

## **Appendix S**

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### **Second Draft EIS Comment and Response Letters**

EMM

Mr. Earl Matsukawa



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

OCT 04 2011

In Reply Refer To:
2011-TA-0128
2011-TA-0362

Mr. Earl Matsukawa
Wilson Okamoto Corporation
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii 96826

Subject: Comments on the Draft Environmental Impact Statement for the Kaloko Makai Development, Hawaii

Dear Mr. Matsukawa:

The U.S. Fish and Wildlife Service (Service) has reviewed the July 2011, Draft Environmental Impact Statement (DEIS) for the Kaloko Makai Development, proposed by the developer, SCD-TSA Kaloko Makai, LLC. At build-out, this master-planned community will have 5,000 single-family and multi-family residences, commercial centers, schools, community services and supporting infrastructure. This housing project will be located on 1,142 acres of land that is currently undeveloped. We requested and received a time extension until October 6, 2011, to submit our comments and we thank you for the additional time.

The DEIS includes and evaluates the actions described in the Draft Kaloko Makai State Habitat Conservation Plan (HCP) to augment the discussion regarding natural resources. The Draft HCP is being developed to satisfy endangered species regulations as described in Hawaii Revised Statute 195D. However, the Draft HCP has only recently been initiated with the State of Hawaii Division of Forestry and Wildlife (DOFAW) and there are several steps yet to complete, including HCP review by the Endangered Species Recovery Committee, a 45-day public review period and approval by the Board of Land and Natural Resources. Hookuleana, LLC, a consulting firm, is currently working with DOFAW to develop a final HCP. We submitted our comments on the Draft HCP in a letter dated July 18, 2011 (Service File 2011-TA-0362).

Between March 22, 2010, and September 23, 2010, the U. S. Fish and Wildlife Service (Service), Federal Highway Administration (FHWA), County of Hawaii, SCD-TSA Kaloko Makai, LLC, Stanford Carr, LLC, and Hookuleana, LLC negotiated several measures to achieve conservation

for the following listed plant species: (1) aiea (Nothocestrum breviflorum); (2) uhiuhi (Caesalpinia kawaiense); (3) maoloa (Nerudia ovate); (4) hala pepe (Pleomele hawaiiensis) and; (5) the candidate kookoolau (Bidens micrantha ssp. ctenophylla). These discussions focused on the impacts associated with the proposed construction of the Ane Keohokalole Highway. The FHWA conducted a section 7 consultation pursuant to the Endangered Species Act of 1973, as amended, that addressed the construction of the Ane Keohokalole Highway and included conservation measures for the collection, propagation and outplanting of the aforementioned species to offset impacts associated with the new highway. Additional conservation measures were agreed to by the Service and the Kaloko Makai Development. Most important, Kaloko Makai Development agreed to set aside 150 acres (ac) (60.7 hectares (ha)) to create the Kaloko Makai Dryland Forest Preserve (Preserve) to offset direct impacts to listed species due to the proposed housing project.

The measures agreed to in our August 16, 2010, meeting between the Service, FHWA, County of Hawaii, SCD-TSA Kaloko Makai, LLC, Stanford Carr, LLC, and Hookuleana, LLC are as follows:

FHWA Responsibilities

- 1. Collect genetic material, propagate and ouplant uhiuhi and maoloa so that 30 individuals of each survive in the Preserve.
2. Collect genetic material, propagate and ouplant hala pepe so that 40 individuals survive in the Preserve.
3. Collect genetic material, propagate and outplant aiea, uhiuhi, maoloa, and hala pepe so that 30 individuals of each species, in each of two locations to be determined in coordination with the Service, survive outplanting.
4. Outplant enough individuals of kookoolau so that 120 individuals survive in the preserve and two populations of 90 individuals survive, at locations to be determined in coordination with the Service.
5. Control weeds in a 15-foot (ft) (5-meter (m)) buffer around existing endangered plants (aiea, uhiuhi, maoloa, hala pepe and kookoolau) in the Preserve for five years.
6. Control weeds in the staging area for Hina Lani Street.
7. Install 13,100 ft (3,993 m) of 4-ft (1.2-m) hogwire fence along the east side of the Ane Keohokalole Highway.

Kaloko Makai Development Responsibilities

- 1. Set aside 150 acres (60.7 ha) in perpetuity for the creation of the Preserve.
2. Install 4-ft (1.2-m) hogwire fence around remaining unfenced portion of the Preserve.



3. Monitor fence and remove ungulates.
4. After FHWA completes their five year weed control program, control weeds throughout the entire Preserve.
5. Control weeds along a 15-ft (5-m) buffer along all roads.

Additional comments regarding the DEIS are as follows:

1. The endangered Blackburn's sphinx moth (*Manduca blackburni*; BSM) may occur in the project area. The adult moth feeds on nectar from native plants including beach morning glory (*Ipomea pes-caprea*), iliee (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiiana*). The larvae feed upon the native *Nothocestrum breviflorum* and nonnative tree tobacco (*Nicotiana glauca*) which can be found in disturbed areas such as open fields, roadway margins, and dry to moist forests at elevations ranging from 1,500 to 5,000 feet. During his 2006 survey, Art Whistler identified beach morning glory and maiapilo within the project area. Any of the other species may also occur on the project site. We recommend the project area be surveyed by a qualified biologist for the presence of BSM host plants during the wet season and if host plants are found, contact our office for further assistance.
2. The endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) may occur within the proposed project area. Hawaiian hoary bats roost in exotic and native woody vegetation at heights greater than 15 feet. If trees or shrubs suitable for bat roosting are cleared during the bat breeding season, there is a risk that breeding bats could inadvertently be harmed or killed. Young bats, which are incapable of flight, are particularly vulnerable during the bat-birthing and pup-rearing season (June 1 through September 15). To minimize potential impacts to the Hawaiian hoary bat, woody plants greater than 15 feet tall should not be removed or trimmed between June 1 and September 15 throughout the development and ongoing operation of the proposed project.
3. The DEIS states "Kaloko Makai will use best efforts to collect genetic material, propagate and plant hala pepe so that 6 individuals survive in the Kaloko Makai Dryland Forest Preserve. The 6 new individuals represent a 3 for 1 replacement of the 2 hala pepe outside of the Dryland Forest Preserve which will be removed and transplanted..." The intent of the 3:1 ratio is 3 populations created for any 1 destroyed, not 3 individuals for every 1 individual. We recommend collecting and growing propagules of the existing plants and outplanting enough individuals so that 3 populations survive within the Preserve. Survival of these plants, if transplanted, is highly unlikely. We recommend you and Hookuleana, LLC coordinate with DOFAW to ensure the State's net benefit requirement is achieved.
4. The HCP (not mentioned in the DEIS) proposes to transplant approximately 12 to 17 kookoolau from within the area to be developed to the Preserve. As stated above, survival of these individuals is unlikely and we recommend collecting propagules of the existing plants and outplanting these individuals in the Preserve. We recommend you

and Hookuleana, LLC coordinate with DOFAW to ensure the State's net benefit requirement is achieved.

5. The HCP and DEIS state "After construction, Kaloko Makai will develop a 25-ft (7.6-m) buffer between the existing aiea tree and any structure." We recommend this buffer be increased to 50 ft (15.2 m). It was also our understanding that no development would occur until successful outplanting of aiea has occurred.
6. In the HCP and DEIS, the developer commits to controlling weeds in a 15-ft (5-m) buffer around extant and outplanted listed and candidate plants. As negotiated previously, weeds are to be controlled in the entire dryland forest preserve and along all roadsides within the development. In addition, as we negotiated, FHWA funds would cover the cost of interim weed control (within the 15-ft (5-m) buffer) in the preserve for five years until the developers of Kaloko Makai took over responsibility for weed control throughout the entire preserve, including areas outside of the 15-ft (5-m) buffer.
7. The HCP and DEIS state "These 150 acres will be set aside and preserved as a dryland forest preserve thus ensuring the continuation of this dryland forest ecosystem." On August 26, 2010, the Hawaii County Planning Department signed a document agreeing to set-aside this 150-ac (60.7-ha) parcel for the purpose of conservation. Stipulations within the document require that applicant comply with conservation measures agreed upon by the applicant and the Service as a condition of approval for county land entitlements. This information should be included in your FEIS.
8. The HCP and DEIS state that a 4-ft high (1.2-m) woven mesh fence will be installed along the common boundary of the Ana Keohokalole Highway and the Kaloko Makai Dryland Forest Preserve. This is a conservation measure from the section 7 consultation with FHWA. As previously negotiated, the remaining borders of the preserve would be fenced by Kaloko Makai Development and monitoring/repair of the entire fence and ungulate removal should be included in your management plan for the Preserve.
9. The Service was unaware that a wildland fire dip tank would be installed inside the Preserve. This will take away from the overall acreage available for outplanting sites and will reduce the size of the overall conservation area. We recommend you either relocate the dip tank outside of the Preserve or increase the size of the Preserve to offset the footprint of the tank and access road leading to it.
10. Several water supply alternatives being investigated by the applicant include utilizing high-elevation off-site pumping wells. The DEIS estimates that the cumulative effects of pumping high-elevation wells in the area of the proposed project could increase salinity in the Kaloko-Honokohau National Historical Park's (Park) waters to up to 16.69 parts per thousand (ppt) at the shoreline. The anticipated increases in salinity may adversely affect aquatic ecosystems in the Park. For example, controlled laboratory experiments reveal that the eggs and naiads of the candidate-endangered orange-black Hawaiian damselfly (*Megalagrion xanthomelas*) are sensitive to increased salinity and temperature, and that naiads exhibit a threshold response to salinity above 15 ppt, with no naiads surviving at 20 ppt (Tango, 2010). Utilizing high-elevation off-site pumping wells

upslope from the Park should be excluded as an alternative for supplying water to this project to protect aquatic ecosystems.

11. We recommend the FEIS include the development of a public education program, including signage that will encourage confinement of pets, discourage feeding of feral animals and promote the installation of animal proof garbage containers.

We look forward to continuing a close collaborative relationship with you to develop a final EIS that results in the restoration and protection of the ecological integrity of the Kaloko Makai Dryland Forest Preserve for future generations. If you have questions regarding these comments, please contact Jodi Charrier, Fish and Wildlife Biologist, (phone: 808-792-9400, email: [jodi\\_charrier@fws.gov](mailto:jodi_charrier@fws.gov)).

Sincerely,



Loyal Mehrhoff  
Field Supervisor

Literature cited

Tango, L. 2010 The effect of salinity and temperature on survival of the orange-black Hawaiian Damselfly, *Megalagrion xanthomelas*. Masters Abstracts International. 48(05) 46 pp.



