental Divide National Scenic Trail shall be subject to the provisions of section 4(f) of the Department of Transportation Act (49 U.S.C. 1653(f)) unless such land or site is deemed to be of historical significance under appropriate historical site criteria such as those for the National Register of Historic Places.

(h)

(1) The Secretary charged with the administration of a national recreation, national scenic, or national historic trail shall provide for the development and maintenance of such trails within federally administered areas, and shall cooperate with and encourage the States to operate, develop, and maintain portions of such trails which are located outside the boundaries of federally administered areas. When deemed to be in the public interest, such Secretary may enter written cooperative agreements with the States or their political subdivisions, landowners, private organizations, or individuals to operate, develop, and maintain any portion of such a trail either within or outside a federally administered area. Such agreements may include provisions for limited financial assistance to encourage participation in the acquisition, protection, operation, development, or maintenance of such trails, provisions providing volunteer in the park or volunteer in the forest status (in accordance with the Volunteers in the Parks Act of 1969 and the Volunteers in the Forests Act of 1972) to individuals, private organizations, or landowners participating in such activities, or provisions of both types. The appropriate Secretary shall also initiate consultations with affected States and their political subdivisions to encourage —

(A) the development and implementation by such entities of appropriate measures to protect private landowners from trespass resulting from trail use and from unreasonable personal liability and property damage caused by trail use, and

(B) the development and implementation by such entities of provisions for land practices compatible with the purposes of this Act, for property within or adjacent to trail rights-of-way. After consulting with States and their political subdivisions under the preceding sentence, the Secretary may provide assistance to such entities under appropriate cooperative agreements in the manner provided by this subsection.

(2) Whenever the Secretary of the Interior makes any conveyance of land under any of the public land laws, he may reserve a right-of-way for trails to the extent he deems necessary to carry out the purposes of this Act.

(i) The appropriate Secretary, with the concurrence of the heads of any other Federal agencies administering lands through which a national recreation, national scenic, or national historic trail passes, and after consultation with the States, local governments, and organizations concerned, may issue regulations, which may be revised from time to time, governing the use, protection, management, development, and administration of trails of the national trails system. In order to maintain good conduct on and along the trails located within federally administered areas and to provide for the proper government and protection of such trails, the Secretary of the Interior and the Secretary of Agriculture shall prescribe and publish such uniform regulations as they deem necessary and any person who violates such regulations shall be guilty of a misdemeanor, and may be punished by a fine of not more \$500 or by imprisonment not exceeding six months, or by both such fine and imprisonment. The Secretary responsible for the administration of any segment of any component of the National Trails System (as determined in a manner consistent with subsection (a)(1) of this section) may also utilize authorities related to units of the national park system or the national forest system, as the case may be, in carrying out his administrative responsibilities for such component.

(j) Potential trail uses allowed on designated components of the national trails system may include, but are not limited to, the following: bicycling, cross-country skiing, day hiking, equestrian activities, jogging or similar fitness activities, trail biking, overnight and long-distance backpacking, snowmobiling, and surface water and underwater activities. Vehicles which may be permitted on certain trails may include, but need not be limited to, motorcycles, bicycles, four-wheel drive or all-terrain off-road vehicles. In addition, trail access for handicapped individuals may be provided. The provisions of this subsection shall not supersede any other provisions of this Act or other Federal laws, or any State or local laws.

(k) For the conservation purpose of preserving or enhancing the recreational, scenic, natural, or historical values of components of the national trails system, and environs thereof as determined by the appropriate Secretary, landowners are authorized to donate or otherwise convey qualified real property interests to qualified organizations consistent with section 170(h)(3) of the Internal Revenue Code of 1954, including, but not limited to, right-of-way, open space, scenic, or conservation easements, without regard to any limitation on the nature of the estate or interest otherwise transferable within the jurisdiction where the land is located. The conveyance of any such interest in land in accordance with this subsection shall be deemed to further a Federal conservation policy and yield a significant public benefit for purposes of section 6 of Public Law 96-541.

STATE AND METROPOLITAN AREA TRAILS

SEC. 8. [16USC1247] (a) The Secretary of the Interior is directed to encourage States to consider, in their comprehensive statewide outdoor recreation plans and proposals for financial assistance for State and local projects submitted pursuant to the Land and Water Conservation Fund Act, needs and opportunities for establishing park, forest, and other recreation and historic trails on lands owned or administered by States, and recreation and historic trails on lands in or near urban areas. The Secretary is also directed to encourage States to consider, in their comprehensive statewide historic preservation plans and proposals for financial assistance for State, local, and private projects submitted pursuant to the Act of October 15, 1966 (80 Stat. 915), as amended, needs and opportunities for establishing historic trails. He is further directed in accordance with the authority contained in the Act of May 28, 1963 (77 Stat. 49), to encourage States, political subdivisions, and private interests, including nonprofit organizations, to establish such trails.

(b) The Secretary of Housing and Urban Development is directed, in administering the program of comprehensive urban planning and assistance under section 701 of the Housing Act of 1954, to encourage the planning of recreation trails in connection with the recreation and transportation planning for metropolitan and other urban areas. He is further directed, in administering the urban open space program under title VII of the Housing Act of 1961, to encourage such recreation trails.

(c) The Secretary of Agriculture is directed, in accordance with authority vested in him, to encourage States and local agencies and private interests to establish such trails.

(d) The Secretary of Transportation, the Chairman of the Interstate Commerce Commission, and the Secretary of the Interior, in administering the Railroad Revitalization and Regulatory Reform Act of 1976, shall encourage State and local agencies and private interests to establish appropriate trails using the provisions of such programs. Consistent with the purposes of that Act, and in furtherance of the national policy to preserve established railroad rights-of-way for future reactivation of rail service, to protect rail transportation corridors, and to encourage energy efficient transportation use, in the case of interim use of any established railroad rights-of-way pursuant to donation, transfer, lease, sale, or otherwise in a manner consistent with the National Trails System Act, if such interim use is subject to restoration or reconstruction for railroad purposes, such interim use shall not be treated, for purposes of any law or rule of law, as an abandonment of the use of such rights-of-way for railroad purposes. If a State, political subdivision, or qualified private organization is prepared to assume full responsibility for management of such rights-of-way and for any legal liability arising out of such transfer or use, and for the payment of any and all taxes that may be levied or assessed against such rights-of-way, then the Commission shall impose such terms and conditions as a requirement of any transfer or conveyance for interim use in a manner consistent with this Act, and shall not permit abandonment or discontinuance inconsistent or disruptive of such use.

(e) Such trails may be designated and suitably marked as parts of the nationwide system of trails by the States, their political subdivisions, or other appropriate administering agencies with the approval of the Secretary of the Interior.

RIGHTS-OF-WAY AND OTHER PROPERTIES

SEC. 9. [16USC1248] (a) The Secretary of the Interior or the Secretary of Agriculture as the case may be, may grant easements and rights-of-way upon, over, under, across, or along any component of the national trails system in accordance with the laws applicable to the national park system and the national forest system, respectively: Provided, That any conditions contained in such easements and rights-of-way shall be related to the policy and purposes of this Act.

(b) The Department of Defense, the Department of Transportation, the Interstate Commerce Commission, the Federal Communications Commission, the Federal Power Commission, and other Federal agencies having jurisdiction or control over or information concerning the use, abandonment, or disposition of roadways, utility rights-of-way, or other properties which may be suitable for the purpose of improving or expanding the national trails system shall cooperate with the Secretary of the Interior and the Secretary of Agriculture in order to assure, to the extent practicable, that any such properties having values suitable for trail purposes may be made available for such use.

(c) Commencing upon the date of enactment of this subsection, any and all right, title, interest, and estate of the United States in all rights-of-way of the type described in the Act of March 8, 1922 (43 U.S.C. 912), shall remain in the United States upon the abandonment or forfeiture of such rights-of-way, or portions thereof, except to the extent that any such right-of-way, or portion thereof, is embraced within a public highway no later than one year after a determination of abandonment or forfeiture, as provided under such Act.

(d)

(1) All rights-of-way, or portions thereof, retained by the United States pursuant to subsection (c) which are located within the boundaries of a conservation system unit or a National Forest shall be added to and incorporated within such unit or National Forest and managed in accordance with applicable provisions of law, including this Act.

(2) All such retained rights-of-way, or portions thereof, which are located outside the boundaries of a conservation system unit or a National Forest but adjacent to or contiguous with any portion of the public lands shall be managed pursuant to the Federal Land Policy and Management Act of 1976 and other applicable law, including this section.

(3) All such retained rights-of-way, or portions thereof, which are located outside the boundaries of a conservation system unit or National Forest which the Secretary of the Interior determines suitable for use as a public recreational trail or other recreational purposes shall be managed by the Secretary for such uses, as well as for such other uses as the Secretary determines to be appropriate pursuant to applicable laws, as long as such uses do not preclude trail use.

(e)

(l) The Secretary of the Interior is authorized where appropriate to release and quitclaim to a unit of government or to another entity meeting the requirements of this subsection any and all right, title, and interest in the surface estate of any portion of any right-of-way to the extent any such right, title, and interest was retained by the United States pursuant to subsection (c), if such portion is not located within the boundaries of any conservation system unit or National Forest. Such release and quitclaim shall be made only in response to an application therefor by a unit of State or local government or another entity which the Secretary of the Interior determines to be legally and financially qualified to manage the relevant portion for public recreational purposes. Upon receipt of such an application, the Secretary shall publish a notice concerning such application in a newspaper of general circulation in the area where the relevant portion is located. Such release and quitclaim shall be on the following conditions:

(A) If such unit or entity attempts to sell, convey, or otherwise transfer such right, title, or interest or attempts to permit the use of any part of such portion for any purpose incompatible with its use for public recreation, then any and all right, title, and interest released and quitclaimed by the Secretary pursuant to this subsection shall revert to the United States.

(B) Such unit or entity shall assume full responsibility and hold the United States harmless for any legal liability which might arise with respect to the transfer, possession, use, release, or quitclaim of such right-of-way.

(C) Notwithstanding any other provision of law, the United States shall be under no duty to inspect such portion prior to such release and quitclaim, and shall incur no legal liability with respect to any hazard or any unsafe condition existing on such portion at the time of such release and quitclaim.

(2) The Secretary is authorized to sell any portion of a right-of-way retained by the United States pursuant to subsection (c) located outside the boundaries of a conservation system unit or National Forest if any such portion is —

(A) not adjacent to or contiguous with any portion of the public lands; or

(B) determined by the Secretary, pursuant to the disposal criteria established by section 203 of the Federal Land Policy and Management Act of 1976, to be suitable for sale. Prior to conducting any such sale, the Secretary shall take appropriate steps to afford a unit of State or local government or any other entity an opportunity to seek to obtain such portion pursuant to paragraph (l) of this subsection.

(3) All proceeds from sales of such retained rights of way shall be deposited into the Treasury of the United States and credited to the Land and Water Conservation Fund as provided in section 2 of the Land and Water Conservation Fund Act of 1965.

(4) The Secretary of the Interior shall annually report to the Congress the total proceeds from sales under

paragraph (2) during the preceding fiscal year. Such report shall be included in the President's annual budget submitted to the Congress.

(f) As used in this section —

(1) The term "conservation system unit" has the same meaning given such term in the Alaska National Interest Lands Conservation Act (Public Law 96-487; 94 Stat. 2371 et seq.), except that such term shall also include units outside Alaska.

(2) The term "public lands" has the same meaning given such term in the Federal Land Policy and Management Act of 1976.

AUTHORIZATION OF APPROPRIATIONS

SEC. 10. [16USC1249] (a)

(1) There are hereby authorized to be appropriated for the acquisition of lands or interests in lands not more than \$5,000,000 for the Appalachian National Scenic Trail and not more than \$500,000 for the Pacific Crest National Scenic Trail. From the appropriations authorized for fiscal year 1979 and succeeding fiscal years pursuant to the Land and Water Conservation Fund Act (78 Stat. 897), as amended, not more than the following amounts may be expended for the acquisition of lands and interests in lands authorized to be acquired pursuant to the provisions of this Act: for the Appalachian National Scenic Trail, not to exceed \$30,000,000 for fiscal year 1979, \$30,000,000 for fiscal year 1980, and \$30,000,000 for fiscal year 1981, except that the difference between the foregoing amounts and the actual appropriations in any one fiscal year shall be available for appropriation in subsequent fiscal years.

(2) It is the express intent of the Congress that the Secretary should substantially complete the land acquisition program necessary to insure the protection of the Appalachian Trail within three complete fiscal years following the date of enactment of this sentence.

(b) For the purposes of Public Law 95-42 (91 Stat. 211), the lands and interests therein acquired pursuant to this section shall be deemed to qualify for funding under the provisions of section 1, clause 2, of said Act.

(c)

(1) There is hereby authorized to be appropriated such sums as may be necessary to implement the provisions of this Act relating to the trails designated by paragraphs 5(a)(3), (4), (5), (6), (7), (8), (9) and (10): Provided, That no such funds are authorized to be appropriated prior to October 1, 1978: And provided further, That notwithstanding any other provisions of this Act or any other provisions of law, no funds may be expended by Federal agencies for the acquisition of lands or interests in lands outside the exterior boundaries of existing Federal areas for the Continental Divide National Scenic Trail, the North Country National Scenic Trail, the Ice Age National Scenic Trail, the Oregon National Historic Trail, the Mormon Pioneer National Historic Trail, the Lewis and Clark National Historic Trail, and the Iditarod National Historic Trail, except that funds may be expended for the acquisition of lands or interests therein for the purpose of providing for one trail interpretation site, as described in section 7(c), along with such trail in each State crossed by the trail.

(2) Except as otherwise provided in this Act, there is authorized to be appropriated such sums as may be necessary to implement the provisions of this Act relating to the trails designated by section 5(a). Not more than \$500,000 may be appropriated for the purposes of acquisition of land and interests therein for the trail designated by section 5(a)(12) of this Act, and not more than \$2,000,000 may be appropriated for the purposes of the development of such trail. The administering agency for the trail shall encourage volunteer trail groups to participate in the development of the trail.

VOLUNTEER TRAILS ASSISTANCE

SEC. 11. [16USC1250] (a)

(1) In addition to the cooperative agreement and other authorities contained in this Act, the Secretary of the Interior, the Secretary of Agriculture, and the head of any Federal agency administering Federal lands, are authorized to encourage volunteers and volunteer organizations to plan, develop, maintain, and manage, where appropriate, trails throughout the Nation.

(2) Wherever appropriate in furtherance of the purposes of this Act, the Secretaries are authorized and encouraged to utilize the Volunteers in the Parks Act of 1969, the Volunteers in the Forests Act of 1972, and section 6 of the Land and Water Conservation Fund Act of 1965 (relating to the development of Statewide Comprehensive Outdoor Recreation Plans).

(b) Each Secretary or the head of any Federal land managing agency, may assist volunteers and volunteer organizations in planning, developing, maintaining, and managing trails. Volunteer work may include, but need not be limited to—

(1) planning, developing, maintaining, or managing (A) trails which are components of the national trails system, or (B) trails which, if so developed and maintained, could qualify for designation as components of the national trails system; or

(2) operating programs to organize and supervise volunteer trail building efforts with respect to the trails referred to in paragraph (1), conducting trail-related research projects, or providing education and training to volunteers on methods of trails planning, construction, and maintenance.

(c) The appropriate Secretary or the head of any Federal land managing agency may utilize and to make available Federal facilities, equipment, tools, and technical assistance to volunteers and volunteer organizations, subject to such limitations and restrictions as the appropriate Secretary or the head of any Federal land managing agency deems necessary or desirable.

DEFINITIONS

SEC. 12. [16USC1251] As used in this Act:

(1) The term “high potential historic sites” means those historic sites related to the route, or sites in close proximity thereto, which provide opportunity to interpret the historic significance of the trail during the period of its major use. Criteria for consideration as high potential sites include historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion.

(2) The term “high potential route segments” means those segments of a trail which would afford high quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original users of a historic route.

(3) The term “State” means each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Northern Mariana Islands, and any other territory or possession of the United States.

(4) The term “without expense to the United States” means that no funds may be expended by Federal agencies for the development of trail related facilities or for the acquisition of lands or interest in lands outside the exterior boundaries of Federal areas. For the purposes of the preceding sentence, amounts made available to any State or political subdivision under the Land and Water Conservation Fund Act of 1965 or any other provision of law shall not be treated as an expense to the United States.