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July 25, 2013

Dr. Loyal Mehrhoff, Field Supervisor  
Pacific Islands Fish and Wildlife Office  
Fish and Wildlife Service  
U.S. Department of the Interior  
300 Ala Moana Boulevard, Room 3-122, Box 50088  
Honolulu, Hawaii 96850

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Dr. Mehrhoff:

Thank you for your letter dated October 4, 2011. The Applicant is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the respective order of your comments:

*The U.S. Fish and Wildlife Service (Service) has reviewed the July 2011, Draft Environmental Impact Statement (DEIS) for the Kaloko Makai Development, proposed by the developer, SCD-TSA Kaloko Makai, LLC. At build-out, this master-planned community will have 5,000 single-family and multi-family residences, commercial centers, schools, community services and supporting infrastructure. This housing project will be located on 1,142 acres of land that is currently undeveloped. We requested and received a time extension until October 6, 2011, to submit our comments and we thank you for the additional time.*

*The DEIS includes and evaluates the actions described in the Draft Kaloko Makai State Habitat Conservation Plan (HCP) to augment the discussion regarding natural resources. The Draft HCP is being developed to satisfy endangered species regulations as described in Hawaii Revised Statute 195D. However, the Draft HCP has only recently been initiated with the State of Hawaii Division of Forestry and Wildlife (DOFAW) and there are several steps yet to complete, including HCP review by the Endangered Species Recovery Committee, a 45-day public review period and approval by the Board of Land and Natural Resources. Hookuleana, LLC, a consulting firm, is currently working with DOFAW to develop a final HCP. We submitted our comments on the Draft HCP in a letter dated July 18, 2011 (Service File 2011-TA-0362).*

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Between March 22, 2010, and September 23, 2010, the U. S. Fish and Wildlife Service (Service), Federal Highway Administration (FHWA), County of Hawaii, SCD-TSA Kaloko Makai, LLC, Stanford Carr, LLC, and Hookuleana, LLC negotiated several measures to achieve conservation for the following listed plant species: (1) aiea (*Nothocestrum breviflorum*); (2) uhiuhi (*Caesalpinia kavaiensis*); (3) maoloa (*Neraudia ovata*); (4) hala pepe (*Pleomele hawaiiensis*) and; (5) the candidate kookoolau (*Eidens micrantha ssp. ctenophylla*). These discussions focused on the impacts associated with the proposed construction of the Ane Keohokalole Highway. The FHWA conducted a section 7 consultation pursuant to the Endangered Species Act of 1973, as amended, that addressed the construction of the Ane Keohokalole Highway and included conservation measures for the collection, propagation and outplanting of the aforementioned species to offset impacts associated with the new highway. Additional conservation measures were agreed to by the Service and the Kaloko Makai Development. Most important, Kaloko Makai Development agreed to set aside 150 acres (ac) (60.7 hectares (ha)) to create the Kaloko Makai Dryland Forest Preserve (Preserve) to offset direct impacts to listed species due to the proposed housing project.

The measures agreed to in our August 16, 2010, meeting between the Service, FHWA, County of Hawaii, SCD-TSA Kaloko Makai, LLC, Stanford Carr, LLC, and Ho'okuleana, LLC are as follows:

#### FHWA Responsibilities

1. Collect genetic material, propagate and outplant uhiuhi and maoloa so that 30 individuals of each survive in the Preserve.
2. Collect genetic material, propagate and outplant hala pepe so that 40 individuals survive in the Preserve.
3. Collect genetic material, propagate and outplant aiea, uhiuhi, maoloa, and hala pepe so that 30 individuals of each species, in each of two locations to be determined in coordination with the Service, survive outplanting.
4. Outplant enough individuals of kookoolau so that 120 individuals survive in the preserve and two populations of 90 individuals survive, at locations to be determined in coordination with the Service.
5. Control weeds in a 15-foot (ft) (5-meter (m)) buffer around existing endangered plants (aiea, uhiuhi, maoloa, hala pepe and kookoolau) in the Preserve for five years.
6. Control weeds in the staging area for Hina Lani Street.
7. Install 13,100 ft (3,993 m) of 4-ft (1.2-m) hogwire fence along the east side of the Ane Keohokalole Highway.

#### Kaloko Makai Development Responsibilities

1. Set aside 150 acres (60.7 ha) in perpetuity for the creation of the Preserve.
2. Install 4-ft (1.2-m) hogwire fence around remaining unfenced portion of the Preserve.
3. Monitor fence and remove ungulates.

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4. After FHWA completes their five year weed control program, control weeds throughout the entire preserve.
5. Control weeds along a 15-ft (5-m) buffer along all roads.

Response: You are correct that representatives of the Applicant participated in some informal discussions with USFWS, FHWA, and the County concerning the proposed dryland forest preserve and other matters. However, Applicant was never a party to any formal agreements with USFWS. Applicant understands that the informal consultation between USFWS, FHWA, and the County resulted in FHWA and the County agreeing to implement certain conservation measures, including a commitment to work with the adjacent landowners [such as Applicant and Lanihau] to preserve a total of 154.6 acres of land. FHWA and the County also agreed to a variety of genetic collection, outplanting, weed control, fencing and other measures. However, Applicant is not a party any agreement with USFWS. For that reason, we respectfully disagree with your characterization of items 1 – 5 in your comment letter as “Kaloko Makai Development Responsibilities.” Nevertheless, the Applicant reaffirms its prior statements that, in connection with the development of Kaloko Makai project, it would set aside 150-acres of Dryland forest for preservation purposes. As acknowledged in your comment letter, this set aside will offset direct impacts to listed species as a result of the development of the Kaloko Makai project. Within this preserve, a variety of species will have continued protection and their habitats set aside in perpetuity, enhancing their prospects for survival.

The Kaloko Makai property has been the subject of numerous botanical surveys over the years. Based on these surveys, four listed endangered plant species are found within the project site.

- ‘aiea (*Nothocestrum breviflorum*)
- hala pepe (*Pleomele hawaiiensis*)
- uhiuhi (*Caesalpinia kavaiensis*)
- ma‘aloa (*Neraudia ovata*)

In the anticipated development discussed in the Draft EIS, only one ‘aiea and two hala pepe plants are found outside the dryland forest preserve; the action, then, proposed removal of these plants due to the proposed development. Based on comments during the DEIS process and further evaluation of the project layout, under the development proposal described in the Second Draft EIS, none of the listed endangered plants situated outside the dryland forest preserve will be “taken” in the development and construction of the Kaloko Makai project.

Instead, Kaloko Makai will leave those plants in place and incorporate a 50-foot buffer around the one ‘aiea and two hala pepe and any structure within the

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project. The plants will be incorporated into landscaping within the 50-foot buffers.

*(1) The endangered Blackburn's sphinx moth (BSM) may occur in the project area. The adult moth feeds on nectar from native plants including beach morning glory, iliee and Maiapilo. The larvae feed upon the native nothocestrum breviflorum and non-native tree tobacco which can be found in disturbed areas such as open fields, roadway margins, and dry to moist forests at elevations ranging from 1,500 to 5,000 feet. During 2006 survey, A. Whistler identified beach morning glory and maiapilo within the project area. Any of the other species may also occur on the project site. We recommend the project area be surveyed by qualified biologist for the presence of BSM host plants during the wet season and if host plants are found, contact our office for further assistance.*

Response: Since the occurrence of potential host plants in any particular location will likely change overtime, a survey of planned construction sites during the wet season preceding construction will be conducted. If any potential host plants are found, your office will be contacted to determine an appropriate course of action.

*(2) The endangered Hawaiian hoary bat may occur within the proposed project area. Hawaiian hoary bats roost in exotic and native woody vegetation at heights greater than 15 feet. If trees or shrubs suitable for bat roosting are cleared during the bat breeding season, there is a risk that breeding bats could inadvertently be harmed or killed. Young bats, which are incapable of flight, are particularly vulnerable during the bat birthing and pup rearing season (June 1 - Sept. 15). To minimize potential impacts to the Hawaiian hoary bat, woody plants greater than 15 ft. tall should not be removed or trimmed between June 1 - Sept. 15 throughout the development and ongoing operation of project.*

Response: The Petitioner will incorporate the recommended protocols to address the Hawaiian hoary bat.

*(3) The DEIS states "Kaloko Makai will use best efforts to collect genetic material, propagate and plant hala pepe so that 6 individuals survive in the Kaloko Makai Dryland Forest Preserve. The 6 new individuals represent a 3 for 1 replacement of the 2 hala pepe outside of the dryland forest preserve which will be removed and transplanted..." The intent of the 3:1 ratio is 3 populations created for any 1 destroyed, not 3 individuals for every 1 individual. We recommend collecting and growing propagules of the existing plants and outplanting enough individuals so that 3 populations survive within the Preserve. Survival of these plants, if transplanted, is highly unlikely. We recommend you and Hookuleana LLC coordinate with DOFAW to ensure the State's net benefit requirements are achieved.*

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*(4) The HCP (not mentioned in the DEIS) proposes to transplant approximately 12 to 17 kookoolau from within the area to be developed to the Preserve. As stated above (comment #3), survival of these individuals is unlikely and we recommend collecting propagules of the existing plants and outplanting these individuals in the Preserve. We recommend you and Hookuleana LLC coordinate with DOFAW to ensure the State's net benefit requirement is achieved.*

Response: Based on comments during the DEIS process and further evaluation of the project layout, under the development proposal described in the Second DEIS, none of the listed endangered plants situated outside of the dryland forest will be "taken" in the development and construction of the Kaloko Makai project. Furthermore, it is anticipated that the project will be developed in such a manner as to avoid any "take" of *Bidens micrantha* ssp. *Ctenophylla*, which is currently proposed for listing as an endangered species. Applicant will incorporate avoidance measures to the extent possible. Because no incidental take license will be needed, Applicant no longer anticipates entering into a Habitat Conservatoin Plan (HCP) as previously suggested in the DEIS.

*(5) The HCP and DEIS state "After construction, Kaloko Makai will develop a 25-ft (7.6-m) buffer between the existing aiea tree and any structure." We recommend this buffer be increased to 50 ft (15.2 m). It was also our understanding that no development would occur until successful outplanting of aiea has occurred.*

Response: As stated above, Applicant will incorporate avoidance measures to the extent possible, thereby eliminating the need to obtain an incidental take license and entering into a HCP. Nevertheless, your comments regarding the proposed size of the buffer around of 'aiea tree have been taken under consideration, and Applicant intends to incorporate a 50-foot buffer around one 'aiea tree and any structure within the project. In addition, Applicant intends to incorporate a similar buffer around the two hala pepe and any structure within the project. The plants will be incorporated into landscaping within the 50-foot buffers.

*(6) In the HCP and DEIS, the developer commits to controlling weeds in a 15 ft. buffer around extant and outplanted listed and candidate plants. As negotiated previously, weeds are to be controlled in the entire dryland forest preserve and along all roadsides within the development. In addition, as we negotiated, FHWA funds would cover the cost of intermediate weed control (within 15 ft buffer) in the preserve for 5 years until the developers of Kaloko Makai took over responsibility for weed control throughout the entire preserve, including areas outside of 15 ft. buffer.*

Response: As stated above, Applicant will incorporate avoidance measures to the extent possible, thereby eliminating the need to obtain an incidental take license and enter into a HCP. Also as stated above, at this time Applicant is not a party to any agreement with USFWS.