NATIONAL PARKS OMNIBUS MANAGEMENT ACT OF 1998 (THOMAS ACT)

Title II - National Park System Resource Inventory and Management

Sec. 201. PURPOSES.

The purposes of this title are—

- (1) to more effectively achieve the mission of the National Park Service;
- (2) to enhance management and protection of national park resources by providing clear authority and direction for the conduct of scientific study in the National Park System and to use the information gathered for management purposes;
- (3) to ensure appropriate documentation of resource conditions in the National Park System;
- (4) to encourage others to use the National Park System for study to the benefit of park management as well as broader scientific value, where such study is consistent with the Act of August 25, 1916 (commonly known as the National Park Service Organic Act, 16 U.S.C. 1 et seq.); and
- (5) to encourage the publication and dissemination of information derived from studies in the National Park System.

Sec. 202. RESEARCH MANDATE.

The Secretary [of the Interior] is authorized and directed to assure that management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information.

Sec. 203. COOPERATIVE AGREEMENTS.

(a) COOPERATIVE STUDY UNITS.—The Secretary is authorized and directed to enter into cooperative agreements with colleges and universities, including but not limited to land grant schools, in partnership with other Federal and State agencies, to establish cooperative study units to conduct multidisciplinary research and develop integrated information products on the resources of the National Park System, or the larger region of which parks are a part.

(b) REPORT.—Within one year of the date of enactment of this title, the Secretary shall report to the Committee on Energy and Natural Resources of the United States Senate and the Committee on Resources of the House of Representatives on progress in the establishment of a comprehensive network of such college and university based cooperative study units as will provide full geographic and topical coverage for research on the resources contained in units of the National Park System and their larger regions.

Sec. 204. INVENTORY AND MONITORING PROGRAM.

The Secretary shall undertake a program of inventory and monitoring of National Park System resources to establish baseline information and to provide information on the long-term trends in the condition of National Park System resources. The monitoring program shall be developed in cooperation with other Federal monitoring and information collection efforts to ensure a cost-effective approach.

Sec. 205. AVAILABILITY FOR SCIENTIFIC STUDY.

(a) IN GENERAL.—The Secretary may solicit, receive, and consider requests from Federal or non-Federal public or private agencies, organizations, individuals, or other entities for the use of any unit of the National Park System for purposes of scientific study.

(b) CRITERIA.—A request for use of a unit of the National Park System under subsection (a) may only be approved if the Secretary determines that the proposed study—

- (1) is consistent with applicable laws and National Park Service management policies; and
- (2) will be conducted in a manner as to pose no threat to park resources or public enjoyment derived from those resources.

(c) FEE WAIVER.—The Secretary may waive any park admission or recreational use fee in order to facilitate the conduct of scientific study under this section.

(d) NEGOTIATIONS.—The Secretary may enter into negotiations with the research community and private industry for equitable, efficient benefits-sharing arrangements.

Sec. 206. INTEGRATION OF STUDY RESULTS INTO MANAGEMENT DECISIONS.

The Secretary shall take such measures as are necessary to assure the full and proper utilization of the results of scientific study for park management decisions. In each case in which an action undertaken by the National Park Service may cause a significant adverse effect on a park resource, the administrative record shall reflect the manner in which unit resource studies have been considered. The trend in the condition of resources of the National Park System shall be a significant factor in the annual performance evaluation of each superintendent of a unit of the National Park System.

Sec. 207. CONFIDENTIALITY OF INFORMATION.

Information concerning the nature and specific location of a National Park System resource which is endangered, threatened, rare, or commercially valuable, of mineral or paleontological objects within units of the National Park System, or of objects of cultural patrimony within units of the National Park System, may be withheld from the public in response to a request under section 552 of title 5, United States Code, unless the Secretary determines that—

- (1) disclosure of the information would further the purposes of the unit of the National Park System in which the resource or object is located and would not create an unreasonable risk of harm, theft, or destruction of the resource or object, including individual organic or inorganic specimens; and
- (2) disclosure is consistent with other applicable laws protecting the resource or object.

Source: *Congressional Record—Senate*, 14 October 1998, pp. S12494-12495.

STATE OF HAWAII LIABILITY LAW, HAWAII REVISED STATUTES 520

LANDOWNERS' LIABILITY]

Section

520-1 Purpose

520-2 Definitions

520-3 Duty of care of owner limited

520-4 Liability of owner limited

520-5 Exceptions to limitations

520-6 Persons using land

520-7 Rights

520-8 Rules and regulations

[§520-1] Purpose. The purpose of this chapter is to encourage owners of land to make land and water areas available to the public for recreational purposes by limiting their liability toward persons entering thereon for such purposes. [L 1969, c 186, §1]

§520-2 Definitions. As used in this chapter:

“Charge” means the admission price or fee asked in return for invitation or permission to enter or go upon the land.

“House guest” means any person specifically invited by the owner or a member of the owner’s household to visit at the owner’s home whether for dinner, or to a party, for conversation or any other similar purposes including for recreation, and includes playmates of the owner’s minor children.

“Land” means land, roads, water, watercourses, private ways and buildings, structures, and machinery or equipment when attached to realty, other than lands owned by the government.

“Owner” means the possessor of a fee interest, a tenant, lessee, occupant, or person in control of the premises.

“Recreational purpose” includes but is not limited to any of the following, or any combination thereof: hunting, fishing, swimming, boating, camping, picnicking, hiking, pleasure driving, nature study, water skiing, winter sports, and viewing or enjoying historical, archaeological, scenic, or scientific sites.

“Recreational user” means any person who is on or about the premises that the owner of land either directly or indirectly invites or permits, without charge, entry onto the property for recreational purposes. [L 1969, c 186, §2; gen ch 1985; am L 1997, c 272, §1]

§520-3 Duty of care of owner limited. Except as specifically recognized by or provided in section 520-6, an owner of land owes no duty of care to keep the premises safe for entry or use by others for recreational purposes, or to give any warning of a dangerous condition, use, structure, or activity on such premises to persons entering for such purposes, or to persons entering for a purpose in response to a recreational user who requires assistance, either direct or indirect, including but not limited to rescue, medical care, or other form of assistance. [L 1969, c 186, §3; am L 1997, c 272, §2]

§520-4 Liability of owner limited. (a) Except as specifically recognized by or provided in section 520-6, an owner of land who either directly or indirectly invites or permits without charge any person to use the property for recreational purposes does not:

- (1) Extend any assurance that the premises are safe for any purpose;

- (2) Confer upon the person the legal status of an invitee or licensee to whom a duty of care is owed;
 - (3) Assume responsibility for, or incur liability for, any injury to person or property caused by an act of omission or commission of such persons; and
 - (4) Assume responsibility for, or incur liability for, any injury to person or persons who enter the premises in response to an injured recreational user.
- (b) An owner of land who is required or compelled to provide access or parking for such access through or across the owner's property because of state or county land use, zoning, or planning law, ordinance, rule, ruling, or order, to reach property used for recreation purposes, or as part of a habitat conservation plan, or safe harbor agreement, shall be afforded the same protection as to such access, including parking for such access, as an owner of land who invites or permits any person to use that owner's property for recreational purposes under subsection (a). [L 1969, c 186, §4; am L 1996, c 151, §2; am L 1997, c 272, §3 and c 380, §9]

[§520-5] Exceptions to limitations. Nothing in this chapter limits in any way any liability which otherwise exists:

- (1) For willful or malicious failure to guard or warn against a dangerous condition, use, or structure which the owner knowingly creates or perpetuates and for willful or malicious failure to guard or warn against a dangerous activity which the owner knowingly pursues or perpetuates.
- (2) For injury suffered in any case where the owner of land charges the person or persons who enter or go on the land for the recreational use thereof, except that in the case of land leased to the State or a political subdivision thereof, any consideration received by the owner for such lease shall not be deemed a charge within the meaning of this section.
- (3) For injuries suffered by a house guest while on the owner's premises, even though the injuries were incurred by the house guest while engaged in one or more of the activities designated in section 520-2(3). [L 1969, c 186, §5]

[§520-6] Persons using land. Nothing in this chapter shall be construed to:

- (1) Create a duty of care or ground of liability for injury to persons or property.
- (2) Relieve any person using the land of another for recreational purposes from any obligation which the person may have in the absence of this chapter to exercise care in the person's use of such land and in the person's activities thereon, or from the legal consequences of failure to employ such care. [L 1969, c 186, §6; gen ch 1985]

[§520-7] Rights. No person shall gain any rights to any land by prescription or otherwise, as a result of any usage thereof for recreational purposes as provided in this chapter. [L 1969, c 186, §7]

[§520-8] Rules and regulations. The department of land and natural resources shall make rules and regulations pursuant to chapter 91, as it deems necessary to carry out the purpose of this chapter. [L 1969, c 186, §8]

HAWAII STATEWIDE TRAILS AND ACCESS SYSTEM, HAWAII REVISED STATUTES 198D

Section

198D-1 Definitions

198D-2 Establishment of Hawaii statewide trail and access
program

198D-3 Inventory

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198D-5 Identification of proposed, potential, and needed
trails and accesses

198D-6 Regulation of use of trails and accesses

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198D-8 Request to acquire rights for public use of additional
trails and accesses

198D-9 Other powers and duties of department

198D-10 Limitation on chapter's provisions

198D-11 Rules

198D-12 General administrative penalties

198D-13 Criminal penalties

[§198D-1] Definitions. For the purpose of this chapter:

“Access” means an easement or way:

- (1) Over which the general public has the right to travel; and
- (2) Which is used by the general public or intended for use by the general public primarily to reach or depart a public beach, shore, park, trail, or other public recreational area.

It includes a lateral easement along the shoreline, coastline, or beach.

“Department” means the department of land and natural resources.

“Trail” means an identifiable linear course used primarily for or used to get a recreational, educational, or inspirational experience. It includes, but is not limited to:

- (1) A corridor trail, which is a designated route, segregated from a highway, providing a continuous linkage between or among major urban areas, fragmented accesses, and major trail areas;
- (2) A segment or connector trail, which is a designated route from one locale to another; and

(3) A special use trail, which is a designated course for a special activity or function. [L 1988, c 236, pt of §2]

§198D-2 Establishment of Hawaii statewide trail and access program. (a) There is established the Hawaii statewide trail and access program, to be known as Na Ala Hele. The department of land and natural resources shall plan, develop, acquire land or rights for public use of land, construct, restore, and engage in coordination activities to implement the program in accordance with this chapter.

(b) The trail and access program shall use funding for the management, maintenance, and development of trails and trail accesses under the jurisdiction of the department from the following sources:

- (1) A portion of the highway fuel taxes collected under chapter 243;
- (2) Federal government grants;
- (3) Private contributions;
- (4) Fees, established pursuant to administrative rules and charged by the department for the commercial and other use of trails and trail accesses under the jurisdiction of the department; and
- (5) Transient accommodations tax revenues pursuant to section 237D-6.5.

(c) The moneys specified in subsection (b)(2) shall be deposited in the state treasury; provided that moneys received as deposits or contributions from the federal government shall be accounted for in accordance with the conditions established by the agencies making the contribution.

(d) The moneys specified in subsection (b)(1), (3), (4), and (5) shall be deposited in the special land and development fund under section 171-19 for the management, maintenance, and development of trails and trail accesses under the jurisdiction of the department; provided that the moneys specified in subsection (b)(5) shall be expended for the management, maintenance, and development of trails and access areas frequented by visitors in response to a master plan developed in coordination with the Hawaii tourism authority. [L 1988, c 236, pt of §2; am L 1993, c 273, §1; am L 1997, c 106, §2; am L 2002, c 250, §3; am L 2005, c 235, §3]

§198D-3 Inventory. (a) The department shall establish, maintain, and amend, as required, an inventory of all trails and accesses in the State, whether wholly or partly on public or private lands and whether or not under the jurisdiction of the department, and a separate inventory of all trails and accesses to public hunting areas in the State. The inventories shall include:

- (1) Maps and lists of all trails and accesses;
- (2) Name and length of each trail or access;
- (3) The person or agency having management responsibility for each trail or access;
- (4) The predominant transportation mode for each trail or access;
- (5) The development standard, condition, and grade of each trail and access;
- (6) The description of amenities or other features on or in close proximity to each trail or access;
- (7) The status of availability to the general public of each trail or access; and
- (8) Other information for each trail or access deemed necessary or desirable by the department.

(b) The department shall publish and periodically update documents, which shall be available to the general public. The documents shall contain that portion of the inventories which include trails and accesses available for the use of the general public. The department may charge an appropriate fee for the documents and any updates. [L 1988, c 236, pt of §2; am L 1990, c 53, §1(1)]

§198D-4 Classification. The department shall classify each trail and access in the inventories according to the following:

- (1) Function;
- (2) Type;
- (3) Theme;
- (4) Actual and desired use intensity; and
- (5) Any other classification deemed necessary or desirable by the department. [L 1988, c 236, pt of §2; am L 1990, c 53, §1(2)]

§198D-5 Identification of proposed, potential, and needed trails and accesses. (a) In addition to the inventories under section 198D-3, the department shall identify and maintain a listing of:

- (1) Proposed trails and accesses which may be opened to the public;
- (2) Potential expansions of trails and accesses;
- (3) Potential or desirable connectors between existing trail systems;
- (4) Public beach, shore, park, trail, and other recreational areas to which access is unavailable or inadequate; and
- (5) Trails and accesses to public hunting areas.

(b) The listing may be published in the inventories required under section 198D-3. [L 1988, c 236, pt of §2; am L 1990, c 53, §1(3)]

§198D-6 Regulation of use of trails and accesses. The department, by rule adopted in accordance with chapter 91, may regulate the use of trails and accesses under the department's jurisdiction. Regulation of the use of trails and accesses shall be established for the following purposes:

- (1) To preserve the integrity, condition, naturalness, or beauty of the trails or accesses;
- (2) To protect the public safety; or
- (3) To restrict or regulate public access to protected or endangered wildlife habitats, except for scientific or educational purposes. [L 1988, c 236, pt of §2; am L 1990, c 53, §1(4)]

[§198D-7] Examination of legal issues. The department, in consultation with the attorney general, shall examine legal issues relating to trails and accesses. The legal issues examined shall include:

- (1) Theories, options, and doctrines by which trails and accesses may be placed into or retained in public use;
- (2) The validity and feasibility of dedication requirements to obtain public use of trails and accesses;
- (3) The extent of liability exposure of the State, counties, and private landowners when allowing trails and accesses under their respective jurisdictions to be used by the general public; and
- (4) Strategies to reduce or limit the liability exposure of the State, counties, and private landowners in order to promote public use of trails and accesses under their respective jurisdictions which are closed to the general public. [L 1988, c 236, pt of §2]

§198D-7.5 Agreements to defend and indemnify. (a) The department may enter into agreements with owners of public or private land to further the purposes of this chapter. Agreements between the State and an owner may provide that the State will defend the owner, its affiliates, and their respective heirs, executors, administrators, representatives, successors, trustees, guardians, assigns, lessees, officers, directors, stockholders, employees, agents, and partners, from claims made by public users of the owner's land.

(b) These agreements may also provide that the State will indemnify the owner, its affiliates, and their respective

heirs, executors, administrators, representatives, successors, trustees, guardians, assigns, lessees, officers, directors, stockholders, employees, agents, and partners, for property losses incurred due to public use, subject to the following provisions:

- (1) The attorney general may review any claim;
- (2) The attorney general may refer a claim associated with property loss to the chairperson of the board of land and natural resources for informal resolution subject to the terms of an agreement;
- (3) All claims of property loss that are subject to the terms of an agreement shall be reviewed in the first instance by the chairperson for resolution as provided for in an agreement. The chairperson may compromise or settle claims for property loss from the trail and access program special funds for an amount not exceeding \$10,000 per fiscal year, and the chairperson may pay claims for property loss up to this amount without the review of the attorney general;
- (4) Upon referral by the chairperson, the attorney general, in the attorney general's discretion, shall make determinations of whether a claim for property loss would or would not be subject to the terms of an agreement; and
- (5) Claims greater than \$10,000 per fiscal year shall be subject to appropriation and allotment.

(c) The existence of an agreement does not allow an action to be brought against the State. The State shall not be made a party in any action solely because of the existence of an agreement to defend or indemnify. Any action defended by the State pursuant to an agreement shall be deemed an action against the owner, and the State may assert all defenses available to the owner, its affiliates, and their respective heirs, executors, administrators, representatives, successors, trustees, guardians, assigns, lessees, officers, directors, stockholders, employees, agents, and partners.