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*(7) The HCP and DEIS state "These 150 acres will be set aside and preserved as a dryland forest preserve, thus ensuring the continuation of this dryland forest ecosystem." On August 26, 2010, the COH Planning Dept. signed a document agreeing to set aside this 150 acre parcel for the purpose of conservation. Stipulations within the document require that the applicant comply with conservation measures agreed upon by the applicant and the Service as a condition of approval for county land entitlements. This information should be included in FEIS.*

Response: It is incorrect to state that the County agreed to set aside any property owned by the Applicant. Kaloko Makai understands that the County of Hawaii made a written representation to USFWS and FHWA that the County will require the formal set-aside of 150 acres within the Kaloko Makai property as a condition of approval for County land use entitlements for the Kaloko Makai project. Furthermore, the County represented that the implementation of whatever conservation measures that may at some point be agreed to by USFWS and Applicant will be required as a condition of obtaining County land use entitlements for the Kaloko Makai project.

*(8) The HCP and DEIS state that a 4 ft. woven mesh fence will be installed along the common boundary of the Ane Keohokalole Hwy. and Kaloko Makai Dryland Forest Preserve. This is a conservation measure from Section 7 consultation with FHWA. As previously negotiated, the remaining borders of the preserve would be fenced by Kaloko Makai development and monitoring/repair of the entire fence and ungulate removal should be included in your management plan for the Preserve.*

Response: As stated above, Applicant will incorporate avoidance measures to the extent possible, thereby eliminating the need to obtain an incidental take license and enter into a HCP. Also as stated above, at this time the Applicant is not a party to any agreement with USFWS.

*(9) The Service was unaware that a wildland fire dip tank would be installed inside the Preserve. This will take away from the overall acreage available for outplanting sites and will reduce the size of the overall conservation area. We recommend you either relocate the dip tank outside of the Preserve or increase the size of the Preserve to offset the footprint of the tank and access road leading to it.*

Response: A previously-graded portion of land within the proposed Preserve is being used by Hawaii Forestry Industry Association (HFIA) as a staging and propagation area for management actions agreed to by USFWS and FHWA. This approximately 5.6-acre staging area serves as a central site for a variety of activities including parking, plant propagation, plant nursery, laboratories and may include a dip tank.

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Dip tanks decrease the travel time required between bucket drops of water during a fire, and, most importantly, can allow first responders to more quickly respond to a fire in the first hour.

The dip take has also been considered for use to irrigate seedlings which the HFIA is propagating within the staging area.

*(10) Several water supply alternatives being investigated by the applicant include utilizing high-elevation off-site pumping wells. The DEIS estimates that the cumulative effects of pumping high elevation wells in the area of the proposed project could increase salinity in the Kaloko Honokohau NHP waters to up to 16.69 ppt at the shoreline. The anticipated increases in salinity may adversely affect aquatic ecosystems in the park. For example, controlled laboratory experiments reveal that the eggs and naiads of the candidate-endangered orange-black Hawaiian damselfly are sensitive to increased salinity and temperatures, and that naiads exhibit a threshold response to salinity above 15 ppt, with no naiads surviving at 20 ppt (Tango 2010). Utilizing high-elevation off-site pumping wells upslope from the Park should be excluded as an alternative for supplying water to this project to protect aquatic ecosystems*

Response: The Second DEIS assesses three alternative water sources now being considered for the project's drinking water supply.

1. On-site wells at 710-foot elevation
2. On-site wells at 710-foot elevation with reverse osmosis (RO) Treatment
3. Desalinization of saline groundwater from 363-foot elevation on-site wells

These alternatives can be affirmatively demonstrated as having no impact on the basal lens. They are limited to use of the high level groundwater drawn from strata far below the basal groundwater so as not to impact it, and desalinizing saline groundwater, also drawn from below the basal lens. Brine from the desalinization alternative would also be discharged far below the basal groundwater.

An Assessment of the Potential Impact on Water Resources and An Assessment of Marine and Pond Environments has been prepared by Tom Nance Water Resource Engineering (TNWRE) and Marine Research Consultants (MRC) respectively. Both reports will be included in the forthcoming Second DEIS.

According to the reports, salinity and temperatures fluctuate daily within the water surrounding Kaloko-Honokohau NHP. The TNWRE report indicates salinity will decrease, not increase due to recharge from excess applied

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irrigation. The MRC report shows results of strong diurnal temperature variation within the fishponds which should also decrease in amplitude with increase flux of groundwater.

*(11) We recommend the FEIS include development of a public education program, including signage that will encourage confinement of pets, discourage feeding of feral animals and promote the installation of animal proof garbage containers.*

Response: Your comments have been noted. Appropriate signage will be developed to encourage public cooperation and discourage trespassing, vandalism or arson within the Kaloko Makai Dryland Forest Preserve.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", written over a light blue circular stamp.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission





Natural Resources Conservation Service  
P.O. Box 50004 Rm. 4-118  
Honolulu, HI 96850  
808-541-2600

EM

August 9, 2011

Mr. Orlando Dan Davidson, Executive Officer  
State Land Use Commission  
Department of Business, Economic Development and Tourism  
P.O. Box 2359  
Honolulu, HI 96804

RECEIVED  
AUG 11 2011  
HONOLULU, HAWAII

RE: FPPA Determination for lands to be converted by Kaloko Makai, LLC, Project, North Kona, Hawai'i

Dear Mr. Davidson,

Thank you for providing USDA-Natural Resources Conservation Service (NRCS) the opportunity to review the status of lands that will be affected by the proposed Kaloko Makai project in North Kona, Hawai'i. We confine our comments to issues within the purview of NRCS, specifically those related to soil properties that are typically used to assess the quality of land for agricultural uses.

Upon review of the provided Draft Environmental Impact Statement, we find that approximately 6% of the land within the project area – roughly 70 acres – is classified as "Other Important Aglands" under the Agricultural Land of Importance to the State of Hawaii (ALISH) statute and will require that a USDA Form AD-1006 – Farmland Conversion Impact Rating – be completed as part of the Environmental Assessment process. A copy of this form and instructions are attached.

If you have any questions concerning the soils and related quality and suitability ratings for this project area, please contact Dr. Cynthia Stiles, Assistant State Soil Scientist, by phone (808) 541-2600 x129 or email [cynthia.stiles@hi.usda.gov](mailto:cynthia.stiles@hi.usda.gov).

Sincerely,

ANGEL FIGUEROA  
Director  
Pacific Islands Area

Enclosure:

cc: Peter Phillips, SCD – TSA Kaloko Makai, LLC  
Earl Matsukawa, AICP – Wilson Okamoto Corp.  
Jennifer Sternfels, District Conservationist, Kealakekua, Hawaii  
Cynthia Stiles, Asst. State Soil Scientist, Honolulu, Hawaii  
*Helping People Help the Land*

An Equal Opportunity Provider and Employer

U.S. Department of Agriculture  
**FARMLAND CONVERSION IMPACT RATING**

<b>PART I (To be completed by Federal Agency)</b>		Date Of Land Evaluation Request			
Name Of Project		Federal Agency Involved			
Proposed Land Use		County And State			
<b>PART II (To be completed by NRCS)</b>		Date Request Received By NRCS			
Does the site contain prime, unique, statewide or local important farmland? <i>(If no, the FPPA does not apply – do not complete additional parts of this form).</i>		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount Of Farmland As Defined In FPPA Acres: %			
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS			
<b>PART III (To be completed by Federal Agency)</b>		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site		0.0	0.0	0.0	0.0
<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide And Local Important Farmland					
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value					
<b>PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)</b>		0	0	0	0
<b>PART VI (To be completed by Federal Agency)</b>					
Site Assessment Criteria <i>(These criteria are explained in 7 CFR 658.5(b))</i>		Maximum Points			
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
<b>TOTAL SITE ASSESSMENT POINTS</b>		160	0	0	0
<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland <i>(From Part V)</i>		100	0	0	0
Total Site Assessment <i>(From Part VI above or a local site assessment)</i>		160	0	0	0
<b>TOTAL POINTS (Total of above 2 lines)</b>		260	0	0	0
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Reason For Selection:					

#### STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 - Originator will send copies A, B and C together with maps indicating locations of site(s), to the Natural Resources Conservation Service (NRCS) local field office and retain copy D for their files. (Note: NRCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the NRCS State Conservationist in each state).

Step 3 - NRCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step 4 - In cases where farmland covered by the FPPA will be converted by the proposed project, NRCS field offices will complete Parts II, IV and V of the form.

Step 5 - NRCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for NRCS records).

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 - The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

#### INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

**Part I:** In completing the "County And State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

**Part III:** In completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

**Part VI:** Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5 (b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will, be weighed zero, however, criterion #8 will be weighed a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

**Part VII:** In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points, and alternative Site "A" is rated 180 points:  
Total points assigned Site A = 180 x 160 = 144 points for Site "A."

Maximum points possible 200

#### Site Assessment Scoring for the Twelve Factors Used in FPPA

The Site Assessment criteria used in the Farmland Protection Policy Act (FPPA) rule are designed to assess important factors other than the agricultural value of the land when determining which alternative sites should receive the highest level of protection from conversion to non agricultural uses.

Twelve factors are used for Site Assessment and ten factors for corridor-type sites. Each factor is listed in an outline form, without detailed definitions or guidelines to follow in the rating process. The purpose of this document is to expand the definitions of use of each of the twelve Site Assessment factors so that all persons can have a clear understanding as to what each factor is intended to evaluate and how points are assigned for given conditions.

In each of the 12 factors a number rating system is used to determine which sites deserve the most protection from conversion to non-farm uses. The higher the number value given to a proposed site, the more protection it will receive. The maximum scores are 10, 15 and 20 points, depending upon the relative importance of each particular question. If a question significantly relates to why a parcel of land should not be converted, the question has a maximum possible protection value of 20, whereas a question which does not have such a significant impact upon whether a site would be converted, would have fewer maximum points possible, for example 10.

The following guidelines should be used in rating the twelve Site Assessment criteria:

1. How much land is in non-urban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent:	15 points
90-20 percent:	14 to 1 points
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the area within one mile of the proposed site is non-urban area. For purposes of this rule, "non-urban" should include:

- Agricultural land (crop-fruit trees, nuts, oilseed)
- Range land
- Forest land
- Golf Courses
- Non paved parks and recreational areas
- Mining sites
- Farm Storage
- Lakes, ponds and other water bodies
- Rural roads, and through roads without houses or buildings
- Open space
- Wetlands
- Fish production
- Pasture or hayland

Urban uses include:

- Houses (other than farm houses)
- Apartment buildings
- Commercial buildings
- Industrial buildings
- Paved recreational areas (i.e. tennis courts)
- Streets in areas with 30 structures per 40 acres
- Gas stations

- Equipment, supply stores
- Off-farm storage
- Processing plants
- Shopping malls
- Utilities/Services
- Medical buildings

In rating this factor, an area one-mile from the outer edge of the proposed site should be outlined on a current photo; the areas that are urban should be outlined. For rural houses and other buildings with unknown sizes, use 1 and 1/3 acres per structure. For roads with houses on only one side, use one half of road for urban and one half for non-urban.

The purpose of this rating process is to insure that the most valuable and viable farmlands are protected from development projects sponsored by the Federal Government. With this goal in mind, factor S1 suggests that the more agricultural lands surrounding the parcel boundary in question, the more protection from development this site should receive. Accordingly, a site with a large quantity of non-urban land surrounding it will receive a greater number of points for protection from development. Thus, where more than 90 percent of the area around the proposed site (do not include the proposed site in this assessment) is non-urban, assign 15 points. Where 20 percent or less is non-urban, assign 0 points. Where the area lies between 20 and 90 percent non-urban, assign appropriate points from 14 to 1, as noted below.

Percent Non-Urban Land within 1 mile	Points
90 percent or greater	15
85 to 89 percent	14
80 to 84 percent	13
75 to 79 percent	12
70 to 74 percent	11
65 to 69 percent	10
60 to 64 percent	9
55 to 59 percent	8
50 to 54 percent	7
45 to 49 percent	6
40 to 44 percent	5
35 to 39 percent	4
30 to 24 percent	3
25 to 29 percent	2
21 to 24 percent	1
20 percent or less	0

**2. How much of the perimeter of the site borders on land in non-urban use?**

More than 90 percent:	10 points
90 to 20 percent:	9 to 1 point(s)
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the land adjacent to the proposed site is non-urban use. Where factor #1 evaluates the general location of the proposed site, this factor evaluates the immediate perimeter of the site. The definition of urban and non-urban uses in factor #1 should be used for this factor.

In rating the second factor, measure the perimeter of the site that is in non-urban and urban use. Where more than 90 percent of the perimeter is in non-urban use, score this factor 10 points. Where less than 20 percent, assign 0 points. If a road is next to the perimeter, class the area according to the

use on the other side of the road for that area. Use 1 and 1/3 acre per structure if not otherwise known. Where 20 to 90 percent of the perimeter is non-urban, assign points as noted below:

Percentage of Perimeter Bordering Land	Points
90 percent or greater	10
82 to 89 percent	9
74 to 81 percent	8
65 to 73 percent	7
58 to 65 percent	6
50 to 57 percent	5
42 to 49 percent	4
34 to 41 percent	3
27 to 33 percent	2
21 to 26 percent	1
20 percent or Less	0

**3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last ten years?**

More than 90 percent:	20 points
90 to 20 percent:	19 to 1 point(s)
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the proposed conversion site has been used or managed for agricultural purposes in the past 10 years.

Land is being farmed when it is used or managed for food or fiber, to include timber products, fruit, nuts, grapes, grain, forage, oil seed, fish and meat, poultry and dairy products.

Land that has been left to grow up to native vegetation without management or harvest will be considered as abandoned and therefore not farmed. The proposed conversion site should be evaluated and rated according to the percent, of the site farmed.

If more than 90 percent of the site has been farmed 5 of the last 10 years score the site as follows:

Percentage of Site Farmed	Points
90 percent or greater	20
86 to 89 percent	19
82 to 85 percent	18
78 to 81 percent	17
74 to 77 percent	16
70 to 73 percent	15
66 to 69 percent	14
62 to 65 percent	13
58 to 61 percent	12
54 to 57 percent	11
50 to 53 percent	10
46 to 49 percent	9
42 to 45 percent	8
38 to 41 percent	7
35 to 37 percent	6
32 to 34 percent	5
29 to 31 percent	4
26 to 28 percent	3

23 to 25 percent	2
20 to 22 percent percent or Less	1
Less than 20 percent	0

**4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?**

Site is protected:	20 points
Site is not protected:	0 points

This factor is designed to evaluate the extent to which state and local government and private programs have made efforts to protect this site from conversion.

**State and local policies and programs to protect farmland include:**

**State Policies and Programs to Protect Farmland**

**1. Tax Relief:**

**A. Differential Assessment:** Agricultural lands are taxed on their agricultural use value, rather than at market value. As a result, farmers pay fewer taxes on their land, which helps keep them in business, and therefore helps to insure that the farmland will not be converted to nonagricultural uses.

- 1. Preferential Assessment for Property Tax:** Landowners with parcels of land used for agriculture are given the privilege of differential assessment.
- 2. Deferred Taxation for Property Tax:** Landowners are deterred from converting their land to nonfarm uses, because if they do so, they must pay back taxes at market value.
- 3. Restrictive Agreement for Property Tax:** Landowners who want to receive Differential Assessment must agree to keep their land in - eligible use.

**B. Income Tax Credits**

**Circuit Breaker Tax Credits:** Authorize an eligible owner of farmland to apply some or all of the property taxes on his or her farmland and farm structures as a tax credit against the owner's state income tax.

**C. Estate and Inheritance Tax Benefits**

**Farm Use Valuation for Death Tax:** Exemption of state tax liability to eligible farm estates.

**2. "Right to farm" laws:**

Prohibits local governments from enacting laws which will place restrictions upon normally accepted farming practices, for example, the generation of noise, odor or dust.

**3. Agricultural Districting:**

Wherein farmers voluntarily organize districts of agricultural land to be legally recognized geographic areas. These farmers receive benefits, such as protection from annexation, in exchange for keeping land within the district for a given number of years.

**4. Land Use Controls: Agricultural Zoning.**

**Types of Agricultural Zoning Ordinances include:**

- Exclusive:** In which the agricultural zone is restricted to only farm-related dwellings, with, for example, a minimum of 40 acres per dwelling unit.
- Non-Exclusive:** In which non-farm dwellings are allowed, but the density remains low, such as 20 acres per dwelling unit.

**Additional Zoning techniques include:**

**A. Sliding Scale:** This method looks at zoning according to the total size of the parcel owned. For example, the number of dwelling units per a given number of acres may change from county to county according to the existing land acreage to dwelling unit ratio of surrounding parcels of land within the specific area.

**B. Point System or Numerical Approach:** Approaches land use permits on a case by case basis.

**LESA:** The LESA system (Land Evaluation-Site Assessment) is used as a tool to help assess options for land use on an evaluation of productivity weighed against commitment to urban development.

**C. Conditional Use:** Based upon the evaluation on a case by case basis by the Board of Zoning Adjustment. Also may include the method of using special land use permits.

**5. Development Rights:**

**A. Purchase of Development Rights (PDR):** Where development rights are purchased by Government action.

**Buffer Zoning Districts:** Buffer Zoning Districts are an example of land purchased by Government action. This land is included in zoning ordinances in order to preserve and protect agricultural lands from non-farm land uses encroaching upon them.

**B. Transfer of Development Rights (TDR):** Development rights are transferable for use in other locations designated as receiving areas. TDR is considered a locally based action (not state), because it requires a voluntary decision on the part of the individual landowners.

**6. Governor's Executive Order:** Policy made by the Governor, stating the importance of agriculture, and the preservation of agricultural lands. The Governor orders the state agencies to avoid the unnecessary conversion of important farmland to nonagricultural uses.

**7. Voluntary State Programs:**

**A. California's Program of Restrictive Agreements and Differential Assessments:** The California Land Conservation Act of 1965, commonly known as the Williamson Act, allows cities, counties and individual landowners to form agricultural preserves and enter into contracts for 10 or more years to insure that these parcels of land remain strictly for agricultural use. Since 1972 the Act has extended eligibility to recreational and open space lands such as scenic highway corridors, salt ponds and wildlife preserves. These contractually restricted lands may be taxed differentially for their real value. One hundred-acre districts constitute the minimum land size eligible.

**Suggestion:** An improved version of the Act would state that if the land is converted after the contract expires, the landowner must pay the difference in the taxes between market value for the land and the agricultural tax value which he or she had been

paying under the Act. This measure would help to insure that farmland would not be converted after the 10 year period ends.

- B. Maryland Agricultural Land Preservation Program: Agricultural landowners within agricultural districts have the opportunity to sell their development rights to the Maryland Land Preservation Foundation under the agreement that these landowners will not subdivide or develop their land for an initial period of five years. After five years the landowner may terminate the agreement with one year notice.

As is stated above under the California Williamson Act, the landowner should pay the back taxes on the property if he or she decides to convert the land after the contract expires, in order to discourage such conversions.

- C. Wisconsin Income Tax Incentive Program: The Wisconsin Farmland Preservation Program of December 1977 encourages local jurisdictions in Wisconsin to adopt agricultural preservation plans or exclusive agricultural district zoning ordinances in exchange for credit against state income tax and exemption from special utility assessment. Eligible candidates include local governments and landowners with at least 35 acres of land per dwelling unit in agricultural use and gross farm profits of at least \$6,000 per year, or \$18,000 over three years.

8. Mandatory State Programs:

- A. The Environmental Control Act in the state of Vermont was adopted in 1970 by the Vermont State Legislature. The Act established an environmental board with 9 members (appointed by the Governor) to implement a planning process and a permit system to screen most subdivisions and development proposals according to specific criteria stated in the law. The planning process consists of an interim and a final Land Capability and Development Plan, the latter of which acts as a policy plan to control development. The policies are written in order to:

- prevent air and water pollution;
- protect scenic or natural beauty, historic sites and rare and irreplaceable natural areas; and
- consider the impacts of growth and reduction of development on areas of primary agricultural soils.

- B. The California State Coastal Commission: In 1976 the Coastal Act was passed to establish a permanent Coastal Commission with permit and planning authority. The purpose of the Coastal Commission was and is to protect the sensitive coastal zone environment and its resources, while accommodating the social and economic needs of the state. The Commission has the power to regulate development in the coastal zones by issuing permits on a case by case basis until local agencies can develop their own coastal plans, which must be certified by the Coastal Commission.

- C. Hawaii's Program of State Zoning: In 1961, the Hawaii State Legislature established Act 187, the Land Use Law, to protect the farmland and the welfare of the local people of Hawaii by planning to avoid "unnecessary urbanization". The Law made all state lands into four districts: agricultural, conservation, rural and urban. The Governor appointed members to a State Land Use Commission, whose duties were to uphold the Law and form the boundaries of the four districts. In addition to state zoning, the Land Use Law introduced a program of Differential Assessment, wherein agricultural landowners paid taxes on their land for its agricultural use value, rather than its market value.

- D. The Oregon Land Use Act of 1973: This act established the Land Conservation and Development Commission (LCDC) to provide statewide planning goals and guidelines.

Under this Act, Oregon cities and counties are each required to draw up a comprehensive plan, consistent with statewide planning goals. Agricultural land preservation is high on the list of state goals to be followed locally.

If the proposed site is subject to or has used one or more of the above farmland protection programs or policies, score the site 20 points. If none of the above policies or programs apply to this site, score 0 points.

5. How close is the site to an urban built-up area?

The site is 2 miles or more from an urban built-up area	15 points
The site is more than 1 mile but less than 2 miles from an urban built-up area	10 points
The site is less than 1 mile from, but is not adjacent to an urban built-up area	5 points
The site is adjacent to an urban built-up area	0 points

This factor is designed to evaluate the extent to which the proposed site is located next to an existing urban area. The urban built-up area must be 2500 population. The measurement from the built-up area should be made from the point at which the density is 30 structures per 40 acres and with no open or non-urban land existing between the major built-up areas and this point. Suburbs adjacent to cities or urban built-up areas should be considered as part of that urban area.