(d) If the agreement provides for indemnification by the State, no judgment shall be executed against an owner, its affiliates, and their respective heirs, executors, administrators, representatives, successors, trustees, guardians, assigns, lessees, officers, directors, stockholders, employees, agents, and partners, until the legislature has reviewed and approved the judgment. [L 1992, c 216, §1; am L 2005, c 175, §2]

[§198D-7.6] Limitation on liability. The State shall not be liable for any injury to any person arising from the person's use of unimproved lands owned or controlled by the State and regulated under section 198D-6, unless the injury results from gross negligence on the part of the State. [L 1999, c 106, §1]

§198D-8 Request to acquire rights for public use of additional trails and accesses. The department may request the legislature for appropriations to acquire rights to trails and accesses which are closed to public use or which are necessary to effectuate the trail and access program. [L 1988, c 236, pt of §2; am L 1993, c 273, §2]

§198D-9 Other powers and duties of department. The department:

- (1) May establish signing and design standards for classifications of trails and accesses;
- (2) Shall establish advisory councils to solicit advice and assistance in the implementation of the trail and access program. The appointment of members to advisory councils shall be made by the department. If advisory councils are established, the members of the advisory councils shall serve part-time and shall not be compensated for official duties performed. Advisory councils may be established on regional, islandwide, countywide, or statewide bases. The statewide council shall include representatives of motorized as well as nonmotorized trail users;
- 3) Shall serve as the centralized information agency for matters relating to the trail and access program;
- (4) Shall coordinate its activities under this chapter, including its compilation of the inventories and classifications of trails and accesses, with other public agencies;
- (5) Shall advise and, when able, assist other public agencies in the development, construction, operation, maintenance, and regulation of trails and accesses under the other agencies' jurisdiction;
- (6) Shall advocate before the legislature, governor, and public agencies, for the implementation of the trail

and access program; and

(7) Shall submit an annual report to the governor and legislature on activities engaged in under this chapter; provided that the annual report shall include a comprehensive description of the status of the trail and access program and the financial information specified in section 198D-2(b). [L 1988, c 236, pt of §2; am L 1990, c 53, §1(5); am L 1993, c 273, §3]

[§198D-10] Limitation on chapter's provisions. (a) Nothing in this chapter shall be construed as conferring or imposing upon the department any rights, powers, and duties over:

(1) Lands not under its jurisdiction; or

(2) The activities of other public agencies; except if provided by other law or agreement.

(b) The designation as part of the statewide trail and access system of trails and accesses, the use to which the public has no rights, shall not be construed as establishing public rights to use those trails and accesses. [L 1988, c 236, pt of §2]

[§198D-11] Rules. The department may adopt rules in accordance with chapter 91 for the purposes of this chapter. [L 1988, c 236, pt of §2]

[§198D-12] General administrative penalties. (a) Except as otherwise provided by law, the board or its authorized representative by proper delegation may set, charge, and collect administrative fines or bring legal action to recover administrative fees and costs as documented by receipts or affidavit, including attorneys' fees and costs; or bring legal action to recover administrative fines, fees, and costs, including attorneys' fees and costs, or payment for damages or for the cost to correct damages resulting from a violation of this chapter or any rule adopted pursuant to this chapter. The administrative fines shall be as follows:

(1) For a first violation, a fine of not more than \$2,500;

(2) For a second violation within five years of a previous violation, a fine of not more than \$5,000; and

(3) For a third or subsequent violation within five years of the last violation, a fine of not more than \$10,000.

(b) Any criminal action against a person for any violation of this chapter or any rule adopted pursuant to this chapter shall not be deemed to preclude the State from pursuing civil legal action to recover administrative fines and costs against that person. Any civil legal action against a person to recover administrative fines and costs for any violation of this chapter or any rule adopted pursuant to this chapter shall not be deemed to preclude the State from pursuing any criminal action against that person. [L 2001, c 34, pt of §1]

[§198D-13] Criminal penalties. (a) In addition to any other penalties, any person violating this chapter, any rule adopted pursuant to this chapter, or the terms and conditions of any permit issued in accordance with this chapter shall be guilty of a petty misdemeanor and shall be fined not less than:

(1) \$100 for a first offense;

(2) \$200 for a second offense; and

(3) \$500 for a third or subsequent offense.

(b) The fines specified in this section shall not be suspended or waived. Each day of each violation shall constitute a separate offense.

(c) Any criminal action against a person for any violation of this chapter or any rule adopted pursuant to this chapter shall not be deemed to preclude the State from pursuing civil legal action to recover administrative fines and costs against that person. Any civil legal action against a person to recover administrative fines and costs for any violation of this chapter or any rule adopted pursuant to this chapter shall not be deemed to preclude the State from pursuing any criminal action against that person. [L 2001, c 34, pt of §1]

ACT 50 OF THE STATE OF HAWAII (HRS CH. 343)

A BILL FOR AN ACT

RELATING TO ENVIRONMENTAL IMPACT STATEMENTS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. The legislature finds that there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawai'i's culture, and traditional and customary rights.

The legislature also finds that native Hawaiian culture plays a vital role in preserving and advancing the unique quality of life and the "aloha spirit" in Hawaii. Articles IX and XII of the state constitution, other state laws, and the courts of the State impose on government agencies a duty to promote and protect cultural beliefs, practices, and resources of native Hawaiians as well as other ethnic groups.

Moreover, the past failure to require native Hawaiian cultural impact assessments has resulted in the loss and destruction of many important cultural resources and has interfered with the exercise of native Hawaiian culture. The legislature further finds that due consideration of the effects of human activities on native Hawaiian culture and the exercise thereof is necessary to ensure the continued existence, development, and exercise of native Hawaiian culture.

The purpose of this Act is to:

- (1) Require that environmental impact statements include the disclosure of the effects of a proposed action on the cultural practices of the community and State; and
- (2) Amend the definition of "significant effect" to include adverse effects on cultural practices.

SECTION 2. Section 343-2, Hawai'i Revised Statutes, is amended by amending the definitions of "environmental impact statement" or "statement" and "significant effect", to read as follows:

"Environmental impact statement" or "statement" means an informational document prepared in compliance with the rules adopted under section 343-6 and which discloses the environmental effects of a proposed action, effects of a proposed action on the economic [and] welfare, social welfare, and cultural practices of the community and State, effects of the economic activities arising out of the proposed action, measures proposed to minimize adverse effects, and alternatives to the action and their environmental effects.

The initial statement filed for public review shall be referred to as the draft statement and shall be distinguished from the final statement which is the document that has incorporated the public's comments and the responses to those comments. The final statement is the document that shall be evaluated for acceptability by the respective accepting authority.

"Significant effect" means the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State's environmental policies or long-term environmental goals as established by law, or adversely affect the economic [or] welfare, social welfare[.], or cultural practices of the community and State."

SECTION 3. Statutory material to be repealed is bracketed. New statutory material is underscored.

SECTION 4. This Act shall take effect upon its approval. Approved by the Governor as Act 50 on April 26, 2000

Appendix B: Trail Segment Descriptions with High Potential Segments Noted as 1 or 2

| DISTRICT/AHUPUA 'A OR SEGMENT END POINTS | DESCRIPTION (THESE DESCRIPTIONS ARE SUBJECT TO CHANGE AND ON-THE-GROUND VERIFICATION.) |
|--|---|
| North Kohala | |
| 'Upolu Point to Honoipu | A dirt jeep road is traditionally used, but not continuous due to private lands. More recent subdivisions have approved lateral and <i>mauka-makai</i> public access. Railroad r.o.w. with sugar history has been incorporated for public access in at least one subdivision [Chang]. |
| Honoipu to Puakea Bay | Puakea Bay subdivision; shoreline trail maintained by Nā Ala Hele has a few dangerous spots near cliff edges [Chang]. |
| Puakea Bay to Kapa'a | This segment has a concentration of historic sites. Parker Ranch subdivision is required to provide <i>mauka-makai</i> and lateral shoreline access. Lateral route is yet to be determined and <i>mauka-makai</i> is yet to be built [Chang]. |
| Kapa'a to Māhukona | A portion of the railroad right-of-way north of Māhukona is a public access easement. Māhukona Resort has public access requirements, but the resort not yet been built [Chang]. |
| Māhukona to Lapakahi | Right of lateral public access is undefined [Chang]. In Kaoma and Hihui the trail is set inland several hundred meters; visible as a faint depression with some stones slightly piled on either side [1] ¹ (Burgett and Rosendahl 1990). ² At Lapakahi, the trail swings closer to the sea, just behind coastal housing compounds [1] (Cordy, 1995). |
| Lapakahi to Hawaiian Homelands | An <i>ala loa</i> is designated on maps and segments have been claimed by the state. No historic trail remnants have yet been identified. In the private lands where the question has arisen, the jeep road is regarded as the <i>ala loa</i> route in the absence of physical remains of the historic trail. The State Conservation Land Use District is mostly located from the jeep road <i>makai</i> to the ocean. |
| Private Lands | On private lands there are several public access requirements which have not yet been built: One Landowner has applied for a Conservation District Use Permit (CDUA) to build an extensive single family dwelling complex. <i>Mauka-makai</i> and lateral public accesses have been proposed for that property. The proposed access avoids numerous historic sites and moves the jeep road access out of their family compound. The CDUA is currently on hold. In <i>Kaiholena</i> subdivision <i>mauka-makai</i> and lateral public access have been required through subdivision approval process (per Hawai'i County Code Chapter 34). |
| Lapakahi to Hawaiian Homelands (cont.) | <i>Kahuā Ranch</i> and <i>Ponoholo Ranch</i> subdivisions are required to provide public access and an Archeological Preservation Plan is pending. <i>Gentry Pacific, Ltd.</i> (TMK 5-9-1:8) is undeveloped but has its SMA, REZ & SUB permits. Public access is required in those permits. <i>Kohala Waterfront</i> is the next subdivision with a public access. They have a public parking lot with <i>mauka-makai</i> access. The lateral access is a required easement, but large sections are overgrown. (TMK: 5-9-16:50) |
| State Lands | <i>Makai</i> of Kohala Ranch subdivision and <i>makai</i> of the Akoni Pule highway, TMK (5-9) a "Beach Trail" is shown leading to Waiakailio Bay crossing state lands [Chang]. |
| DHHL to Kawaihae | Department of Hawaiian Homelands (DHHL) is generally not supportive of public access. Waikā and Kahuā Trail just behind coastal housing compounds (Cordy, 1995). |

¹ Numbers in brackets [] indicate the trail classification outlined in chapter 2. These were determined from written reports or informal on-the-ground surveys and will be verified during the management planning process for each trail segment. Names in brackets [] reflect information from phone calls, emails, or other forms of communication.

² All names in parentheses () refer to authors of printed material listed in the bibliography.

| DISTRICT/AHUPUA 'A OR SEGMENT END POINTS | DESCRIPTION (THESE DESCRIPTIONS ARE SUBJECT TO CHANGE AND ON-THE-GROUND VERIFICATION.) |
|--|---|
| South Kohala | |
| Kawaihae to Spencer Beach Park | Trail behind coastal housing enclosures until the sand shore of the bay; there it ran along the sand edge in front of house enclosures (Jackson 1883; Loebenstein 1903) Route of ala loa at Pu'ukoholā Heiau and the kings' residence is not clear (may have been seaward of the <i>heiau</i> (Loebenstein 1903) Māhele documents of late 1840s label the trail the alanui (Kelly 1974). Harbor security permits public access during certain hours. A lateral trail exists between Pelekane Bay in the Pu'ukoholā National Historic Site and Spencer Beach Park [Chang]. |
| Spencer Beach Park to MKB | Portion of Nā Ala Hele State Ala Kahakai Trail to Mau'umae and from Mau'umae to Mauna Kea Beach Hotel (MKB) golf course. Nā Ala Hele is working with MKB to delineate the access through the golf course to Kauna'oa Beach [Chang]. |
| MKB to Hāpuna Beach | A trail is open and visible on the ground. MKB responsible for management [Chang]. |
| Hāpuna Beach to Puakō Bay | Trail is a dirt path. Nā Ala Hele has jurisdiction, has posted signs, and maintains a portion of it. Legal status of trail is not clear from Waialea Bay to Puakō Boat Ramp [Chang]. |
| Puakō Bay to 'Anaeho'omalū Bay | Much of the lateral access along Puakō Bay is blocked by old sea walls. The lateral trail is continuous through Mauna Lani Resort all the way to 'Anaeho'omalū Bay. In sections it follows concrete sidewalks [Chang]. At Kalāhuipua'a, trail is a winding, crushed 'a'ā footpath 2-3 feet wide across Kanikū lava flow (Cordy). Only portions remain after extensive shoreline development [Chang]. On pāhoehoe lava, straight 1880s trail runs through the Waikoloa petroglyph field [1]. Nearby is a footpath worn in the lava, the prehistoric <i>ala loa</i> [1]. It winds in and out and under the late 1800s <i>ala loa</i> (<i>alanui aupuni</i> --"government road") (Cordy 1994.; Barrera 1971; Walker and Rosendahl 1986; Donham 1988; Jensen 1988, 1989). |
| North Kona | |
| 'Anaeho'omalū to Kīholo Bay | The 1859 lava flow covered portions of the ancient ala loa. A network of historic trails on state land including extensive <i>mauka makai</i> trails; late 1800s <i>ala loa</i> (<i>alanui aupuni</i>) is present. In Pu'u Anahulu, the <i>ala loa</i> runs along the shore. The Hu'e hue to Kīholo Trail (<i>mauka makai</i>) is state-owned. The <i>makai</i> portion of that trail is maintained by Nā Ala Hele [Chang]. |
| Kīholo to Ka'ūpūlehu | Near Lauahinewai Point, from Luahinewai Pond to Ka Lae Manō the ancient trail runs along the cliffs where it is a crushed 'a'ā path [1] (Cordy, 1995) and is in good historic condition. There is a new development under construction with public access requirements south of Ka Lae Manō and north of Kona Village Resort [Chang]. |
| Ka'ūpūlehu to Kūki'o | An ancient segment between Four Seasons and Kūki'o Resorts is present. Trail is partially a crushed 'a'ā path with some beach stepping stones placed in the trail and partially on smooth pāhoehoe. [1] On intervening pāhoehoe lands and beaches, no remnant is visible (Cordy, 1995). Several significant <i>mauka-makai</i> historic trails in this area [Chang]. |
| Kūki'o to Maniniowali | Some crushed 'a'ā path is apparent with some beach stepping stones placed in trail (Cordy, 1995). Historic lateral trail in good condition [Chang]. |
| Maniniowali to Mahai'ula | Some ancient trail; Mahai'ula and Makalawena have <i>mauka-makai</i> trails in good condition [Chang]. |
| Mahai'ula to Keahole Point | Informal jeep trail; historic preserve with anchialine ponds just north of Keahole Point; the jeep trail is blocked on the Keahole side, but can be hiked [Chang]. |
| Keahole Point to Kaloko-Honokōhau NHP | Beyond the vast 1801 pāhoehoe flow, most of the route ran along the sand or pāhoehoe, leaving no visible remnants of the ancient trail (Cordy, 1995). The 1800s Mamalahoa Trail is still on the ground (absent where Queen Ka'ahumanu Highway covers it). It can be followed from NELHA through Kaloko NHP. It once extended all the way into Kailua-Kona. Access along the coast is a jeep trail; "The Shores" at Kohanaiki development has public access requirements. Public access routes and modes of travel will change with completion of Kohanaiki's development [Chang]. |