For greater accuracy, use the following chart to determine how much protection the site should receive according to its distance from an urban area. See chart below:

Distance From Perimeter of Site to Urban Area	Points
More than 10,560 feet	15
9,860 to 10,559 feet	14
9,160 to 9,859 feet	13
8,460 to 9,159 feet	12
7,760 to 8,459 feet	11
7,060 to 7,759 feet	10
6,360 to 7,059 feet	9
5,660 to 6,359 feet	8
4,960 to 5,659 feet	7
4,260 to 4,959 feet	6
3,560 to 4,259 feet	5
2,860 to 3,559 feet	4
2,160 to 2,859 feet	3
1,460 to 2,159 feet	2
760 to 1,459 feet	1
Less than 760 feet (adjacent)	0

6. How close is the site to water lines, sewer lines and/or other local facilities and services whose capacities and design would promote nonagricultural use?

None of the services exist nearer than 3 miles from the site	15 points
Some of the services exist more than one but less than 3 miles from the site	10 points
All of the services exist within 1/2 mile of the site	0 points

This question determines how much infrastructure (water, sewer, etc.) is in place which could facilitate nonagricultural development. The fewer facilities in place, the more difficult it is to develop an area. Thus, if a proposed site is further away from these services (more than 3 miles distance away), the site should be awarded the highest number of points (15). As the distance of the parcel of land to services decreases, the number of points awarded declines as well. So, when the site is equal to or further than 1 mile but less than 3 miles away from services, it should be given 10 points. Accordingly, if this distance is 1/2 mile to less than 1 mile, award 5 points; and if the distance from land to services is less than 1/2 mile, award 0 points.

Distance to public facilities should be measured from the perimeter of the parcel in question to the nearest site(s) where necessary facilities are located. If there is more than one distance (i.e. from site to water and from site to sewer), use the average distance (add all distances and then divide by the number of different distances to get the average).

Facilities which could promote nonagricultural use include:

- Water lines
- Sewer lines
- Power lines
- Gas lines
- Circulation (roads)
- Fire and police protection
- Schools

7. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the county? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)

As large or larger:	10 points
Below average: Deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more is below average	9 to 0 points

This factor is designed to determine how much protection the site should receive, according to its size in relation to the average size of farming units within the county. The larger the parcel of land, the more agricultural use value the land possesses, and vice versa. Thus, if the farm unit is as large or larger than the county average, it receives the maximum number of points (10). The smaller the parcel of land compared to the county average, the fewer number of points given. Please see below:

Parcel Size in Relation to Average County Size	Points
Same size or larger than average (100 percent)	10
95 percent of average	9
90 percent of average	8
85 percent of average	7
80 percent of average	6
75 percent of average	5
70 percent of average	4
65 percent of average	3
60 percent of average	2
55 percent of average	1
50 percent or below county average	0

State and local Natural Resources Conservation Service offices will have the average farm size information, provided by the latest available Census of Agriculture data

8. If this site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project	10 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project	9 to 1 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project	0 points

This factor tackles the question of how the proposed development will affect the rest of the land on the farm. The site which deserves the most protection from conversion will receive the greatest number of points, and vice versa. For example, if the project is small, such as an extension on a house, the rest of the agricultural land would remain farmable, and thus a lower number of points is given to the site. Whereas if a large-scale highway is planned, a greater portion of the land (not including the site) will become non-farmable, since access to the farmland will be blocked; and thus, the site should receive the highest number of points (10) as protection from conversion.

Conversion uses of the Site Which Would Make the Rest of the Land Non-Farmable by Interfering with Land Patterns

Conversions which make the rest of the property nonfarmable include any development which blocks accessibility to the rest of the site. Examples are highways, railroads, dams or development along the front of a site restricting access to the rest of the property.

The point scoring is as follows:

Amount of Land Not including the Site Which Will Become Non-Farmable	Points
25 percent or greater	10
23 - 24 percent	9
21 - 22 percent	8
19 - 20 percent	7
17 - 18 percent	6
15 - 16 percent	5
13 - 14 percent	4
11 - 12 percent	3
9 - 11 percent	2
6 - 8 percent	1
5 percent or less	0

9. Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available	5 points
Some required services are available	4 to 1 point(s)
No required services are available	0 points

This factor is used to assess whether there are adequate support facilities, activities and industry to keep the farming business in business. The more support facilities available to the agricultural

landowner, the more feasible it is for him or her to stay in production. In addition, agricultural support facilities are compatible with farmland. This fact is important, because some land uses are not compatible; for example, development next to farmland can be dangerous to the welfare of the agricultural land, as a result of pressure from the neighbors who often do not appreciate the noise, smells and dust intrinsic to farmland. Thus, when all required agricultural support services are available, the maximum number of points (5) are awarded. When some services are available, 4 to 1 point(s) are awarded; and consequently, when no services are available, no points are given. See below:

Percent of Services Available	Points
100 percent	5
75 to 99 percent	4
50 to 74 percent	3
25 to 49 percent	2
1 to 24 percent	1
No services	0

**10. Does the site have substantial and well-maintained on farm investments such as barns, other storage buildings, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?**

High amount of on-farm investment	20 points
Moderate amount of non-farm investment	19 to 1 point(s)
No on-farm investments	0 points

This factor assesses the quantity of agricultural facilities in place on the proposed site. If a significant agricultural infrastructure exists, the site should continue to be used for farming, and thus the parcel will receive the highest amount of points towards protection from conversion or development. If there is little on farm investment, the site will receive comparatively less protection. See below:

Amount of On-farm Investment	Points
As much or more than necessary to maintain production (100 percent)	20
95 to 99 percent	19
90 to 94 percent	18
85 to 89 percent	17
80 to 84 percent	16
75 to 79 percent	15
70 to 74 percent	14
65 to 69 percent	13
60 to 64 percent	12
55 to 59 percent	11
50 to 54 percent	10
45 to 49 percent	9
40 to 44 percent	8
35 to 39 percent	7
30 to 34 percent	6
25 to 29 percent	5
20 to 24 percent	4
15 to 19 percent	3
10 to 14 percent	2
5 to 9 percent	1
0 to 4 percent	0

**11. Would the project at this site, by converting farmland to nonagricultural use, reduce the support for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?**

Substantial reduction in demand for support services if the site is converted	10 points
Some reduction in demand for support services if the site is converted	9 to 1 point(s)
No significant reduction in demand for support services if the site is converted	0 points

This factor determines whether there are other agriculturally related activities, businesses or jobs dependent upon the working of the pre-converted site in order for the others to remain in production. The more people and farming activities relying upon this land, the more protection it should receive from conversion. Thus, if a substantial reduction in demand for support services were to occur as a result of conversions, the proposed site would receive a high score of 10; some reduction in demand would receive 9 to 1 point(s), and no significant reduction in demand would receive no points.

Specific points are outlined as follows:

Amount of Reduction in Support Services if Site is Converted to Nonagricultural Use	Points
Substantial reduction (100 percent)	10
90 to 99 percent	9
80 to 89 percent	8
70 to 79 percent	7
60 to 69 percent	6
50 to 59 percent	5
40 to 49 percent	4
30 to 39 percent	3
20 to 29 percent	2
10 to 19 percent	1
No significant reduction (0 to 9 percent)	0

**12. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of the surrounding farmland to nonagricultural use?**

Proposed project is incompatible with existing agricultural use of surrounding farmland	10 points
Proposed project is tolerable of existing agricultural use of surrounding farmland	9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland	0 points

Factor 12 determines whether conversion of the proposed agricultural site will eventually cause the conversion of neighboring farmland as a result of incompatibility of use of the first with the latter. The more incompatible the proposed conversion is with agriculture, the more protection this site receives from conversion. Therefore, if the proposed conversion is incompatible with agriculture, the site receives 10 points. If the project is tolerable with agriculture, it receives 9 to 1 points; and if the proposed conversion is compatible with agriculture, it receives 0 points.

**CORRIDOR - TYPE SITE ASSESSMENT CRITERIA**

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor-type site or design alternative for protection as farmland along with the land evaluation information.

For Water and Waste Programs, corridor analyses are not applicable for distribution or collection networks. Analyses are applicable for transmission or trunk lines where placement of the lines are flexible.

- (1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
- |                          |                       |
|--------------------------|-----------------------|
| (2) More than 90 percent | (3) 15 points         |
| (4) 90 to 20 percent     | (5) 14 to 1 point(s). |
| (6) Less than 20 percent | (7) 0 points          |
- (2) How much of the perimeter of the site borders on land in nonurban use?
- |                          |                   |
|--------------------------|-------------------|
| (3) More than 90 percent | (4) 10 point(s)   |
| (5) 90 to 20 percent     | (6) 9 to 1 points |
| (7) less than 20 percent | (8) 0 points      |
- (3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
- |                          |                      |
|--------------------------|----------------------|
| (4) More than 90 percent | (5) 20 points        |
| (6) 90 to 20 percent     | (7) 19 to 1 point(s) |
| (8) Less than 20 percent | (9) 0 points         |
- (4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
- |                       |           |
|-----------------------|-----------|
| Site is protected     | 20 points |
| Site is not protected | 0 points  |
- (5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)
- |   |               |
|---|---------------|
| As large or larger  | 10 points     |
| Below average deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average | 9 to 0 points |
- (6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
- |  |                  |
|--|------------------|
| Acreage equal to more than 25 percent of acres directly converted by the project         | 25 points        |
| Acreage equal to between 25 and 5 percent of the acres directly converted by the project | 1 to 24 point(s) |
| Acreage equal to less than 5 percent of the acres directly converted by the project      | 0 points         |

- (7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
- |                                      |                 |
|--------------------------------------|-----------------|
| All required services are available  | 5 points        |
| Some required services are available | 4 to 1 point(s) |
| No required services are available   | 0 points        |
- (8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
- |                                       |                  |
|---------------------------------------|------------------|
| High amount of on-farm investment     | 20 points        |
| Moderate amount of on-farm investment | 19 to 1 point(s) |
| No on-farm investment                 | 0 points         |
- (9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
- |  |                  |
|--|------------------|
| Substantial reduction in demand for support services if the site is converted    | 25 points        |
| Some reduction in demand for support services if the site is converted           | 1 to 24 point(s) |
| No significant reduction in demand for support services if the site is converted | 0 points         |
- (10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
- |   |                 |
|---|-----------------|
| Proposed project is incompatible to existing agricultural use of surrounding farmland       | 10 points       |
| Proposed project is tolerable to existing agricultural use of surrounding farmland          | 9 to 1 point(s) |
| Proposed project is fully compatible with existing agricultural use of surrounding farmland | 0 points        |





7469-01  
July 25, 2013

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Ms. Angel Figueroa, Director  
Pacific Islands Area  
Natural Resources Conservation Service  
U.S. Department of Agriculture  
P.O. Box 50004, Room 4-118  
Honolulu, HI 96850

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Figueroa:

Thank you for your letter dated August 9, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, the proposed project is not receiving federal funds. Therefore the USDA Form AD-1006 Farmland Conversion Impact Rating is not required.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission



United States Department of the Interior  
 NATIONAL PARK SERVICE  
 Kaloko Honokōhau National Historical Park  
 73-1486 Kanalani Street, #14  
 Kailua Kona, Hawaii 96740



*em*

IN REPLY REFER TO:  
 L7621

October 5, 2011

Mr. Earl Matsukawa, AICP  
 Wilson Okamoto Corporation  
 1907 South Beretania Street, Suite 400  
 Honolulu, Hawaii 96826

10/11/2011  
 OCT 11 2011  
 RECEIVED

RE: National Park Service Review of the Draft Environmental Impact Statement for the Kaloko Makai Project, North Kona, Island of Hawai'i

Dear Mr. Matsukawa:

Thank you for providing the National Park Service (NPS) with the opportunity to review and comment on the Draft Environmental Impact Statement (DEIS) for the Kaloko Makai Project, North Kona, Hawaii. The applicant (SCD-TSA Kaloko Makai, LLC) plans to petition the Land Use Commission for a Land Use District Boundary Amendment to reclassify land in Conservation and Agricultural Districts to Urban Districts, and to develop this land into a mixed-use community. As described in the DEIS, the proposed development will be a 1,142-acre, master-planned, mixed-use residential community with up to 5,000 new single- and multi-family residential units, approximately 153 acres of light-industrial/commercial/retail, an urgent care medical facility with potential for a regional hospital, two elementary schools, a middle school, a wastewater treatment plant, associated roadways, utilities, drainage, and water source and distribution system.

NPS submits these comments in furtherance of its Congressionally mandated mission to protect the natural and cultural resources within Kaloko Honokōhau National Historical Park (National Park) and the Honokōhau Settlement National Historic Landmark (NHL), and Ala Kahakai National Historic Trail (Historic Trail). Specific comments are attached to this letter. The project is located upslope and adjacent to the National Park and the NHL and the Historic Trail, and is approximately 1 mile from the coast. The project will have significant, irreversible adverse impacts to the cultural and natural resources that make these NPS lands and resources nationally significant.

Congress established the National Park in 1978 "to provide a center for the preservation, interpretation, and perpetuation of traditional native Hawaiian activities and culture, and to demonstrate historic land use patterns as well as to provide a needed resource for the education, enjoyment, appreciation of such traditional native Hawaiian activities and culture by local residents and visitors" (Public Law 95-625). Water quality and quantity are critical to this mission and to the integrity of the Park. National Park lands and waters are also significant

cultural resources, and provide habitat for 16 threatened, endangered, and candidate species. Additionally, visual and auditory resources, and air quality are of critical importance within the National Park. Light and soundscapes, views, and cultural landscapes are preserved to protect flora, fauna, cultural integrity and visitor enjoyment. Traffic congestion and noise, airborne particulates from exhaust of potentially 10,000 additional cars in the area, combined with existing sources of particulates, may affect human health as well as natural and cultural resources. Impacts resulting from changes in volume of visitor use and impacts to visitor protection services within the National Park are all of concern to the NPS and have not been addressed, or adequately addressed by the DEIS.

A fundamental purpose of an environmental impact statement as required by HRS 343 is to provide decision makers and the public with information and analysis of the nature and scope of the proposed project, the known and potential impacts that the projects presents, measures that can avoid or mitigate those impacts, and the impacts that cannot be mitigated if the project goes forward as planned. Unfortunately, the DEIS for the proposed Kaloko Makai project fails to accomplish any of these requirements.

The DEIS does not satisfy the requirements of HRS 343 because the information about the proposed project is presented at a conceptual level that lacks detail, makes speculative analyses and unsupportable conclusions using partial or no analysis of existing data or scientific literature. This has resulted in misleading discussions, inadequate response to comments submitted during the review process, a lack of substantive analyses of the cumulative impacts from other existing and planned developments, and an inadequate exploration of mitigation measures. Because completion of the project is planned to take 30 years, many of the stated purposes and assumptions of the project will change—what may actually be built can be fundamentally and radically different from what is presented in the DEIS. The document appears to merely be "a self-serving recitation of benefits and rationalization of the proposed action" (HAR §11-200-14) in which impacts are downplayed throughout.

Measures to mitigate known or potential impacts are vague and not directly connected to the impacts from the proposed project (whether actually identified or not). The DEIS lacks analysis of the effectiveness of the measures described and fails to provide sufficient detail on those measures that are listed in the DEIS. In places, no mitigation measures are even identified. The NPS does note that the DEIS calls out several items to allegedly address impacts from the proposed project on groundwater resources. It appears that the project proponent and its consultants simply pulled measures imposed on or adopted by developments which are adjacent to or near the project site. Although it is somewhat encouraging that the DEIS lists these, it appears that their inclusion is to placate anticipated concerns of the NPS and others without any thought (or analysis) of their appropriateness, effectiveness, ability to be implemented, or enforceability, as they relate to the Kaloko Makai proposed project.

The fundamental problems with the DEIS are also of concern because the same developer (TSA), in the same general location, submitted a similar inadequate analysis of impacts from a development adjacent to the Kaloko Makai project site, Kaloko Light Industrial Park-Phases III and IV, over 10 years ago. In that Docket (A00-732), the Land Use Commission (LUC) found that the conclusions and analysis were inadequate or unsupported (A00-732 FFCLDO 2002). A

similar lack of analysis and unsupported conclusions from the Kaloko Industrial Park-Phases III and IV EIS and LUC proceeding are presented in the Kaloko Makai DEIS.

In the TSA matter, the LUC stated it was "... is acutely aware that continuous development is planned for this coastline. Although each developer might claim that only a "small amount" of pollution will result from their development and that the area's ecosystem will show "little" effects, these developments and their impacts are cumulative and, absent strong mitigation measures, have the potential to devastate the fragile resources of the coastal and marine aquatic environments of the entire Kona coastal region." (LUC Docket A00-732, FFCLDO, p. 103). The LUC recognized the extent and significance of the resources within the National Park and the NHL as well as the threat to those resources. In particular, the LUC, based on the "Precautionary Principle" in Hawai'i law, determined that "for all proposed development adjacent to or near a National Park that raises threats of harm to the environment, cultural resources, or human health, precautionary measures should be taken to protect the National Park cultural and natural resources, even if some cause and effect relationships are not fully established scientifically." (Ibid, FF number 165). The LUC also acknowledged its obligations to protect the trust resources of the state, including the customary and traditional practices of Native Hawaiians, finding that "... native Hawaiian rights and natural and cultural resources would be damaged or destroyed by the pollution of groundwater that reaches the National Park from surrounding areas, including Petitioner's proposed development at the Kaloko Industrial Park. Appropriate mitigation measures are, therefore, required under the Hawai'i Constitution and the Commission's decision-making criteria in order to approve reclassification of the project area." (Ibid, CL number 7).

The DEIS should be re-drafted to describe a phased project with appropriate detail and rigorous analyses, and supported by adequate scientific studies to enable the required public review and comment. The DEIS should be revised to incorporate relevant, well described protective mitigation measures with effective, realistic mechanisms for enforcement. The NPS is opposed to the notion of this proposed 30-year project receiving boundary amendment approval all at once. If approved, it should be only on a phased-basis, with an additional EIS and public review as required by HRS 343 at each stage. Furthermore, the LUC should not base their decision on the final EIS for this project, unless the final EIS provides sufficient detail and analysis on what will be built. Therefore another draft of this EIS should be released for public review and comment. To release a final based on this DEIS would demonstrate recklessness with county, state, and national resources on the part of the project proponent. The Land Use Commission should require this project (including environmental impact analyses) to be phased in its boundary amendment changes and should not grant the boundary amendment for the entire project all at once. Particular attention should be paid to the proposed hospital. Because the potential environmental impacts from a hospital are many, the LUC should require full analysis of the potential environmental impacts of a hospital in a hospital-specific EIS.

Our specific comments and concerns regarding the DEIS are attached. Thank you for the opportunity to provide comments on this DEIS. If you have questions regarding these comments,

please contact me at 800-329-6881 x1201, Kathy\_Billings@nps.gov, or Dr. Jeff Zimpfer of my staff, at x1500, Jeff\_Zimpfer@nps.gov.

Sincerely,



Kathy Billings  
Superintendent

cc: Hawaii Office of Environmental Quality Control  
State of Hawaii Land Use Commission  
State Office of Planning  
County of Hawaii Planning Department  
County of Hawaii Department of Water Supply  
County of Hawaii Department of Public Works  
Department of Hawaiian Home Lands  
Department of Land and Natural Resources  
Commission on Water Resources Management  
Office of Hawaiian Affairs  
DLNR, State Historic Preservation Division  
Advisory Council for Historic Preservation  
U.S. Fish and Wildlife Service  
NOAA Fisheries Protected Resources Division  
State of Hawaii Coastal Zone Management Program  
Department of Health Clean Water Branch  
Department of Health Safe Drinking Water Branch, UIC Program  
National Parks Conservation Association  
NPS Pacific West Regional Office  
NPS Water Rights Branch  
DOI Solicitor's Office  
U.S. EPA Pacific Islands Contact Office

October 6, 2001 Comments by National Park Service Comments on the Kaloko Makai Draft EIS (date July 2011)

The National Park Service only had 60 days to review and evaluate this Draft Environmental Impact Statement. Sixty days is inadequate to review a project of this magnitude and complexity. Therefore, these comments may not represent all of the National Park Service's concerns.