| DISTRICT/AHUPUA‘A OR SEGMENT END POINTS | DESCRIPTION (THESE DESCRIPTIONS ARE SUBJECT TO CHANGE AND ON-THE-GROUND VERIFICATION.) |
|---|--|
| Kaloko-Honokōhau NHP to ‘Alula Cove | ‘Alula Cove has a <i>heiau</i> nearby. State and DHHL lands surrounding Honokōhau Harbor and ‘Alula Cove are proposed to be developed commercially [Chang]. |
| ‘Alula Cove to Pawai | Wayfinding is necessary on pāhoehoe. Queen Lili‘uokalani Children’s Center (QLCC) land at Pawai [Chang]. |
| Pawai to Old Kona Airport | An easy walk along the shore but QLCC has a private camping area at Pawai [Chang]. |
| Old Kona Airport to Kailua Bay | A boat canal cuts off walking access to Kailua Bay. In Kona Bay Estates and Lanihau subdivisions traditional access rights were asserted via a law suit. As a result, the <i>ala loa</i> was restored by locating it on a low rock wall fronting both subdivisions’ lots [Chang]. |
| Kailua Bay to the end of Ali‘i Drive at Keauhou | <p>Historically, the trail ran along the route of today’s Ali‘i Drive to Kahalu‘u in today’s Outrigger Keauhou Beach Resort. The trail was mostly on pāhoehoe land but today is urbanized (Allen 1986; Hammatt, Borthwink & Shideler 1994:11; McEldowney 1983; Tomonari-Tuggle 1985). From Kahalu‘u, the path crossed rougher ‘a‘ā flows with large, smooth stones placed about three or four feet apart (Ellis 1863: 76).</p> <p>From Kailua to Hōkūkano, the <i>ala loa</i> was often flanked by houses. In the 1850s when houselots became walled with dry-laid stone, the trail passed through walled houselots (I‘i 1959; Cordy 1994). The walled pattern can be seen today along the jeep road just south of Keauhou (Cordy 1994).</p> <p>Today there is public access next to the Ala Kala condominium sign that follows an ancient trail shown on the TMK; although extensively developed, there used to be several <i>mauka-makai</i> trails that have been preserved in various forms. Examples include the Judd Trail, Keauhou Trail and Makole‘ā Trail. The coastal trail at Outrigger Keauhou Beach was developed by Bishop Estate years ago when given permits to pave a lateral trail for a public shoreline access. Through the years the pavement has been extensively torn up by high surf, and use of the lateral coastal access is a liability concern for the landowners involved. Still it is a popular coast for shoreline fishing, and there is a small beach between Outrigger Keauhou Beach and Keauhou Surf and Racquet Club to the south which has recently taken care of its public access requirements (<i>mauka-makai</i> and lateral) [Chang].</p> |
| End of Ali‘i Drive to Hokuli‘a | The Old Government Road (OGR) is at the end of Ali‘i Drive and extends along the coast into Hokuli‘a and beyond. |
| South Kona | |
| Hokuli‘a to Kealakekua Bay | <p>The <i>ala loa</i> is approximated by today’s jeep road although in the Hōkukano-Ke‘eke‘e area a new route was built to bypass the shore, evidently in the late 1880s (Kaschko 1984:12-15; Hammatt et al. 1994:186-187). Hōkukano Village is on state land, but many unprotected historic sites are there. The Old Government Road and old cart road are in good physical condition crossing private land of several landowners from Hokuli‘a to Ka‘awaloa. (TMK 8-1-7:45) [Chang] [1,2]. Some trail near Kealakekua Bay is on ‘a‘ā lava. The walled house pattern can be seen today at Nāpo‘opo‘o on the south shore of Kealakekua Bay [1] (Cordy, 1995).</p> <p>Steep cliffs cause the trail to be on top of Pali [Kawashima]. State Parks is in the process of including Ka‘awaloa in the Kealakekua State Historical Park to better protect historic sites there [Chang].</p> |
| Kealakekua Bay to Hōnaunau Bay | <p>There is a 100 foot stretch of paving stone just south of Kipu rock about 200 feet from shore [1]. For the rest of this 4.5 mile stretch, the old trail has either been destroyed by storm waves or the route was over bare pāhoehoe leaving little or no trace (Cordy, 1995).</p> <p>The TMK (see 8-3-6) shows trails, including a <i>mauka-makai</i> trail which is historic and considered to be publicly owned [Chang].</p> |
| Hōnaunau Bay to Ho‘okena | The shoreline trail within Pu‘uhonua o Hōnaunau NHP was washed away by storms, but well-documented segments of the 1868 trail and constructed stone ramp remain [1]. The trail passes through the ruins of Ki‘ilae Village Trail. The first 2/3 of the trail to Ho‘okena is in impressive physical condition and has many historic sites. The trail in places is built up 5’ to 8’ high. The 8’ trail surface has large flat inlaid lava rock with one foot high curbs. The last 1/3 has been bulldozed to accommodate jeep travel [Kawashima]. |

| DISTRICT/AHUPUA 'A OR SEGMENT END POINTS | DESCRIPTION (THESE DESCRIPTIONS ARE SUBJECT TO CHANGE AND ON-THE-GROUND VERIFICATION.) |
|--|---|
| Ho'okena to Ka'ohe Bay | Just outside of Ho'okena, trails have not been explored. There are cliff areas along the coast making passage difficult. Trails probably traveled at top of cliffs [1] [Kawashima]. Trails and old roads tend to be inland of coast when there are cliffs. Here goats are an issue as they move the rocks forming the curbstones and make it difficult to identify historic trails. On the other hand in some places, they eat the grass and make the trail more evident. Further south, lava flows have destroyed some historic areas [Kawashima]. Old trails and roads are noted on old maps and archeology reports in Pāhoehoe and Ka'ohe <i>ahupua'a</i> . Trail in Ka'ohe has curbstones and it extends north to where it is covered by the 1950 lava flow [Chang]. |
| Ka'ohe Bay to Pāpā Bay | Some jeep trail. At Kipāhoehoe and Pāpā Bay, the trail is one meter wide and made of paved beachstones on 'a'ā [1] (SHPD site inventory files for #4185 & #4182). This is an impressive stepping stone trail with big stones, sometimes two or three across. The trail stands out because it is on a lava flow with little vegetation [Kawashima]. In Kipāhoehoe, cairns mark a portion of the trail. The trail at Pāpā Bay consists of smooth beachstone paving and runs by the house sites of this former community (Cordy 1995). At Kukuiope at least one recent subdivision (TMK: 8-7-11:1) has set-aside the jeep road as the lateral, coastal public access right-of-way, presumably recognizing it as the rough equivalent of the <i>ala loa</i> . That subdivision has no archeological survey of its coastal area, so we don't know if there are historic trail remnants or sites. Another recent subdivision in Opihihale (TMK 8-7-14:6) has an archeological survey and several historic trail remnants were identified, both lateral coastal and <i>mauka makai</i> (as well as other sites). The subdivision approval required certain trails to be preserved in accordance with State Historic Preservation Division requirements [Chang]. |
| Pāpā Bay to Miloli'i | Trail generally is apparent on open 'a'ā fields, although obstructed by kiawe in some places. [1] The trail at Pāpā Bay is extremely attractive, being one meter wide and consists of paved beach stones (SHPD inventory files, 4185). Jeep roads overlay the trail in some places. |
| Miloli'i to Manukā | On the south side of Honomalino Bay the trail is one meter wide and consists of large paved beachstones laid on 'a'ā [1] (SHPD site inventory files # 1993) (TMK: 8-9). An aesthetically beautiful trail section is paved with large sized grey and white coral rubble. The area is filled with historic sites, <i>heiau</i> , the best preserved <i>hōlua</i> slide in the state, and much more [Chang]. The state legislature designated the areas of Kapu'a, Honomalino, Kaulanamauna, and Manukā a wilderness park which would allow State Parks to buy the private lands in Kapu'a. The Miloli'i area of the park is unencumbered State lands (Quinn) ³ . Footpath varying from well established crushed 'a'ā to <i>pāhoehoe</i> to soil to sand [1 or 2]. Some trail is overgrown with kiawe (NPS, 1998a, p. F-4). |
| Ka'ū | |
| Manukā to Humuhumu Point | Manukā Ahupua'a is state-owned and most is a Natural Area Reserve. The shoreline area is unencumbered State lands that could be used for a state park. From here to South Point there are discontinuous pieces of trail: over 'a'ā, the trail is visible as a crushed path with steppingstones; on <i>pāhoehoe</i> , the <i>ala loa</i> is sometimes apparent as a worn path and sometimes left no remains except for stone cairns and pieces of coral [1, 2] (Haun and Walker 1987). A privately owned road to Humuhumu Point, "Road to the Sea," marks the south boundary of the <i>ahupua'a</i> . |
| Humuhumu Point to South of Pōhue Bay | Pōhue Bay is a sandy beach, a rare feature in this area, with anchialine ponds nearby. It is accessible by a locked, private road. A <i>mauka-makai</i> ancient trail in good physical condition leads from the Hawaiian Ranchos subdivision down to just south of Pōhue Bay. The area contains a concentration of pre- and post-contact petroglyphs. Along the <i>mauka-makai</i> trail are fascinating geological features as well as petroglyphs. The revised County General Plan removed the Resort designation that existed for the area and changed it to Open. The area is considered to be in a hazardous volcanic zone [Chang]. |

³ Unencumbered state lands are owned by the state, but no management entity has been assigned to them.

| DISTRICT/AHUPUA‘A OR SEGMENT END POINTS | DESCRIPTION (THESE DESCRIPTIONS ARE SUBJECT TO CHANGE AND ON-THE-GROUND VERIFICATION.) |
|---|--|
| Pōhue Bay to Ka Lae (The Point or South Point) | There are discontinuous pieces of trail: over ‘a‘ā, the trail is visible as a crushed path with steppingstones; on <i>pāhoehoe</i> , the <i>ala loa</i> is sometimes apparent as a worn path and sometimes left no remains except for stone cairns and pieces of coral [1, 2] (Haun and Walker 1987). |
| Ka Lae to Ka‘alu‘alu | Little trail is visible at South Point where deep soils are present (Cordy 1995). A jeep road is present for the entire segment. |
| Ka‘alu‘alu to Kimo Point | Well-worn trail, some ‘a‘ā and some worn into <i>pāhoehoe</i> [1]. Jeep roads cut across the path and some trail is overgrown with vegetation. |
| Kimo Point to Honu‘apo | A jeep road is shown on maps. |
| Honu‘apo to Punalu‘u | Between Hōkūkano and Hīlea, a rugged ‘a‘ā field is present, and the “road across it was formed of large smooth round stones, placed in a line two to three feet apart” [1] (Ellis 1963: 142). In the Punalu‘u area, this trail was called the <i>alanui aupuni</i> in 1852 (Kelly 1972: 56). From Honu‘apo to Punalu‘u, a later, straighter 1800s version of the <i>ala loa</i> is present. It has curbing, is wider, and has causeways. Parts of the old trail on the edge of Nīnole Fishpond were damaged by the 1868 tidal wave [1,2] (Kelly 1972). |
| Punalu‘u to Kapāo‘o (boundary of Hawai‘i Volcanoes NP) ⁴ | As elsewhere, the trail can be seen across the ‘a‘ā flows as trodden surface with it disappearing on the <i>pāhoehoe</i> [1,2,3] (Cordy 1995). |
| Kapāo‘o to ‘Opihinehe | “Ancient trail from Ka‘ū to Puna has been off the map for many years.” ⁵ A faint trail and <i>ahu</i> guide walkers [1,2]. |
| Ka‘ū/Puna | |
| ‘Opihinehe to ‘Āpua Point | In 1930, Hudson noted that between Keauhou Landing and ‘Āpua Point the trail was a “worn track across the smooth <i>pāhoehoe</i> flows (Hudson 1932: 89).” The Puna Coastal Trail extends from Halapē to ‘Āpua. |
| Puna | |
| ‘Āpua Point to boundary of Hawai‘i Volcanoes NP | Portions of the trail are visible. Stretches of rough ‘a‘ā are crossed by a trail made of waterworn boulders—one to three stones wide and continuous [1]. This continuous waterworn construction may be an architectural style somewhat unique to Puna although it is found in places in South Kona (Cordy 1995). Areas where this type of trail can be seen include ‘Āpua (Emory et al. 1959:82) and Pūlama (inland of the site of Waha‘ula heiau (Emory et al. 1959:71). In smooth <i>pāhoehoe</i> areas sometimes the trail is visible. [1]” This pattern continues on around the Puna shore and up to Hilo Bay (Cordy 1995). |

Sources:

Ala Kahakai National Trail Study and Final Environmental Impact Statement, National Park Service, Pacific West Region, Pacific Great Basin Support Office, San Francisco, 1998

Ross Cordy, "The Ala Kahakai or the Ala Loa: An Archaeological and Historic Preservation Perspective." Ms. on file, State Historic Preservation Division, DLNR, Honolulu, HI.

Deborah Chang: the first Program Manager of the Nā Ala Hele Trail and Access Program, currently on the Hawai‘i County Nā Ala Hele Advisory Council, recently with the Hawai‘i County Planning Department, and currently Hawai‘i Trails and Access Consultant.

Irving Kawashima: Hawai‘i County Nā Ala Hele Trail and Access Specialist

Curt Cottrell: Program Manager of Nā Ala Hele Trail and Access Program

⁴ The remainder of the trail is within the wilderness area of Hawai‘i Volcanoes National Park. Overnight camping requires registration at the Kīlauea Visitor Center. Life threatening situations such as advancing lava flows, earthquakes, or tsunami occur in this area, and park rangers must be able to locate and account for all persons in the wilderness area. The native Hawaiian residents of Kalalpana and their guests have exclusive fishing and seafood-gathering rights from the eastern park boundary to a fenceline between Keauhou and Halapē.

⁵ Noted on National Trails Day, June 1993

Appendix C: High Potential Sites and Complexes along the Ala Kahakai NHT

Cultural sites along national trails are especially vulnerable to impacts by uninformed users of trails. Many resources not readily apparent to the non-archaeologist and individuals who are not descended from traditional residents of the land area crossed by the trails can be inadvertently damaged, or they may be intentionally looted. For that reason in a public document such as this, there is no attempt to list all of sites along the *ala loa*. The text below describes selected examples of generally recognized sites, complexes, and potential traditional cultural properties. The basic text, with minor corrections, is quoted directly from Helene R. Dunbar, *Cultural Resources Assessment Ala Kahakai, Hawai'i Island*, U.S. National Park Service, Department of Interior, San Francisco Support Office, San Francisco, California, 1997. The Dunbar text does not incorporate much ethnographic material, and as sites are considered for inclusion in the Ala Kahakai NHT, this information will be added to the descriptions.

This appendix adds information prepared by Kepā Maly of *Kumu Pono Associates* in order to suggest the level of personal relationship Hawaiians have to their lands, trails, resources, and gods and to suggest the range of sites that could be considered for the Ala Kahakai NHT. These additions are indicated by an asterisk (*) placed before the site name. A list of trail studies prepared by Kumu Pono Associates LLC is appended to the bibliography.

Kohala District

MO'OKINI HEIAU AND THE KAMEHAMEHA I BIRTHPLACE, 'ŪPOLU POINT

Mo'okini is the largest temple on Hawai'i Island, and one of the most significant sacred traditional cultural properties in the Hawaiian Islands. This National Historic Landmark is associated with a number of historic figures and events (Dunbar and Napoka 1990):

Construction is attributed to the priests Pā'ao and Mo'okini who arrived from *Kahiki* (a "foreign place" believed by some to refer to the ancestral Polynesian homeland) around the 13th or 14th centuries. Several families today claim descent from these individuals.

The site has a long association with the Kohala District chiefs, including Kamehameha I's granduncle, Alapa'i nui who reigned as paramount chief of Hawai'i Island around 1740 A.D.

Mo'okini was one of Kamehameha's major temples, and a *luakini heiau*.

Kamehameha's high priest, Hewahewa, the last high priest of the Hawaiian kingdom, officiated here.

Formerly there was also a chiefly residence for the sacred high chiefs in Pu'uepa-Kokoiki. Reportedly born at Kokoiki, Kamehameha I was most likely taken from his birth site nearby, to Mo'okini Heiau for his birth rituals.

According to tradition, the legendary priest-navigator Pā'ao first landed in Puna District where he built Waha'ula Heiau, a temple that shared some architectural similarities with Mo'okini Heiau (Emory *et al.* 1959). Finally he settled in Kohala District on the northern tip of land he named Uporu ('Ūpolu) after his home district somewhere to the south of the Hawaiian Islands. After an unspecified time interval, Pā'ao decided conditions were favorable for setting up a ruling chief of his own choosing, and obtained one from abroad ("Kahiki"). Pili Ka'aiea, himself a descendant of the ancient Polynesian gods, was installed as ruling chief of Hawai'i Island. Pili married into Hawaiian nobility and founded the chiefly family, which generation after generation, supplied the sacred rulers of the island of Hawai'i (Fornander 1969(1):86, 191-92, 201; (2):22, 38, 39). His descendants became the ruling chiefs of the six traditional chiefdoms of the island. With but one brief interlude, they ruled until 1893. Pā'ao himself became the high priest of an order he established, one that continued until 1819.