1. Page 1-1. The size of the off-site potable wellfield is stated as 3.5 acres. This is inconsistent with other statements on this page, and elsewhere in the document, which refer to the size of the off-site well field as 18 acres.
2. Pages 1-12 and 4-8. The DEIS does not state how many 1, 2, 3 etc. story buildings will be constructed and where will they be located. Page 1-12 and 4-81 mention "single story structures" and "multistory structures" but not how many or where they will be located. There is no clear way to evaluate the environmental impact (e.g., aesthetics) without knowing the basic size and shape of the buildings and where they will be located relative to existing features in the area.
3. Page 1-17. Section 1.7.8, lists unresolved issues related to the DEIS but does not list the uncertainty related to the hydrologic connection between the high-level and coastal groundwater systems. The hydrologic connection between the high-level and coastal groundwater systems is one of the main factors that will control how the withdrawal of fresh groundwater for the proposed development will affect the quantity and quality of groundwater resources in downgradient areas. The DEIS (p. 3-15) states the following, which highlights the uncertainty related to the connection between the high-level and coastal groundwater systems "In addition to it creating a substantial reservoir of potable quality water, this subsurface feature also controls the location and manner of groundwater movement into the downgradient basal lens. While the hydraulic relationship between the two groundwater bodies is not yet understood, it is undoubtedly the reason for the anomalous characteristics of basal groundwater in the Keahole to Kailua area (Nance 2008)." Also on p. 3-15, the DEIS states "Groundwater responses when these wells are ultimately used to their full capacity may shed light on the unknown aspects of this groundwater occurrence, including the geologic feature which creates the high-level water, the hydraulic relationships among the differing high-level groundwater compartments, and where, how and if the high-level groundwater drains into the basal lens (Nance 2008)." Both of these statements indicate that it would be appropriate to list the uncertain hydrologic connection between the high-level and coastal groundwater systems as one of the important unresolved issues in Section 1.7.8.
4. Page 2-10. "Kaloko Makai would consist of homes, ranging from traditional single-family homes to mixed-use, mid- and higher-density multifamily units." Figure 2-7, County General Plan Land Use Pattern Allocation Guide, does not indicate any medium or high-density zones at or near the proposed project.
5. Page 2-16. Section 2.1.5, ¶2 The references for the radiocarbon dates are not given.
6. Page 2-31 to 2-38 (Figures 2-11 to 2-14). The use of the term "natural zone" is unclear.
7. Page 2-14. No explanation is provided for the proposed change in land use designation from agriculture land to urban for the dryland forest preserve. If a land use designation change is necessary, conservation would be more appropriate for a forest preserve.
8. Page 2-44. "Archaeological data created by others makai of the Queen Kaahumanu Highway" should be clarified and the references listed.
9. Page 2-44. The discussion of where and how the trail will be realigned is unclear.
10. Page 2-45. "Kaloko Makai will also incorporate two trails that run through the dryland forest" is unclear. The reader cannot tell if the trails will be protected. These also should incorporate a preservation corridor to protect the integrity of the trails as historic properties under Section 6E.
11. Page 2-48; Page 4-106; Page 5-40. The DEIS states that average potable water demand will be approximately 3.2 Mgd and maximum water demand will be 4.8 Mgd. These values are incorrect and underestimate water demand due to several miscalculations in Table 4-24. Pages 2-48, 4-106 and 5-40 should be revised to accurately reflect the estimated water demand for the project.
12. Page 2-48. The preferred alternative to supply potable water for the project involves drilling up to four mid-level wells to tap a fresh water layer underlying the basal aquifer, about 2.5 miles upgradient of the National Park. No reference to credible scientific information is provided to support the sustainability of this new source of potable water. The DEIS acknowledges on p. 3-16 that the depth, inclination and geologic nature of the formation confining this layer of fresh water in this area are not known. The possibility that all, or even some, of the potable water needs of the project can be supplied by an "underlying fresh water layer" at the project site is therefore speculative as this resource has never been developed for potable or irrigation water on the Kona Coast. The DEIS should have included information demonstrating that this resource can be developed and used in a manner that can be continued indefinitely, without causing unacceptable environmental, economic, or social consequences.
13. Page 2-48: Several alternatives being investigated to supply potable water for the proposed project, including the preferred alternative, may require an on-site desalination facility, about one mile from the National Park. However, no information is presented on the proposed quantity of brackish water needed to produce potable water, nor is any information presented on the quantity or quality of effluent that will be generated as part of the desalination process. Statements indicating that the desalination water system will have "no impact" are unsubstantiated. More specifically:
  - a. Page 2-49; Page 4-114. The statement "The desalination water system will have no impact on potable or brackish groundwater. Likewise, it will not affect nearshore waters and will not affect groundwater used by neighboring projects or anchialine pools and fishponds in the area, including nearby Kaloko-Honokōhau National Park"

- is unsupported by a quantitative analysis and no desalination plants have been used to supply potable water on a large-scale on the Kona Coast. The DEIS should have included credible scientific information to support this conclusion.
- b. The DEIS does not state the anticipated number of injection wells, their injection rate, or quality of the injected fluids that will be needed to desalinate brackish groundwater, yet finds there will be no impact on basal groundwater. The DEIS should have included this information to support the conclusion of no significant impact.
  - c. The DEIS does not evaluate the cumulative impact of the proposed desalination plant in addition to The Shores at Kohanaiki desalination plant which began operating in November 2008 immediately downgradient of the proposed project site and adjacent to the National Park. This desalination plant includes eight pumping wells and one injection well and will further complicate the response of the basal aquifer to pumping and injection. The Shores at Kohanaiki are required to report chloride concentrations at all pumping wells and eight monitoring wells on a monthly basis, to monitor water quality at the injection well on a quarterly basis, and to collect a conductivity-temperature-depth profile at the deepest monitor well on a quarterly basis. The DEIS should have included a quantitative analysis of the cumulative effects of the proposed and existing desalination facility. This analysis should include a review of the monitoring data collected at the Kohanaiki desalination plant since it began operating in 2008.
  - d. If desalination is required to produce potable water from on- or off-site wells, then the volume of brackish groundwater that must be pumped to produce potable water will be much greater than the water demand estimated in the DEIS. For example, The Shores at Kohanaiki estimated that the ratio of brackish (46% seawater) groundwater pumped to potable product water was about 1.5 (Kohanaiki Non-potable Water Plan). Ooma Beachside Village estimated that the ratio of brackish (78% seawater) groundwater pumped to potable product water would be about 2.25 (Exhibit 42, LUC Docket A07-774). The DEIS should have quantified the pumping rate of the on- or off-site brackish wells and evaluate the effect of pumping up to 2.25 times the estimated water demand to provide potable water for the project.
  - e. The DEIS does not estimate or consider the additional source of nitrate-nitrogen to groundwater from RO injection. The actual nitrate-nitrogen added to groundwater from the Kohanaiki injection well is greater than estimated for that project by nearly a factor of three (source: Kohanaiki injection well water quality reports and 2007 Kohanaiki Non-Potable Water Plan).
14. Page 2-48. "*Kaloko Makai is committed to water conservation strategies... the goal is to reduce the total water use through a combination of water saving equipment and strategies*" The "*equipment and strategies*" are not discussed or described in any detail, and, therefore, there is now way to tell if this "commitment" is appropriate, effective, or implementable.
  15. Page 2-48. The DEIS does not identify how sustainable building design and LEED concepts and certifications will be implemented. There are no specific commitments from the project

- proponent to actually follow through with implementing sustainable building design and LEED concepts.
16. Page 2-50. "*The projected wastewater generation demand for Kaloko Makai is 2.37 million gallons per day (mgd) average dry weather flow. The WWTP will be designed to reduce the concentrations of Total Nitrogen (TN) to <5 mg/l, and Total Phosphorous (TP) to <2 mg/l. Installation of the Private WWTP shall be subject to conditions of approval by the DOH, including any lower concentrations of TN and/or TP in the effluent, and HAR Chapter 11-62. The amount of recycled water produced will be essentially the same as the amount received for processing, or 2.37 mgd.*" A general rule of thumb for projecting wastewater generation (refer to Wastewater Engineering Treatment, Disposal, and Reuse by Metcalf and Eddy, EPA website, and other sources) is that it will equal the projected water use at full build-out, minus outdoor use (such as car washing and irrigation), minus loss and leakage (should be minimal). Since most of the proposed project's irrigation water is coming from R1 treated water, the projected wastewater generation demand should be approximately equal to projected water use at full build-out (3.0-3.2 mgd (average) and 4.7-4.8 mgd (max)). Therefore, the DEIS has underestimated wastewater generation by as much as half of what can be expected based on the estimated water use in the DEIS – which is itself substantially underestimated. The amount of wastewater, therefore, will be significantly larger than stated in the DEIS.
- The DEIS does not provide any scientific justification for why these concentrations of TN and TP are protective and appropriate, or why lower concentrations would not be more appropriate and protective. The DEIS should provide scientific studies, not solely citations from engineering wastewater manuals, that support the selection of these concentrations. Before an appropriate analysis of the impacts from the disposal of wastewater (whether through irrigation, infiltration basins, or injection wells) on coastal and marine resources, including the resources within the National Park, can be completed, the DEIS must provide a more detailed description of the quality of the water to be discharged including what methods will be used to reduce nutrients and what methods will be used to prevent pharmaceuticals and other contaminants from reaching the National Park. If a hospital is built as part of the project as described, it is especially important to analyze the full range of potential impacts from a hospital including the fate of pharmaceuticals in treated wastewater from the facility. For a wastewater facility this close to a national park, which will include injection wells as part of waste management, wastewater treatment should include maximum nutrient removal, be treated to tertiary standards including removal of pathogens, and de-chlorination should follow chlorination steps. The DEIS should describe why dry-lining for potential hookup to the Kealakehe WWTP is not an option as was required for Lanihau and TSA developments adjacent or near the project site.
17. Page 2-59. Adequate justification is not made in the DEIS to support the density and number of housing units proposed. The NPS questions the need for an additional 4,180 multi-family units in North Kona. Especially since many thousand more single- and multi-family units are planned for construction in the immediate area. Given the impact to the community and the

environment, the project proponents have not justified the need for the number and density of housing units in their preferred alternative.

18. Page 3-4. The statements that the soils within Kaloko Makai are not suitable for cultivation are not accurate. The project location is known for high productivity of food crops, as evidenced by the numerous examples given within this document. This DEIS notes on page 4-10 that agriculture (including farming, horticulture and subsistence planting) and animal husbandry are “function types commonly encountered in this general area” and that there are “several pervasive agricultural sites in the project area with widespread clearing and planting mounds” (Table 4-2). On page 4-43 of the DEIS, “During the mid 1800s, Captain Charles Wilkes of the American Exploring Team comments on the agricultural use of pāhoehoe excavations (similar to the modification of pāhoehoe outcrop in the project) which he observed specifically in the Kona region.” Page 4-50 of this document notes “During the 1930s to 1940s, the alahe’e along with mango, banana, uhi or yam (*Dioscorea alata*), and pia, a Polynesian arrowroot (*Tacca leontopetaloides*) used as medicine and food by Hawaiians, were also widely distributed in the project area.”

Oral histories of the area, ethnographic evidence and archeological evidence document that the upland Kaloko and neighboring areas are prime for agricultural purposes. Ethnographic and archeological evidence for the Kaloko ahupua’a is a well developed part of the Kona Field System (Tuggle and Tuggle 2006, Cordy 2000, Newman 1970, Schilt 1984). Crops from this area included sweet potato, taro, banana, mountain apple, wauke and breadfruit historically (Tuggle and Tuggle 2006, Land Commission and Boundary Commission documents) and more recently was known to be plentiful in mango, pineapple and sweet potato. Areas slightly further south at the same elevation as the project area within the Kona field system are known to be fertile for production of sweet potato, wauke, and breadfruit (Kelly 1983).