Only the temple remains. A state of Hawaii commemorative plaque marks the alleged birth site. The ancient trails, the former chiefly compound, and all other structural associations, were destroyed when the surrounding land was leveled for a sugarcane plantation in the 19th century.

The importance of Mo'okini Heiau has increased since recent lava flows covered Waha'ula Heiau, the only other known structure associated with Pā'ao. The State of Hawaii in conjunction with Mo'okini Luakini, Inc., a non-profit private foundation, has partially developed this landmark for public interpretation. The site is maintained by personnel from nearby Lapakāhi State Park.

LAPAKĀHI STATE HISTORICAL PARK

Lapakāhi provides a glimpse into the life of the common people in contrast to the great centers maintained by the ruling chiefs of ancient Hawai'i. This 600-year-old farming and fishing settlement is partially restored. Lapakāhi contains the rock-walled foundations of house sites and canoe sheds, as well as shrines, burial cairns, and other features associated with daily life. A major network of terraces comprising the vast agricultural system that supported the settlement is located several miles inland above the village on the slopes of the Kohala Mountains. Although no archaeological vestiges of the *ala loa* remain, multiple footpaths connect the coastal region with the upland agricultural fields. Lapakāhi is on both the State and National Registers of Historic Places.

PU'UKOHOLĀ HEIAU, KAWAIHAE

Pu'ukoholā National Historic Landmark is located within Pu'ukoholā National Historic Site, overlooking Kawaihae Bay in the district of South Kohala. It was built between 1790 and 1791. In addition to what may be vestiges of the *ala loa*, the landmark district includes Pu'ukoholā Heiau, Mailekini Heiau, the former Hale o Kapuni Heiau (a submerged shark temple), Pelekāne (the former chiefly residential complex), Kamehameha's "leaning post" (a *pōhaku* where he allegedly rested to watch sharks feeding at offshore Hale o Kapuni), and Pahukanilua, the homestead of John Young, the former British sailor who became a high chief under Kamehameha.

Kawaihae and Pu'ukoholā formed the setting of Kamehameha I's rise to power and consolidation of the Hawaiian Islands under one rule. By late prehistoric times, warfare had become a frequent means for the descendants of Pili Ka'aiea to enlarge territorial holdings. Kawaihae was a favored battleground; armies from the six kingdoms frequently fought here. Invading fleets from Maui Island also made Kawaihae their target. Apple (1969:12) says "remnants of defeated Maui war fleets, en route home from battles,

refreshed at Kawaihae and sometimes cut down coconut trees there as final acts of defiance to the Hawai'i chiefs." Mailekini Heiau was an ancient and important prehistoric and historic site associated with the inter-chieftom and inter-island rivalry of the time period prior to Kamehameha I's rise to power; it was one of the prizes gained by the Maui or Hawai'i chief who held Kohala (Kamakau 1961:56, 58, 66, 110-111, 150).

A number of prominent historic figures are associated with the residential complex known today as Pelekāne. Although earlier paramount chiefs such as Alapa'i nui probably resided there sporadically, it achieved its greatest prominence between 1790 and 1810 when Kamehameha I was a frequent resident (Kamakau 1961:350). Pelekāne most likely was the birthplace of Queen Kamāmalu, daughter of Kamehameha I, in about 1802. She was the half-sister of Liholiho (Kamehameha II), and as permitted under ancient Hawaiian kinship rules, later became his wife. She died of measles, as did Kamehameha II, on a state visit to England in 1824 (li 1959:70). Liholiho, as Kamehameha II, was a periodic visitor to the king's residence at Kawaihae. We know that he retired there in the interim period following the death of Kamehameha I, and that he visited during journeys around the Island to the *luakini heiau* during the annual *Makahiki* ceremonial season. He began "...in Kailua, whence he went to Kawaihae and continued from there around the island to the Hale o Keawe" at Hōnaunau (li 1959:137). Tradition further indicates that Queen Emma, granddaughter of Kamehameha I and John Young, who became the bride of Kamehameha IV, may have been born or resided at Pelekāne (see Kelly 1974:16).

Finally, Kawaihae became the primary residence of John Young, who along with Isaac Davis, provided the technological knowledge of cannon, rifles, fortifications and martial arts that were indispensable to Kamehameha I's military successes and which served to preserve for history their role in Hawaiian unification. John Young in particular appears to have set the course that led Hawai'i into the sphere of American influence and ultimately to statehood (Apple 1969:22). His home in Kawaihae was the first western style structure built in the islands.

KALĀHUIPUA'A, AND 'ANAEOHOMALU, SOUTH KOHALA

Waikoloa Beach Resort is located in 'Anaehomalu and the Mauna Lani Resort is located in the land unit

of Kalāhuipua‘a. These resorts have incorporated historic preserves set aside in State historic preservation agreements. Sections of the ancient coastal trail, a prehistoric bypass trail, and the historic (1880s) Māmalahoa Trail have been recorded at various locations within these historic preserves.

PUAKŌ PETROGLYPH ARCHEOLOGICAL PRESERVE (MAUNA LANI RESORT)

This extensive rock art site contains over three thousand units carved between 1000 and 1800 A.D. (Georgia Lee, personal communication, February 1996). Rock art specialist Edward Stasack (personal communication, February 1996) believes it may have been associated with the *ala loa* whose route may lie beneath the modern Puakō Road although there is no documentation or archaeological confirmation.

Hawaiian petroglyphs appear to have served a variety of purposes. Many appear to commemorate personal experiences, or are acknowledgements of the *‘aumāku* (ancestral spirits). The place where the petroglyphs appear also may have had sacred importance. Other images may relate to mythology, and a few possibly depict pre-contact and early historic events. Common forms of stone carvings include dots, circles, straight lines, wavy and curved lines, and simple stick figures representing dogs, turtles, fish, birds, pigs, crabs and human beings. Some figures are fanciful anthropomorphs, but others depict men on surfboards, canoe paddlers with paddles in hand, sails and canoes. Post contact petroglyphs may depict western ships, horseback riders (*paniolo*), and Hawaiian words written in a style introduced by nineteenth century missionaries.

At Puakō, a large number of the rock art elements consist of cupules, sometimes covered with a stone. These holes (*lua*) are thought to be connected with a birth ritual of a new born child. It was believed that placing the umbilical cord stump (*piko*) in the pecked cup would generate helpful *mana* (spiritual power) to nourish the child. Many human forms also are depicted here including linear figures, family groups, triangular human figures and muscular figures. One of the most intriguing series of figures, close to the Ka‘eo Trail (a modern access trail from Puakō up to Petroglyph Field A) is a line of thirty figures lined up head to foot that are believed to represent a column of marching warriors or perhaps a family lineage.

KALĀHUIPUA‘A (MAUNA LANI RESORT) (SEE REGISTER MAP NO. 824, J.S. EMERSON SURVEYOR, 1880)

This ancient land unit, containing a segment of the *ala loa*, centers around four fishponds, the largest of which, Kalāhuipua‘a Fishpond, is still in use today. Various stories are associated with the fishponds. The ancient trail (winding in and out under the 1800s trail) leads around the ponds and along the coast to dozens of ancient sites. Excavation of lava tube shelters and house sites confirms they were used from 1200-1700 A.D. Petroglyphs include triangular and linear human figures, dots, circles, *papamū* and an impressive depiction of a helmeted warrior.

*** KAHĀPAPA AND KU‘UALI‘I FISHPONDS AT ‘ANAEO‘OMALU (SEE REGISTER MAP NO. 824)**

An oasis along an otherwise arid coastline, the fishponds of Kahāpapa, Ku‘uali‘i, and the smaller brackish (anchialine) and fresh water ponds, provided ancient Hawaiians with the resources necessary to sustain themselves along the South Kohala coast. The fishponds were generally managed for support of the royal households, with rights of taking fish granted to the people of the land. This was particularly important during seasons of rough weather, when canoes could not leave the shore, as fish provided the primary protein to the Hawaiian populace. Ancient residents of the coastal lands around the fishponds also traveled regularly between the rich cultivated lands of the Waimea region, the coastal residences, and they left behind many reminders of past times. Historically, the fishponds remained in regular use through the early 1940s.

WAIKŌLOA PETROGLYPH PRESERVE AT ‘ANAEO‘OMALU (WAIKŌLOA BEACH RESORT)

Protected within the Waikōloa Beach Resort are two restored, operative fishponds, C-shaped stone break walls used by early travelers as shelters against the prevailing wind, other structural remains, and the extensive Waikōloa Petroglyph Preserve through which the ancient *ala loa* passes. Common petroglyph carvings include cupules that may be associated with birth rituals. Other elements include various styles of human figures, canoes, a turtle, a crab claw, fishhooks, and a nineteenth century cowboy (*paniolo*) on horseback. A stick-figure image of Lono, god of the *Makahiki*, can be seen among the other petroglyphs beside the old foot-worn *Ala Māmalahoa*. It is estimated that the earliest petroglyphs were done around 800 A.D. when the ‘Anaeho‘omalū region was first extensively settled.

Near the main Waikōloa petroglyph field is a large abrader quarry area on the inland side of the coastal bypass trail. “Here porous pieces of *pāhoehoe* were ground down in basin-like depressions into hand-held sized abraders used for woodworking. Hundreds of basins on the *pāhoehoe* surface are scattered through this quarry. Also, a few temporary shelters are present in the form of rock shelter overhangs and a few small surface enclosures. Dates from these shelters show use of the quarry beginning about A.D. 1400 and increasing after A.D. 1600” (Cordy 1994b:14).

“At the Kona border, on the seaward edge of the coastal bypass trail, is a small rectangular platform, the Ke ahu a Lono, which Lonoikamakahiki is said to have built ca. 1640-1660 in commemoration of his reconciliation with his chief advisor, Kapaihihilina. The site is also identified as the *ahupuaʻa* shrine for the ‘Anaehoʻomalua-Waikōloa area. The platform has recently been reconstructed and has temporary interpretive signage” (Cordy 1994b:14). This area is currently in need of repair.

North and South Kona Districts

* KAPALAOA COMPLEX, ANCHIALINE PONDS AND PETROGLYPH FIELD (SEE REGISTER MAP NO. 824; AND NO.1278, J.S. EMERSON, SURVEYOR, 1885)

Kapalaoa was the northern-most village of the North Kona District, being a part of the *ahupuaʻa* of Puʻu Anahulu. It was most likely closely tied to the ‘Anaehoʻomalua-Kalāhuipuaʻa sites. The near shore boundary of Puʻu Anahulu-Kona, and ‘Anaehoʻomalua-Kohala, is marked by an ancient *heiau* known by the name of Hiʻiaka-i-ka-ʻale-ʻī. To the inland, where the *ala loa* passes from Kohala to Kona, is found the *heiau*, Ke-ahu-a-Lono, which is associated with events of the island king, Lono-i-ka-makahiki. The village at Kapalaoa remained in use by traditional Hawaiian families through the 1960s. The old house sites gave way to wooden structures, but families continued to use the old ponds and fisheries, and other sites associated with generations of residency in the region. One site on the southern side of the Kapalaoa village is a field of petroglyphs, with figures that span the generations, recording ancient images, the arrival of western sailing ships along the coast, and the use of letter printing to record the names of families of the land.

* WAINĀNĀLIʻI AND KĪHOLO FISHPOND COMPLEXES, VILLAGES, AND LUAHINEWAI (SEE REGISTER MAP NO. 1278)

In ancient times, the residents of this region developed fishponds along the shore of Puʻu Anahulu and Puʻu Waʻawaʻa. The fishponds were controlled by the chiefs, but the people who worked the ponds and lived on the land were allowed access to the fishery resources of the ponds in order to sustain themselves, while supporting their chiefly benefactors. The two fishpond complexes were still worked during the reign of Kamehameha I, with the Kīholo fishpond actually rebuilt in ca. 1811, under the direction of Kamehameha I. Like other sites along this coastline between Kohala and Kailua, traditional communities were established around the fishponds and freshwater sources. In the Wainānāliʻi-Kīholo vicinity, native tenants also regularly traveled between the coast and the uplands of Puʻu Anahulu and Puʻu Waʻawaʻa, where they tended extensive cultivating fields—with seasonal movement between the shore and uplands, coinciding with the dry and rainy periods of the year.

Approximately one-half mile south of the Kīholo fishpond, the *ala loa* enters onto the 1800 lava flow, and passes the area of Luahinewai, a freshwater pond. Luahinewai is a significant sight in the history of the rise of Kamehameha I to power on the island of Hawaiʻi. It was at this pond, that Keōua-ku-ʻahuʻula—a cousin of Kamehameha I—participated in a ceremonial bath to prepare his body for sacrifice at Puʻu Koholā Heiau, in Kawaihae.

* KALAEMANŌ SALT WORKS AND HABITATION FEATURES (CEREMONIAL SIGNIFICANCE) (SEE REGISTER MAP NO. 1278)

Kalaemanō (The shark point) is an area of an ancient lava flow, surrounded by branches of the 1800 lava from Hualālai. The point was the traditional home of a shark-god, who protected the people and fishery resources of the region. Elders from the neighboring villages of Kīholo, Kaʻūpūlehu, and other lands to the south, learned that while passing along the *ala loa*, at Kalaemanō, one had to always travel with respect, as the shark’s home, a cave entered from the sea, was situated below an area crossed by the trail. Also, extensive system of salt pans existed in this area. Fishing was the primary livelihood of the ancient and historic residents of this region—with the largest quantities of fish being the *ʻōpelu*, a type of mackerel. These fish were caught, hundreds at a time, and salt (*paʻakai*) made from the salt water, which was dried in salt pans at Kalaemanō, was used to preserve the fish.

The dried *‘ōpelu* were in turn, exchanged with people from other communities for items such as poi, and goods for various aspects of life.

KA‘ŪPŪLEHU (KONA VILLAGE RESORT)

Despite alterations to the terrain wrought by the lava flows from the 1801 eruption of Mt. Hualālai, Ka‘ūpūlehu contains the ruins of a prehistoric settlement on Kahuwai Bay, a petroglyph field of at least 324 units, restored fishponds and a portion of a *hōlua* sled ramp. Vestiges of the *ala loa* that probably circled the bay may be present; however, it is known the 1801 lava flow extensively altered the configuration of Kahuwai Bay. The prehistoric *ala loa* would have been buried wherever lava flowed to the sea.

The fifteen-acre Ka‘ūpūlehu petroglyph field is one of the most significant and unique rock art sites in Hawaii. The most unusual aspect of the site is the large number of Hawaiian sail motifs pecked into the smooth *pāhoehoe* lava. There are scenes with figures in elaborate headdresses that seem to indicate chiefly concerns (Stasack and Lee 1992; Lee and Stasack, in press). There are also canoe paddlers, and *papamū*. Other elements are unique and include a surfing fisherman, a head-to-head depiction of twins, elaborate kite designs, and what appears to be a captive individual slung from poles, possibly a sacrificial victim.

Ka‘ūpūlehu is of historic interest, too, for the incident of the *Fair American* (1790), a ship attacked by Hawaiians who were retaliating for the flogging of one of their chiefs by Captain Metcalf of the ship *Eleanora* just a few days earlier. To lay hands on a chief by such means was punishable by death. Captain Metcalf’s son, Simon Metcalf, was captain of the *Fair American*. He and all his men were slain, except for Isaac Davis, who escaped by swimming to shore. The crew of the *Fair American* is believed to be buried in the Ka‘ūpūlehu area. However, Davis, who was captured, entered the limelight of history and became, with John Young, a trusted advisor of Kamehameha I.

*** KŪKI‘O TO KAULANA—A SERIES OF SMALL VILLAGES, AND FEATURES ASSOCIATED WITH TRADITIONAL AND HISTORIC RESIDENCY, INCLUDING FISHPONDS AND ANCHIALINE POOLS. (SEE REGISTER MAP NO. 1278)**

The near-shore *ala loa*, connects a series of villages, including many associated features, with functions ranging from those resulting from daily subsistence activities to ceremonial observances. Among the notable features are the remains of the great fishpond Pa‘aiea,

which was destroyed by the 1801 lava flow of Hualālai. The native accounts of the visit of Pele—in human form—to the region, and the refusal of the overseer of the fishpond to share fish with her, describe many *wahi pana* of the region. The account also explains why the small, life sustaining anchialine ponds, fresh water pools, and fishponds remain on the landscape. A traditional saying of the ancient fishpond observed

O na hōkū o ka lani luna, o Pa‘aiea ko lalo —
The stars are above, Pa‘aiea is below.

(This refers to “Kamehameha’s great fishpond Pa‘aiea, in Kona... Its great size led to this saying—the small islets that dotted its interior were compared to the stars that dot the sky...” Pukui 1986:275 – 2515)

KEĀHOLE POINT TO KALOKO AHUPUA‘A

“This stretch of land crosses the former *ahupua‘a* of Kalaoa, ‘O‘oma, Kohanaiki, and Kaloko. The area consists of dry, arid lava lands near the shore. Prehistoric agricultural fields were several miles inland on the upland slopes where rainfall was sufficient for year-round cultivation. The bulk of the dwellings in this area, however, were along the shore, being connected to the upland fields by inland-heading (*mauka-makai*) trails” (Cordy 1994b:14). In contrast with the more densely populated Kaloko *ahupua‘a* to the south, the settlements of Kohanaiki, ‘O‘oma, and Kalaoa, were small and dispersed, reflecting a notable drop in prehistoric population beyond Kaloko. Small clusters of house ruins are scattered just behind the sandy shore. Kohanaiki and ‘O‘oma each have small community *heiau* (a platform and enclosure, respectively) located immediately seaward of the *ala loa*’s former location (now marked approximately by a jeep road in the sand). “A few other small religious structures are present, notably a fishing shrine in ‘O‘oma which is a small platform with three upright stones. Additionally, a complex of modified tidal (anchialine) ponds in Kohanaiki are present, marked off by large stone cairns. These ponds seem to have been used in part for the raising of bait for offshore fishing” (Cordy 1994b:14).

Developers are currently planning two resorts for the Kohanaiki-‘O‘oma -Kalaoa area, (Kohanaiki and ‘O‘oma II). A number of historic sites will be preserved, including Kohanaiki’s *heiau* and several house sites. Just north, the remainder of ‘O‘oma and Kalaoa are

on the State's Natural Energy Laboratory Authority's land. Here a multi-acre historic preserve encloses 'O'oma's *heiau*, the fishing shrine and several house sites. In Kalaoa, the best example of a small prehistoric house site along the trail is being preserved, and a historic preserve which includes a complex of 1800s to early-1900s house ruins has been set aside. All of these sites are scheduled for interpretation under state historic preservation agreements tied to development. (Cordy 1994b:15).

KALOKO-HONOKŌHAU NATIONAL HISTORICAL PARK

This great chiefly center is a National Historic Landmark (Honokōhau Settlement, December 29, 1962) and a newly developing National Historical Park. It contains over 200 sites and features denoting a sizable population in late prehistoric times. Some historic structures are also present. Almost every type of pre-contact structure is represented including 'Aimakapā and Kaloko fishponds (the largest surviving ponds on the island), and 'Ai'opio fish trap; several *heiau*; a *ko'a*; burial areas; house platforms; stone enclosures believed to be agriculture planters; a *hōlua* slide; canoe landings; lava tube shelters; salt pans; *papamū* surfaces for *kōnane*; and several types of trails. The latter include *mauka-makai* trails, the inland straighter-line historic *Ala Māmalahoa*, and the probable route of the *ala loa* along the shore, although the latter is no longer visible.

"The shoreline itself consists of fairly rugged *pāhoehoe* tidal rocks. A narrow band of sand usually lies just above the high tide line. The houses that were along this shore were generally found just inland of the coastal sand strip and would have lined the trail which ran in front of them on the sand... to the south of Kaloko fishpond are unwallled house ruins, both single structures and groups of multiple structures. One has been interpreted as a high chief's residence. To the north and back of the fishpond are house ruins that have one meter high enclosing walls around the house yards. These walled house lots are more common to the mid-1800s period. To the south of the fishpond are also two large pavings interpreted as community *heiau* and just inland is a large prehistoric cemetery. These Kaloko sites reflect a typical Kona community that would be found along the *ala loa*" (Cordy 1994b:15).

Kaloko has tremendous significance to people of Hawaiian ancestry, some of whom believe it is the

sacred and *kapu* final resting place of Kamehameha I whose bones were placed in a hidden sepulcher near those of other noted *ali'i* (Kamakau 1964; USDI 1994:96). The location remains a closely guarded secret. Kaloko is also believed to be the resting place of Kahekili, ruler of Maui, as well as other members of the Kamehameha family.

KAMAKAHONU AND THE AHU'ENA HEIAU, KAILUA

Kamakahonu, located on the north side of Kailua Bay, was from 1813 to 1819 the residence of Kamehameha I. It was here that his heir, Liholiho (Kamehameha II) was declared king, and in November 1819, abolished the traditional religious system, the *kapu*, an act that vastly altered Hawaiian life. It was also here that the first American missionaries came ashore in 1820 (after a brief stop in Kawaihae) to confer with Kamehameha II and his chiefs regarding a program for western religious instruction.

Only a fraction of the once multi-acre compound remains. The *ala loa* that formerly connected Kamakahonu with other settlements north and south of Kailua has been obliterated by modern construction, in particular Ali'i Drive, King Kamehameha's Kona Beach Hotel and its adjacent facilities, and modernization of the Kailua Wharf (Dunbar 1985). Most of the original 11 structures in the compound described by Li (1959:117-121) were destroyed; however, Kamehameha I's temple, the Ahu'ena Heiau, has been reconstructed and can be viewed on guided interpretive tours sponsored by the King Kamehameha Hotel. Kamakahonu is both a State and National Historic Landmark.

HULIHE'E PALACE, KAILUA

The palace was built in 1838 by Kuakini, governor of Hawai'i and brother of Kamehameha's favorite wife, Ka'ahumanu. Later, King David Kalākaua (1874-1891) redecorated Hulihe'e and used it as a summer palace. Across the street (Ali'i Drive) is Moku'aikaua Church, the first Congregational church built in Hawai'i. According to Ellis (1963), stones from an old *heiau* were used for the foundation of the original church which was built in 1823 but destroyed by fire in 1835. The present structure was completed in 1837. Any vestiges of prehistoric or historic period trails have been lost to twentieth century construction.

*** KAMOA-KEOLONĀHIHI POINT COMPLEX**

Kamoa Point and the Keolonāhihi complex at Hōlualoa, was once a royal center and resort. The surf

of *Pu'u*, which fronts the point was famed, and a place where *ali'i* and commoners sported. The land itself is host to several *heiau* and royal residences. The complex of *heiau* and residences also continued on the *mauka* side of the *ala loa* from Kamo Point. One of the ancient mountain trails, later modified into what is now called the Judd Trail, also departed from this complex, ascending the slopes of Hualālai, and connected with other trails to Mauna Kea, Hilo, and the Kohala District. In this area, the ancient *ala loa* was modified into the Government Road system, and later paved as the present-day Ali'i Drive.

* LA'ALOA

Like the Kamo Point complex, La'aloa was once a chiefly center, and the site of another *heiau*, Haukālū, passed by the ancient *ala loa*. While the trail itself is covered by the present-day Ali'i Drive, the ruins of the *heiau* may be seen in a County Park facility.

KAHALU'U ROYAL CENTER

Kahalu'u *ahupua'a* was the location of another famous prehistoric royal center. "It was a residence of Lonoikamakahiki ca. 1640-1660, and the oral histories specifically note its use by Alapa'i nui, Kalani'ōpu'u and Kamehameha — successive rulers from 1740-1760 on. The focus of this center was Kahalu'u Bay, a sand fringed bay. The ruler's residence was on the south end of the bay by a natural pond called Po'o Hawai'i, and a number of large *heiau* encircled the bay. High chiefs' residences undoubtedly were nearby and some were in Keauhou *ahupua'a* just to the south. In Kahalu'u, eight major *heiau* are still present near the shore. Between the Keauhou Beach Hotel and the Kona Lagoon Hotel, Ke'ekū Heiau (a *luakini*) extends off the shore on the *pāhoehoe* tidal flats. At this enclosure-type *heiau* Lonoikamakahiki is said to have offered up the body of the Maui ruler, Kamalālāwalu, to his gods after an invading Maui army was routed and defeated in Kohala. Petroglyphs on the tidal rocks reportedly commemorate this event. One hundred feet away, also extending offshore is the ruins of Hāpaiali'i Heiau, and another 100 or so feet north is Kapuanoni Heiau, a temple dedicated to agricultural and fishing success. Just behind Kapuanoni is the Keauhou Beach Hotel, and on its landscaped grounds on the south edge of Kahalu'u Bay is a pond — Po'o Hawai'i — where the ruler's residence is said to have been located. No surface architecture survives of the ruler's residence" (Cordy 1994b:16).

"Other *heiau* encircle the bay. The foundation of another *luakini*, 'Ōhi'amukumuku — used in the time of Kalani'ōpu'u and Kamehameha, is present at the head of the bay within a ruined churchyard. Ku'emanu, a large surfing *heiau*, is on the north edge of the bay. The houses of this center are largely gone today" (Cordy 1994b:16). Some habitations are being preserved, as well as agricultural fields, just inland within the Keauhou Resort. The *ala loa* in this area passed inland of the *heiau* and ruler's residence; however, as with the royal center in Kailua, it now lies under paved Ali'i Drive, a two lane paved main road with adjacent modern houses, condominiums, and hotels.

KAMEHAMEHA III BIRTHPLACE, KEAUHOU

Keauhou was an important chiefly center and one of several important *ali'i* sporting areas along the Kona Coast in the prehistoric and early historic periods. Kamehameha III (Kauikeaouli), a younger son of Kamehameha I, was born there in 1814. The actual birth site consists of a natural arrangement of stones surrounded by a rock wall. Also on the water's edge, is the "Kauikeaouli stone," at which the still-born child, Kauikeaouli, was set, and brought back to life by the priest, Kapihe.

KĀNEAKA, THE KEAUHOU HŌLUA SLIDE

This National Historic Landmark is located above the Kamehameha III birth site, somewhat inland from the *ala loa* which at this location deviated from Ali'i Drive and paralleled the shore. Called Kāneaka, the Keauhou slide is the longest (over one-half a mile) and largest hōlua sled run ever built by the Hawaiians, large enough to accommodate two parallel racers (Kamakau, 1961 & Dunbar 1987). The size of this structure dominates the landscape. The volume of stone used in its construction dwarfs that of the largest known temple platforms, making it in fact the largest surviving structure from ancient Hawaii.

It has been speculated (Kekahuna 1953; James 1995, as well as others), the slide originally extended another 3,000 feet, all the way down to the sea; however, there is no archaeological evidence, historic photos, or information from the traditional sources to support such a claim. Curiously, not even the indefatigable recorder Ellis (1963), who traveled the *ala loa* to Keauhou Bay, mentions the sled run although he commented extensively on the Hōnaunau slides which, by contrast, are considerably smaller. Today the Keauhou sled run ends abruptly at Ali'i Drive, leaving

one with the impression that its terminus may have been truncated by highway construction.

LEKELEKE AND KUAMO'O BATTLE SITE (1819)

Not far from Keauhou Bay is the famous battle site where Kekuaokalani, nephew of Kamehameha I, fought against the forces of Liholiho (Kamehameha II) to restore the national religious system. The battle was first encountered at Lekeleke, near the Keauhou-Honalo boundary. Kekuaokalani's forces were then pushed further south to the lands of Mā'ihi and Kuamo'o, where the last battle occurred. This was the last battle fought on the island of Hawai'i. Kekuaokalani was defeated and killed. At Lekeleke in Keauhou and at Kuamo'o a little further south, rock platforms and stone mounds (*pū'o'a*) mark the burials of the slain warriors interred along the ancient *ala loa*. Cordy (personal communication, March 27, 1997) notes, "The trail is visible in this area, often as more modern curbed trail, flanked by house yard lots."

KEALAKEKUA BAY STATE HISTORICAL PARK

The lands and diverse cultural features between Keauhou and Kealakekua, are crossed via the ancient *ala loa*, portions of which were modified as early as the 1830s, when the young Hawaiian Kingdom, was establishing a system of government roads, the *Alanui Aupuni*. A number of *heiau*, residential complexes, *wahi pana*, and the Kāināliu, Nāwāwā, Onouli-Keōpuka, and Ka'awaloa village sites are among the traditional places passed via the trail. (Maly, 2006)

Kealakekua Bay, one of the ruling centers of the Kingdom of Hawai'i, was associated with many of the Kingdom's renowned rulers such as Keawenuia'umi, Lonoikamakahiki, Kalani'ōpu'u, Kīwala'ō, Kamehameha, Keaweheulu, Naihe, and Kapi'olani. Ka'awaloa on the north side of the bay was a chiefly residential complex. Nāpo'opo'o on the south side of the bay contained a priestly residential complex near Hikiau *heiau* as well as houses of commoners and lesser chiefs. Hikiau was one of six *luakini heiau* on Hawai'i Island, and at the time of western contact, was apparently the *heiau* and chiefly complex used for opening and closing rites of the annual *Makahiki* rituals. (Belt Collins)

Kealakekua Bay and the ancient village sites of Nāpo'opo'o and Ka'awaloa provided the background for one of the most dramatic events in the annals of culture contact. It was here that the British ships *Resolution* and *Discovery* dropped anchor on January

17, 1779, and here that Captain James Cook was feted as the god Lono, the god of agriculture and prosperity, on the temple platform of Hikiau Heiau.

Cook had first arrived in Hawai'i in 1778, stopping off at Kaua'i; however, his return the following year coincided with the annual *Makahiki*, the season that honored Lono with tribute offerings, feasting, competitive games, and *hula* performances. Traditionally warfare was taboo during this period. The emblem of Lono was an upright pole with crossbeam and hanging *tapa* cloth, which the Hawaiians likened to the mast and sails of the European ships. During this visit to Hawai'i Island, Cook performed the first Christian ceremony at Hikiau Heiau, a funeral service for a crew member who had died January 28, 1779. Within days, Cook's ships departed and all would have gone well, but fate ordained otherwise. A broken mast forced Cook's return to Kealakekua Bay for repairs. By then the *Makahiki* had ended and attitudes had changed. There followed a skirmish at the water's edge fronting Ka'awaloa village (a residence of ruling Chief Kalani'ōpu'u), and Captain Cook was slain. Cook had been attempting to take Chief Kalani'ōpu'u hostage in return for a cutter that had been stolen from his ship and later broken up by Hawaiians for its iron nails. Cook's body was then taken to nearby Puhina o Lono Heiau for traditional Hawaiian rites that included cooking and cleaning flesh from his bones, an honor afforded to only the highest and most sacred Hawaiian chiefs. A white obelisk on the north side of the Bay, the Captain Cook Monument, marks the spot where Cook lost his life.

MOKU'ŌHAI BATTLEGROUND (1782)

Located along the *ala loa*, Moku'ōhai was the decisive 1782 battle in which Kamehameha I defeated his cousin Kīwala'ō. The battle was fought in the land of Ke'ei near the bay listed on the maps as "Mokuakae" (Mokuoka'e describes a defiled area because of the bodies left behind).

PU'UHONUA O HŌNAUNAU NATIONAL HISTORICAL PARK

The current interpretive emphasis of this sacred precinct is on the religious structures associated with the use of the area as a temporary place of refuge (*pu'uhonua*) for children, women, the elderly (and some chiefs as well) during war, or those fleeing punishment. "In a larger perspective, however, Hōnaunau was one of the royal centers along the Kona Coast. It contains the ruler's residential area and

immediately seaward a large wall (the Great Wall), at one end of which was a royal mausoleum (the Hale o Keawe). ... Seaward of the mausoleum, was the *luakini heiau* 'Āle'ale'a, and other religious structures on the *pu'uhonua* grounds. Houses of high chiefs extended south along the shore. And not far to the south were several *hōlua* slides. The *ala loa* entered this area of Hōnaunau from the north, passed along the inland side of the ruler's dwelling, and then it may have proceeded seaward of the dwellings to the south" (Cordy 1994b:17).

"The Great Wall was said to have been constructed in the reign of Keākealanikāne, 1660-1680. And the ruler Keawe seems to have used Hōnaunau as one of his favorite residences, ca 1700-1720. Not surprisingly, the Hale o Keawe housed his bones, and those of his immediate family and descendants. Hōnaunau continued to be used occasionally as a royal center until the abolition of the *kapu* and the departure of the royal centers to other islands in 1820, but its primary period of use as a royal residential area may have been during Keawe's reign" (Cordy 1994b:17).

"The *ala loa* is no longer visible in this immediate area as the park's visitor center and parking lot are just inland of the royal residential area. In the ruler's residential area, few ruins are visible on the surface — a pond and a portion of a nearby paving can be seen. However, archaeological work, although limited, has found considerable subsurface remains. Notably, the Hale o Keawe, the Great Wall, and the 'Āle'ale'a *luakini* platform have been restored. The Hale o Keawe's thatched house, surrounding images, and wooden fence provide a striking re-creation of this mausoleum, one of only two once present on Hawai'i Island. The massive size of the Great Wall and the 'Āle'ale'a platform also readily give the viewer the impression of the scale of public-ceremonial structures at Hawaiian royal centers. The rubble ruin of another large *heiau* is also nearby. Beyond the *pu'uhonua* area to the south, the ruins of the shore side dwellings and *hōlua* slides are also present, although they are not actively interpreted at this time" (Cordy 1994b:17).

*** KAPALILUA REGION: HO'OKENA-KAUHAKŌ, HO'OPŪLOA, MILOLI'I, OKOE BAY, HONOMALINO AND KAPU'A (SITES**
Departing from the famed *Alahaka* (cliff-side trail) of the Hōnaunau vicinity, one enters the Kapalilua region of South Kona. Here nearly the entire extent of the ancient *ala loa* remains intact, with some sections

modified in the 1840s as a part of the Kingdom's *Alanui Aupuni*. While appearing to be a rocky and almost desolate region, at numerous areas along the coast, ancient Hawaiians found fresh water, and sheltered bays provided them with safe places to live. Noted for its rich near-shore and deep-sea fisheries, this region was highly valued by its tenants. The uplands of this region were also sheltered by stands of forest, predominated by the 'ōhi'a (*Metrosideros polymorpha*), which sheltered an extensive system of dryland agricultural fields. While no streams flow across this land, the daily *kēhau*, a moisture laden breeze, flowing off of Mauna Loa each night, provided much needed moisture for cultivation of such crops as *kalo* (taro), *mai'a* (bananas), and 'uala (sweet potatoes). Numerous *mauka makai* trails also cross the individual *ahupua'a* of the Kapalilua region. The upper forests contained extensive stands of *koa* (*Acacia*), and the coastal residents were known not only as excellent fisher-people, but also as skilled canoe makers (*po'e kālai wa'a*).

Among the sites documented in the State Register of Historic Place (1993), along this section of the trail are the Ho'okena-Kauhakō Village sites, the Okoe Bay Village sites, the North Honomalino village sites, and the Āhole Hōlua and Kapu'a village sites.

The trail passes thousands of residential features, canoe landings, and other sites associated with traditional life and ritual.

Ka'ū District

Although sparsely inhabited today, Ka'ū contains vestiges of many trails which attest to the travel of traditional residents and travelers across the landscape. The labor to create certain types of trails is indicative of powerful chiefs. Here, too, the trails, ancient village sites, chiefly residences with associated fishponds, and numerous coastal landing spots for canoes testify to the district's former importance in trade and chiefly affairs.

Among the cultural resources listed on the State Register of Historic Places (1993), and sites accessed via the trail system are

- *Manukā Bay petroglyphs, habitation complex, and *hōlua* slide
- *Kaiakēkua and Keawaiki complexes
- *Kā'iliki'i-Wai'ahukini fishing village complex,

chiefly center

*Wai'ahukini (royal residence)

Ka Lae – The South Point National Historic Landmark District

The coastal attraction of Ka Lae for ancient Hawaiians and modern fishermen alike lies in the adjacent deep-sea fishing zone with its abundance of prized pelagic (open sea) game species. Powerful cross-currents meet here and bring schools of fishes making for excellent but dangerous fishing grounds where tuna (*aku* and *'ahi*), marlin (*a'u*), and dolphin (*mahimahi*) are still avidly sought.

The landmark consists of a series of archaeological settlements, structures and features that define the area's significance as a favored fishing area in prehistoric time. There are dozens of ancient salt pans and canoe mooring holes carved into shoreline rocks; a significant fishing temple, Kalalea Heiau (reputedly used by Kamehameha I) at which offerings are still left by fishermen; and ancient habitation sites such as Mākālei Shelter, Wai'ahukini Shelter, and the famous Pu'u Ali'i Dune Site whose radiocarbon dates suggest it was among the earliest known settlements in the Hawaiian Islands. During excavations conducted by the Bishop Museum in the 1950s at several of the South Point habitation sites, thousands of fishhooks and fishhook fragments were recovered from datable deposits (the earliest fishhooks and stone adzes from the Pu'u Ali'i Site resemble forms from the Marquesas, 2400 miles to the south). The South Point fishhooks were serrated according to stylistic changes over time and thus provide a relative dating chronology for cross-dating other sites in Hawaii (Emory, Bonk and Sinoto 1959).

The prehistoric *ala loa* passed across Ka Lae (South Point), but much of it was on sand and hence not visible.

*The Kalalea Heiau.

*Mahana Bay and Kapalaoa archeological district—canoe mooring, salt pans, fishhook manufacturing localities.

Further south through Ka'ū many other features exist,

but they have not been inventoried and described.

PUNALU'U RUINS

The importance of this former royal center, which may be commercially developed and interpreted under a historic preservation agreement with the state, is evident in the remains of a huge *luakini* called Punalu'u nui overlooking the Punalu'u Bay and a coastal fishpond of the same name. Remnants of Punalu'u habitation sites are behind the pond. The area contains petroglyphs and east beyond Punalu'u, vestiges of a coral marked *ala loa*.

Puna District

All locations discussed in this section are within Hawai'i Volcanoes National Park.

As with Ka'ū District, there are many vestiges of trails that have interpretive potential, but there has been no systematic research to identify and date these remaining trail segments.

Some aspects of trail location and uses can never be known due to recent and vast lava flows. There are some clues in the literature, but for present purposes these remain inconclusive because it is not always clear if a reference to an "ancient trail" refers to the actual prehistoric *ala loa*, or to a nineteenth century trail.

Spears, who was doing archeological survey for Hawai'i Volcanoes Park in the vicinity of Pāna'ū Iki (1995) is of the opinion (personal communication, with Holly Dunbar, October 9, 1996) that the Puna-Ka'ū trail ... referred to on the 1922 USGS maps and some later editions is in general an accurate guide to the older coastal trail route through the district. The following properties are included in Puna-Ka'ū Historic District (129,655 acres), a property entered on the National Register of Historic Places on July 1, 1974.

KEALAKOMO VILLAGE

Kealakomo is of historic interest because it was at this village on the ancient coastal trail that Reverend Ellis was met by some two hundred native inhabitants when he descended from a visit to Kīlauea down to the coast. Coastal villages typically contain house sites, walled enclosures, canoe shelters, *ko'a*, *heiau*, and grave sites. Particularly noteworthy of the rock art at Kealakomo is the large number (67) of *papamū*, or rectangles of dots where the checker-like game of *kōnane* was played. Emory *et al.* (1959a:3) noted that Kealakomo "was and still is important as a salt

producing center. Dried fish were exported from here to 'Ōla'a and inland places in exchange for taro [*ka'o*], tapas, and other products which could not be produced on this dry coastal land."

The Kealakomo visited by Ellis was a village already adapted to western contact; hence, there were probably already changes in traditional settlement pattern, with possible modifications to the alignment of the ancient pre-contact trail. Lava has inundated at least 85% of the area, but remains of the trail that passed through the area can still be picked up further east.

PU'U LOA PETROGLYPHS

This extraordinary site is located two and one-half miles east of Kealakomo. *Pu'u Loa* ("long hill" or "hill of long life") has the most concentrated complex of petroglyphs (approximately 23,000 units) known in the Hawaiian Islands, and perhaps anywhere in the Pacific (Lee 1993; Lee and Stasack, in press). The most prevalent forms are the *piko* or *lua* glyphs associated with birth rituals for newborn children; however, human figures and other images are also carved in the *pāhoehoe*.

Although not specifically referencing the *ala loa*, Emory *et al.* (1959a:3) spoke of an ancient trail passing through the site:

...east of Kealakomo, and nearly a mile from the shore, the ancient trail passes over a *pāhoehoe* pressure dome about 400 feet long named Pu'u Loa, "Hill of Long Life." The dome itself and the area along both sides of the trail as it approaches the hill from either direction are covered with hundreds of glyphs.

Prehistoric art specialist, Georgia Lee (personal communication with Holly Dunbar, February 20, 1996) also believes the prehistoric main trail through Puna was set back from the coast in this area and did go through the site. Spears, on the other hand, says of the "ancient trail" (1995:83):

...traveling west, as you approach Pu'u Loa, the trail veers southwest and thus by-passes the sacred nature of Pu'uloa. It continues inland on a westerly course, then turns toward the ocean where it comes out at the settlement of Kaena.

It is not clear if Spears is discussing the same ancient trail noted by Emory and Lee, or if she perhaps does not know the maximum extent and boundaries of this

vast petroglyph field.

Hawai'i Volcanoes archeologist Laura Schuster (personal communication with Holly Dunbar, May 2, 1997) has walked the sections of the trail noted by Emory, Lee and Spears. Her description of the trail moves from east to west:

...the trail that continues through Pu'uloa connected with Lae'apuki ... As the trail crossed different *ahupua'a* the trail became more defined, with curb stones, etc. and for the length of the trail, an earlier trail alignment or worn *pāhoehoe* is visible. This earlier worn area would weave in and out of the curbstones along the trail section in Lae'apuki. The trail through Pānau nui/iki did not have curbstones and inland *mauka-makai* trails were present, but rare. The intersection of a trail, a hill like Pu'uloa, where the *piko* ceremony was carried out, and *ahupua'a* boundaries is a pattern that is repeated at least five times between Pu'uloa and Ka'ili'ili. I would agree with Emory that this is an old trail, [that] may have been modified in some areas, like Lae'apuki, but it is old.

LAE'APUKI AND KAMOAMOA VILLAGE RUINS

These former coastal villages and trail associations were destroyed in the same 1988-95 series of lava flows that encircled Waha'ula Heiau before eventually pouring into the sea. Lae'apuki (occupied until 1920) had been a traditional farming and fishing community whose local economy converted to goat and cattle herding following western contact. Kamoamoa, an ancient farming and fishing settlement, had been partially destroyed by the *tsunami* of 1868.

WAHA'ULA HEIAU

The Waha'ula temple complex, inundated by lava in 1998, consisted of low wall enclosures. Construction has been attributed to the legendary Pāvao (Malo 1951:6-7; Ladefoged *et al.* 1987:56) who is also credited with the construction or refurbishment of Mo'okini Heiau near 'Ūpolu Point in Kohala. (Note: Cordy, personal communication with Holly Dunbar, March 27, 1997, believes "the oral histories relating to Pā'ao and Pili date to around A.D. 1400, using 20 years per generation.") Thrum (1908:52) said the temple formerly had a *pu'uhonua*, but this was not verified in the archaeological work reported by Ladefoged (*et al.*). A possible explanation is provided by Kelly, citing unpublished notes by Stokes (in Bryan

and Emory 1986:154), who says another *heiau* called Waha'ula, but located in the land of Kamā'ili, Puna, was claimed by local residents to have been the original *heiau* of Waha'ula, and that the stones were taken to Pūlama to build the large Waha'ula in its present location.

Waha'ula was reconditioned by 'Īmaikalani, a chief of Ka'ū in the late 1500s or early 1600s A.D., and again by Kalani'ōpu'u around 1770 A.D. Kamehameha I ordered the final renovations in early historic times, dedicating the temple to his family war god, Kūkā'ilimoku. In the early nineteenth century, Liholiho (Kamehameha II) visited Waha'ula during the peaceful period of the annual *Makahiki* cycle.

Other structures existed in the vicinity of the temple, including portions of the *ala loa*; however, in 1989 a massive lava flow crossed the Chain of Craters Road in Hawai'i Volcanoes National Park, covering hundreds of recorded archeological sites and surrounding the temple. In 1998, the lava flow encompassed the *heiau* itself.

Appendix D: Consultation with the United States Fish and Wildlife Service



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122, Box 50088
Honolulu, Hawaii 96850



In Reply Refer To:
1-2-2005-SP-180

APR 21 2005

Memorandum

To: Meredith Kaplan, Project Planner, National Park Service, Pacific West Region
Oakland, California

From: Acting Field Supervisor, Pacific Islands Fish and Wildlife Office
Honolulu, Hawaii

Subject: Species List Request for the Ala Kahakai National Historic Trail on the Island of Hawaii

Thank you for your March 9, 2005, letter requesting a species list and information on changes in environmental or resource conditions that may be of concern regarding the addition of the Ala Kahakai trail to the National Trails System. We received your letter on March 14, 2005.

We reviewed the information you provided and pertinent information in our files, including data compiled by the Hawaii Natural Heritage Program. Our records of the last 20 years indicate that there is no plant or animal critical habitat overlapping the project area, and that the following federally endangered, threatened, or candidate species may occur within the vicinity of the project area:

PLANTS: endangered
'Ohai (*Sesbania tomentosa*)
Loulou (*Pritchardia affinis*)

MAMMALS: endangered
Hawaiian Hoary Bat or 'ope'ape'a (*Lasiurus cinereus semotus*)

BIRDS: endangered
Hawaiian duck or koloa maoli (*Anas wyvilliana*)
Hawaiian coot or 'alae ke'oke'o (*Fulica alai*)



Hawaiian stilt or ae'o (*Himantopus mexicanus knudseni*)
 Hawaiian hawk or 'io (*Buteo solitarius*)

REPTILES: endangered
 Green turtle or honu (*Chelonia mydas*)

REPTILES: threatened
 Hawksbill turtle or honu'ea (*Eretmochelys imbricata*)

DAMSELFLIES: candidate
 Orange-black damselfly (*Megalagrion xanthomelas*)

SHRIMP: candidate
 Anchialine pool shrimp (*Metabetaeus lohena*)

In addition, we recommend signage at the low and high salinity anchialine pools found along the Ala Kahakai trail, prohibiting bathing, littering, fishing, or other inappropriate use of the pools.

We appreciate your concern for endangered species. If you have any questions, please contact Christa Russell, Plant Conservation Program Coordinator, at 808/792-9451 (fax: 808/792-9580).

Additional special status species listed by the National Park Service <http://www.nature.nps.gov/biology/endangered-species/database/parksearch.cfm> retrieved December 19, 2006

Species listed at Hawai'i Volcanoes National Park:

| | | | |
|------------------------------|-----------------------------|------------|-----------------|
| Caesalpinia kavaie | uhiuhi | endangered | flowering plant |
| Ischaemum byrsoniae | Hilo ischaemum | endangered | flowering plant |
| Pleomele hawaiiensis | hala pepe | endangered | flowering plant |
| Oceanodroma castro | band-rumped | candidate | bird |
| storm-petrel | | | |
| Pterodroma phaeopygia | Hawaiian dark-rumped petrel | endangered | bird |
| sandwichensis | | | |
| Puffinus auricularis newelli | Newell's Townsend's | threatened | bird |
| shearwater | | | |

Species listed at Pu'ukoholā NHS

| | | | |
|------------------------|----------------|------------|-----------------|
| Branta sandvicensis | Hawaiian Goose | endangered | bird |
| Hibiscus brackenridgei | ma'o hau hele | endangered | flowering plant |

Species listed at Kaloko-Honokōhau NHP

| | | | |
|------------------------|--------------------|------------|------------------------|
| Metabetaeus lohena | | candidate | anchialine pool shrimp |
| Palaemonella burnsi | | candidate | anchialine pool shrimp |
| Bidens micrantha | ko'oko'olau | candidate | flowering plant |
| Ctenophylla | | | |
| Monachus schauinslandi | Hawaiian monk seal | endangered | mammal |



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Box 50088
Honolulu, Hawaii 96850

In Reply Refer To:
PI-03-60

AUG 29 2003

Michael L. Donoho
National Park Service
Ala Kahakai National Historic Trail
Kaloko-Honokohau NHP
74-4786 Kanalani Street, #14
Kailua-Kona, Hawaii 96740

Dear Mr. Donoho:

This responds to your February 11, 2003, letter requesting, we provide a list of all threatened, endangered, and candidate species affected by the designation of the 175-mile long Ala Kahakai National Historic Trail on the Island of Hawaii. The National Park Service has initiated a Comprehensive Management Plan and Environmental Impact Statement for the Ala Kahakai National Historic Trail and is moving ahead with the public scoping process and data collection. The initial information request was received on February 12, 2003. On March 4, my staff met with Michael Donoho to discuss the specific location of the trail. During this meeting we requested additional maps and Geographic Information Systems data layers, and they were provided.

We reviewed the information you provided and pertinent information in our files, including maps prepared by the Hawaii Natural Heritage Program and from other sources. Tables 1 and 2 include data from the Hawaii Natural Heritage Program on listed and candidate species, species of concern, natural communities, and designated critical habitat for plants that may occur in the vicinity of the Ala Kahakai National Historic Trail. Table 3 includes the listed and candidate species of plants and plant species of concern from data sources other than the Hawaii Natural Heritage database. Three additional maps are enclosed to depict the vicinity of the Ala Kahakai Trail in relation to listed and rare species and critical habitat boundaries of Blackburn's Sphinx Moth (*Manduca blackburni*), the endangered plant (*Kokia drynariodes*), and 13 other plant species.

We appreciate your efforts to conserve endangered species. If you have any questions, please contact Fish and Wildlife Biologist Antonio Bentivoglio or Ray Hoy (phone: 808/792-9530; fax: 808/792-9581).

(808) 792-9400

Sincerely,




 Paul Henson, Ph.D.
Field Supervisor

Table 1. Listed and Candidate Species, and Species of Concern in the Vicinity of the Ala Kahakai National Historic Trail from the Hawaii Natural Heritage Program

| CATEGORY | SCIENTIFIC NAME | COMMON NAME | DATE | STATUS | COUNT |
|-------------------|--|---|------|--------|-------|
| Animal | ANAS WYVILLIANA | HAWAIIAN DUCK, KOLOA | 1985 | LE | 1 |
| Animal | BRANTA SANDVICENSIS | NENE, HAWAIIAN GOOSE | 1891 | LE | 1 |
| Animal | BUTEO SOLITARIUS | HAWAIIAN HAWK, 'IO | 1993 | LE | 1 |
| Animal | CHELONIA MYDAS | HONU, GREEN TURTLE | 1973 | LT | 1 |
| Animal | CORVUS HAWAIIENSIS | HAWAIIAN CROW, 'ALALA | 1982 | LE | 1 |
| Animal | ERETMOCHELYS IMBRICATA | HAWKSBILL SEA TURTLE | 1996 | LE | 1 |
| Animal | FULICA ALAI | 'ALAE KE'OKE'O, HAWAIIAN COOT | 1995 | LE | 1 |
| Animal | GALLINULA CHLOROPUS SANDVICENSIS | HAWAIIAN GALLINULE, 'ALAE-'ULA | 1988 | LE | 1 |
| Animal | GYMNOTHORAX HILONIS | ANCHIALINE MURAENID EEL | 1982 | | 1 |
| Animal | HIMANTOPUS MEXICANUS KNUDSENI | HAWAIIAN STILT, AE'O | 1970 | LE | 1 |
| Animal | LASIURUS CINEREUS SEMOTUS | 'OPE'APE'A, HAWAIIAN HOARY BAT | 1996 | LE | 1 |
| Animal | MONACHUS SCHAUINSLANDI | HAWAIIAN MONK SEAL | 1994 | LE | 2 |
| Animal | OREOMYSTIS MANA | HAWAII CREEPER | 1952 | LE | 1 |
| Animal | PSITTIROSTRA PSITTACEA | 'O'U | 1895 | LE | 1 |
| Animal | PUFFINUS NEWELLI | NEWELL SHEARWATER, 'A'O | 1996 | LT | 1 |
| Invertebrate | ANTECARDINA LAUENSIS | ANCHIALINE POOL SHRIMP | 1973 | SOC | 2 |
| Invertebrate | CALLIASMATA PHOLIDOTA | ANCHIALINE POOL SHRIMP | 1985 | SOC | 1 |
| Invertebrate | DROSOPHILA DIGRESSA | POMACE FLY | 1976 | C | 1 |
| Invertebrate | DROSOPHILA HETERONEURA | POMACE FLY | 1978 | C | 1 |
| Invertebrate | HALOCARIDINA PALAHEMO | ANCHIALINE POOL SHRIMP | 1992 | SOC | 1 |
| Invertebrate | MEGALAGRION XANTHOMELAS | ORANGE-BLACK MEGALAGRION DAMSELFLY | 1994 | C | 7 |
| Invertebrate | METABETAUS LOHENA | ANCHIALINE POOL SHRIMP | 1992 | SOC | 5 |
| Invertebrate | NERITILIA HAWAIIENSIS | ANCHIALINE POOL SNAIL | 1972 | SOC | 2 |
| Invertebrate | NERITILIA SP 1 | ANCHIALINE POOL SNAIL | 1972 | | 1 |
| Invertebrate | NERITILIA SP B | ANCHIALINE POOL SNAIL | 1992 | | 2 |
| Invertebrate | PALAEOMONELLA BURNSI | ANCHIALINE POOL SHRIMP | 1972 | SOC | 1 |
| Invertebrate | PROCARIS HAWAIANA | ANCHIALINE POOL SHRIMP | 1985 | SOC | 1 |
| Invertebrate | VETERICARIS CHACEORUM | ANCHIALINE POOL SHRIMP | 1985 | SOC | 1 |
| Natural Community | CANTHIUM ODORATUM LOWLAND DRY SHRUBLAND | ALAHE'E LOWLAND DRY SHRUBLAND | 1990 | | 1 |
| Natural Community | DIOSPYROS SANDWICENSIS/COLUBRINA OPPOSITIFOLIA | | | | |
| Natural Community | LOWLAND DRY FOREST | LAMA/KAUIA LOWLAND DRY FOREST | 1992 | | 2 |
| Natural Community | HETEROPOGON CONTORTUS LOWLAND DRY GRASSLAND | PILI LOWLAND DRY GRASSLAND | 1988 | | 2 |
| Natural Community | HIGH SALINITY LAVA ANCHIALINE POOL | HIGH SALINITY LAVA ANCHIALINE POOL | 1996 | | 5 |
| Natural Community | HIGH SALINITY LAVA TUBE ANCHIALINE POOL | HIGH SALINITY LAVA TUBE ANCHIALINE POOL | 1991 | | 1 |
| Natural Community | LOW SALINITY LAVA ANCHIALINE POOL | LOW SALINITY LAVA ANCHIALINE POOL | 1996 | | 5 |
| Natural Community | LOW SALINITY LAVA TUBE ANCHIALINE POOL | LOW SALINITY LAVA TUBE ANCHIALINE POOL | 1987 | | 1 |
| Natural Community | LOW SALINITY LAVA TUBE ANCHIALINE POOL | LOW SALINITY LAVA TUBE ANCHIALINE POOL | 1992 | | 1 |
| Natural Community | MYOPORUM SANDWICENSE COASTAL DRY SHRUBLAND | NAIO COASTAL DRY SHRUBLAND | 1990 | | 1 |
| Natural Community | SESBANIA TOMENTOSA LOWLAND DRY SHRUBLAND | 'OHAI LOWLAND DRY SHRUBLAND | 1992 | | 1 |
| Natural Community | UNCHARACTERIZED ANCHIALINE POOL | UNCHARACTERIZED ANCHIALINE POOL | 1900 | | 11 |
| Natural Community | UNCHARACTERIZED ANCHIALINE POOL | UNCHARACTERIZED ANCHIALINE POOL | 1986 | | 23 |
| Natural Community | UNCHARACTERIZED ANCHIALINE POOL | UNCHARACTERIZED ANCHIALINE POOL | 1994 | | 6 |
| Plant | ABUTILON MENZIESII | KO'OLOA 'ULA | 1971 | LE | 1 |
| Plant | ACHYRANTHES MUTICA | | 1779 | LE | 1 |
| Plant | BIDENS M. SSP CTENOPHYLLA | KO'OKO'OLAU, KOKO'OLAU | 1993 | C | 1 |
| Plant | BOBEA TIMONIOIDES | 'AHAKEA | 1988 | SOC | 2 |
| Plant | BONAMIA MENZIESII | | 1986 | LE | 1 |
| Plant | CAESALPINIA KAVAIENSIS | UHIUHI | 1993 | LE | 1 |
| Plant | CAPPARIS SANDWICHIANA | PUA PILO, MAIPILO | 1991 | SOC | 3 |
| Plant | CHAMAESYCE OLOWALUANA | 'AKOKO, KOKO, KOKOMALEI | 1952 | SOC | 1 |
| Plant | COLUBRINA OPPOSITIFOLIA | KAUIA | 1987 | LE | 1 |
| Plant | DIELLIA ERECTA | | 1927 | LE | 1 |
| Plant | DIELLIA ERECTA | | 1991 | LE | 1 |
| Plant | EXOCARPOS GAUDICHAUDII | HEAU | 1933 | SOC | 1 |
| Plant | FIMBRISTYLIS HAWAIIENSIS | | 1992 | SOC | 1 |
| Plant | FLUEGGIA NEOWAWRAEA | MEHAMEHAME | 1982 | LE | 1 |
| Plant | GARDENIA BRIGHAMII | NANU, NA'U | 1929 | LE | 1 |
| Plant | HEDYOTIS COOKIANA | | 1816 | LE | 1 |
| Plant | ISCHAEMUM BYRONE | | 1995 | LE | 1 |
| Plant | ISODENDRION PYRIFOLIUM | AUPAKA | 1993 | LE | 1 |
| Plant | KOKIA DRYNARIOIDES | KOKI'O | 1993 | LE | 1 |
| Plant | LIPOCHAETA LOBATA VAR LOBATA | NEHE | 1779 | | 1 |
| Plant | MARISCUS FAURIEI | | 1992 | LE | 1 |
| Plant | NERAUDIA OVATA | MA'ALOA, MA'OLOA, 'OLOA | 1995 | LE | 1 |
| Plant | NOTHOCESTRUM BREVIFLORUM | 'AIEA | 1992 | LE | 2 |
| Plant | OPHIOGLOSSUM CONCINNUM | POLOLEI | 1990 | | 1 |
| Plant | PLEOMELE HAWAIIENSIS | HALAPEPE | 1992 | LE | 3 |
| Plant | PORTULACA VILLOSA | 'IHI | 1992 | SOC | 1 |
| Plant | PRITCHARDIA AFFINIS | LOULU | 1990 | LE | 7 |
| Plant | SESBANIA TOMENTOSA | 'OHAI | 1992 | LE | 2 |
| Plant | SOLANUM NELSONII | | 1977 | SOC* | 1 |
| Plant | TETRAMOLOPIUM C. VAR KAUENSE | | 1980 | | 1 |
| Plant | TREMATOLOBELIA GRANDIFOLIA | | 1913 | SOC | 1 |

*Federal Status:

LE = Endangered
 LT = Threatened
 C = Candidate
 SOC = Species of Concern

Table 2. Designated Critical Habitat for Plants Occurring in the Vicinity of the Ala Kahakai National Historic Trail from the Hawaii Natural Heritage Program

| CATEGORY | CRITICAL HABITAT NAME | COUNT |
|------------------------|-------------------------|-------|
| Plant Critical Habitat | Diellia erecta | 1 |
| Plant Critical Habitat | Flueggea neowawraea | 1 |
| Plant Critical Habitat | Colubrina oppositifolia | 1 |
| Plant Critical Habitat | Diellia erecta | 1 |
| Plant Critical Habitat | Flueggea neowawraea | 1 |
| Plant Critical Habitat | Gouania vitifolia | 1 |
| Plant Critical Habitat | Neraudia ovata | 1 |
| Plant Critical Habitat | Pleomele hawaiiensis | 1 |
| Plant Critical Habitat | Sesbania tomentosa | 1 |
| Plant Critical Habitat | Ischaemum byrone | 1 |
| Plant Critical Habitat | Ischaemum byrone | 1 |
| Plant Critical Habitat | Pleomele hawaiiensis | 1 |
| Plant Critical Habitat | Sesbania tomentosa | 1 |

Table 3. Listed and Candidate Species of Plants, and Plant Species of Concern in the Vicinity of the Ala Kahakai National Historic Trail from Other Sources

| CATEGORY | SCIENTIFIC NAME | COMMON NAME | DATE | STATUS | COUNT | SOURCE |
|----------|-----------------------------------|--------------------|------|--------|-------|----------------------------------|
| Plant | Bidens micrantha ssp. ctenophylla | Ko'oko'olau | 0 | C | 1 | Pratt |
| Plant | Bobea timonioides | 'Ahakea | 0 | SOC | 1 | Pratt |
| Plant | Bonamia menziesii | None | 2001 | E | 1 | N.Agorastos |
| Plant | Capparis sandwichiana | Pua pilo, Maiapilo | 0 | SOC | 4 | Pratt |
| Plant | Capparis sandwichiana | Pua pilo, Maiapilo | 0 | SOC | 2 | Rick2 |
| Plant | Cyanea marksii | Haha | 0 | SOC | 1 | Rick1 |
| Plant | Cyrtandra menziesii | Ha'iwale | 0 | SOC | 3 | Rick1 |
| Plant | Diellia erecta | None | 0 | E | 1 | Rick2 |
| Plant | Diellia erecta | None | 1999 | E | 2 | Wood |
| Plant | Fimbristylis hawaiiensis | None | 0 | SOC | 3 | Pratt |
| Plant | Flueggea neowawraea | Mehamehame | 0 | E | 1 | Giffin |
| Plant | Flueggea neowawraea | Mehamehame | 2000 | E | 1 | L.Perry, B.Stormont, N.Agorastos |
| Plant | Flueggea neowawraea | Mehamehame | 2000 | E | 1 | L.Perry, P.Moriyasu |
| Plant | Gouania vitifolia | None | 2000 | E | 1 | N.Agorastos |
| Plant | Ischaemum byrone | Hilo ischaemum | 0 | E | 3 | Pratt |
| Plant | Neraudia ovata | None | 0 | E | 1 | Rick2 |
| Plant | Pleomele hawaiiensis | Hala pepe | 0 | E | 3 | Rick1 |
| Plant | Portulaca villosa | 'Ihi | 0 | SOC | 1 | Pratt |
| Plant | Portulaca villosa | 'Ihi | 0 | SOC | 1 | Rick2 |
| Plant | Pritchardia affinis | Loulu | 0 | E | 2 | Pratt |
| Plant | Pritchardia affinis | Loulu | 0 | E | 2 | Rick2 |
| Plant | Pritchardia affinis | Loulu | 1990 | E | 1 | HINHP |
| Plant | Pritchardia affinis | Loulu | 2001 | E | 4 | N.Agorastos |
| Plant | Sesbania tomentosa | 'Ohai | 0 | E | 1 | Pratt |
| Plant | Sesbania tomentosa | 'Ohai | 0 | E | 1 | Rick2 |
| Plant | Sesbania tomentosa | 'Ohai | 1995 | E | 2 | Pratt |
| Plant | Sesbania tomentosa | 'Ohai | 1997 | E | 8 | T.R.Belfield |
| Plant | Sesbania tomentosa | 'Ohai | 2001 | E | 3 | N.Agorastos |
| Plant | Sesbania tomentosa | 'Ohai | 2001 | E | 2 | Pratt |
| Plant | Solanum nelsonii | Popolo | 0 | SOC | 1 | Rick2 |
| Plant | Streblus peridulinus | | 0 | NS | 1 | Rick1 |

*Federal Status:

E = Endangered
C = Candidate
SOC = Species of Concern
NS = Rare but not Listed

Appendix E: Uses of the Uniform Marker

The proposed sign plan will address the design, placement, and use of the official marker on a variety of signs, such as highway information and directional signs, entrance signs at parking areas, trailhead information signs, regulatory signs, directional indicators, identity signs that distinguish unaltered and verified trail segments from linking trails, interpretive signs and wayside exhibits, wilderness area marking, private property signs, destinations signs, and trail partner or adopter signs. Following are examples of possible auto tour route markers.



Example of a sign that might be used to mark the auto tour roadways.



Example of a directional sign to a national park along the route.



Example of a directional sign to a nonfederal site along the route.



Example of a directional sign for a scenic lookout associated with the trail.