19. Page 3-14. The DEIS states that “The groundwater lens in the Keahole vicinity is brackish and discharges freely along the coast in a narrow band of a few feet wide in the intertidal zone.” However, later the DEIS states on Page 3-35 that “A somewhat unusual finding is that the lowest salinities in the ocean samples were not found nearest to the shoreline off of either fishpond. Rather, the lowest salinities were measured in surface ocean samples approximately 25-50-m offshore.” These statements appear to contradict each other. The DEIS should have clarified the area where groundwater discharges to the ocean.
20. Page 3-14. The DEIS states that “Salinity, lens thickness and the diffuse transition zone are all indicative of a modest groundwater flow.” The DEIS should define “modest” quantitatively. Also, the listed factors do not preclude the possibility of high groundwater flow (say greater than 5 Mgd per mile of width) with a large amount of mixing caused by hydrodynamic dispersion.
21. Page 3-15. The DEIS states that “While the hydraulic relationship between the two groundwater bodies is not yet understood, it is undoubtedly the reason for the anomalous characteristics of basal groundwater in the Keahole to Kailua area. (Nance 2008).” The

DEIS should explain what is meant by “anomalous characteristics.”

22. Page 3-15. The DEIS states that “Use of Well 3857-01 at Wai’aha started in 2005.” The State Commission on Water Resource Management lists this well as abandoned and sealed. Perhaps the correct well number should be 3857-04.
23. Page 3-15. The DEIS states that fresh water was encountered at 1,060 ft below sea level at the Kamakana Villages Well (3959-01), but no information is provided to support this statement. Documenting the source of this information is important because this resource has never been developed for municipal use, yet it is the preferred alternative to supply over 3 Mgd of potable water for the project. The DEIS should have included credible scientific documentation of the circumstances under which fresh water was encountered at the Kamakana Well.
24. Page 3-25. Section 3.5.1 “Due to high permeability of the natural ground surface across the project site, surface runoff does not occur on the project site even during the most intense rainfalls. Natural drainage of the project site consists of rainfall percolation through the layers of very porous lava to the ground water table.” The more development at the project site (and on the upslope lands), the more difficult it will be for “green space” to take-in or absorb the surface water runoff water, as the “green space” will not have the same surface area it once did to percolate. Furthermore, the claim that rainfall percolates through the layers of very porous lava to the ground water table (with respect to surface water), is contradictory to the claim that wastewater effluent disposed onsite percolating through the same layers of very porous lava to the ground water table will not have significant impact.
25. Page 3-26. The DEIS states that reverse osmosis concentrate will be injected into the basal aquifer in strata where groundwater salinity is 30 ppt or greater, and asserts on p. 4-110 that “Since the concentrate has a greater density than the surrounding saline groundwater, it will flow seaward without rising above the surrounding saline groundwater and will not rise to the basal freshwater layer. It is then discharged into the ocean offshore at a substantial depth and distance from the shoreline.” At the same time, the DEIS also notes on p. 3-16 the presence of a saltwater circulation system where “Saltwater flows landward in the deeper parts of the aquifer, rises and then mixes with seaward-flowing groundwater.” The predicted fate and transport of the injected reverse osmosis concentrate is speculative and unsubstantiated by references to any credible scientific evidence. The DEIS should have included (1) the estimated salinity of the reverse osmosis concentrate from the proposed project, and (2) a quantitative analysis of the potential for the injected reverse osmosis concentrate to enter the saltwater circulation system and increase the salinity of inland and nearshore marine waters downgradient of the project site.
26. Page 3-26 The DEIS should have discussed in detail how it will protect NPS resources downslope from the proposed project. The DEIS should have included a thorough and rigorous analysis of potential impacts, direct and cumulative, to groundwater and groundwater-fed ecosystems from termiticides and pesticides used on houses, buildings, grounds, and common areas; added nutrients from irrigation and fertilized green spaces;

- potential releases of contaminants from commercial businesses in the light-industrial/commercial parks who generate hazardous wastes (e.g., metal finishing, photoprocessing, automotive maintenance, dentistry, pesticide companies, printing, etc); potential releases of medical wastes, pathogens, and pharmaceuticals from the medical facilities; nutrients, pathogens, and pharmaceuticals carried in wastewater; contaminants associated with roadways and other impermeable surfaces including petroleum products, metals, pesticides, nutrients, and other pollutants.
27. Page 3-26. *“As the excess irrigation water percolates downward through the unsaturated zone to the groundwater, natural removal of nitrogen and phosphorus from the water will be significant.”* The DEIS should have quantified *“significant.”* It is not possible to analyze impacts to NPS resources without an accurate understanding of the increased flow of nitrogen and phosphorus into NPS waters.
28. Pages 3-26 and 3-74. Details regarding stormwater management and impacts to NPS aquatic resources are not provided in the DEIS. Surface runoff from impermeable surfaces associated with this development will occur. DOH and County drainage regulations do not address polluted runoff, only volume of runoff. Drywells are nothing more than holes in the ground; conduits for polluted runoff to groundwater. No specific pollution reduction devices or methods with numerical removal efficiencies are proposed beyond stating BMPs will be used. Moreover, there is no discussion of how the BMPs will be implemented, who will monitor the BMPs, or how they will be enforced. It is not adequate for purposes of an EIS to merely state *“Innovative and more natural ways to handle drainage improvements will be sought to comply with the County drainage standards.”* The details of these *“innovative”* means should be explained. Potential environmental impacts to coastal and marine resources, including the resources in the National Park, have not been evaluated and the statement that *“Kaloko Makai is not expected to have an adverse effect on groundwater or coastal marine waters”* is completely unsupported. No data have been presented to support this conclusion.
29. Page 3-27. *“Control of contaminated surface water can be achieved through the development of a PPP designed to address all pollutants associated with the development and to identify measures that will contain and treat such pollutants in order to prevent any release into the environment, including the groundwater. There will be no anticipated adverse impact on groundwater quality from the development of this project.”* These statements are highly speculative with no analysis to support the conclusion that there will be no adverse impacts to groundwater quality, and are not substantiated by any data presented. PPPs, although a statement of good intentions, are difficult to implement, monitor, or enforce. PPPs, even good ones, cannot guarantee that no contaminated surface water will reach the groundwater. There is no discussion of how the project proponent will implement the PPP, which is especially problematic given the multitude of land uses (industrial, recreational, and single and multi-family housing units) and length of time to complete this development. CCRs are an inadequate mechanism to prevent pollution offsite of the development as there is no reason for landowners to self-police for offsite damages and no governmental agency – local, state or federal – can enforce them.

30. Page 3-28. The DEIS states: *“Nutrient loading and its subsequent impact is one of the more important issues concerning conservation and protection of coral reefs”* and then goes on to say *“However, according to Atkinson (2003)[sic], the conclusion that nutrients are deleterious to a reef ecosystem is incorrect.”* Although some of the statements made in this section of the DEIS are indeed in Atkinson and Falter (2003) book chapter (cited in the DEIS as Atkinson 2003), this statement must be taken in context with other statements in Atkinson and Falter that are not mentioned in the DEIS. Overall the comments in the DEIS that were derived from Atkinson and Falter (2003) are one sided, incomplete, and are not fully supported for Kaloko-Honokohau marine waters. Atkinson and Falter (2003) focuses on the flux of nutrients in and out of coral systems, not on indirect effects of nutrients on the coral. In fact, the Atkinson and Falter (2003) states that significant anthropogenic impacts of nutrients on coral tend to occur *“in areas of groundwater or surface water where relatively large areas are discharge into shallow reef flats.”* This is the situation at the National Park, where approximately three million gallons per day of groundwater discharge to marine waters in Honokohau and Kaloko Bays. Atkinson and Falter also state there is a need for more studies in which the organism or community responses are a function of actual nutrient loading, per area of benthos, not a function of concentration. The DEIS should have stated that nutrient impacts to coral reefs are probably indirect and long term and that it is possible that nutrients can stimulate bacteria and other disease vectors that might harm coral. Overall, the statements that are quoted from Atkinson and Falter in the DEIS seem to have been selectively picked to include only the ones that support the hypothesis that excess nutrients have little or no impacts on coral health in order to mislead the reader. The statements that tell the other side of the story, such as those quoted just above, are not included in the DEIS. There are many cases in the published scientific literature where excess nutrients, as well as the pathogens that will be associated with this development, can result in coral reef degradation due to various indirect processes. There is no conclusive evidence presented in the DEIS that corals cannot be harmed by excess nutrients and/or an unnatural ratio of organic to inorganic nutrients or human pathogens. Excessive nutrients cause excess algae growth that can lead to depletion in oxygen available for other organisms associated with a coral reef and can lead to algae blooms that take over sections of coral, blocking the sunlight and hurting its ability to thrive. The state of Hawaii is experiencing a significant decline in some of Maui’s coral reefs experiencing a significant decline where excess nutrients are implicated in invasive algae blooms. Although the factors influencing Maui’s reef decline are complex, the DAR reported (Williams et al 2007) *“strong indications that human impacts have been very important.”* Supporting data include proximity of private and county sewage injection wells, which place nutrient loads close to the coral substrate, high levels of nitrogen and phosphorus, and stable isotope ratios indicative of animal waste (presumably sewage) in algae. The potential for a hospital associated with this development is another concern. Pathogens, pharmaceuticals, and endocrine disrupting compounds are associated with hospital waste, many of these are unlikely to be fully eliminated by the proposed sewage treatment plan. The effects of these pathogens and compounds on coral reefs were not mentioned or analyzed in the DEIS, therefore the DEIS is seriously inadequate to evaluate impacts to coral reefs.

31. Page 3-29 to 3-34. “3.5.2.1.1. *Assessment of Coral Ecosystem Health of Kealakekua Bay and Honokōhau Bay.*” The discussion in this section supports the conclusion that inputs of nutrients from the Kaloko Makai development will likely result in adverse impacts to the natural and cultural resources within the National Park. None of the arguments or information presented supports the assertion that more nutrients and other pollutants will not result in impacts to the NPS natural and cultural resources. Furthermore, none of the other sites discussed in the DEIS for comparison are in pristine conditions. The NPS mission is to maintain its marine waters in as pristine conditions as possible.
32. Pages 3-33 and 3-34. “*Coral ecosystems will not normally recover from chronic stresses until the stressors are removed (Grigg, 1995; Edinger et al., 1998). If elevated nutrients and/or algal cover are chronic stressors to the coral ecosystems of this study as the results indicate, and future human population growth and development continue to increase nutrient inputs to these bays, then it is likely that future degradation is imminent ...*” The DEIS did not discuss how the coral reef ecosystems within NPS boundaries, or North Kona, will be affected by cumulative nutrient stresses associated with the proposed development and other nearby developments. Compare these pages with lack of any discussion on pages 8-2 to 8-4.
33. Page 3-34. “3.5.2.2. *Endangered Marine Species*” The presence of endangered species, and the difficulty of assigning specific impacts to specific causes in these complex environments, argues for using the precautionary principle to significantly limit additional inputs of human sewage including organic nutrients, pharmaceuticals, and other contaminants into the groundwater that flows through, under, and in the National Park.
34. Section 3.5.2.3. This section of the DEIS is a long review of very old, non-peer reviewed reports, containing in large part data collected nearly a decade or more ago. These reports and the data therein were presented in the TSA and Lanihau Dockets and were refuted by the LUC at those hearings. (TSA FFCLDO 2002, Lanihau FFCLDO 2002). The discussion and conclusions regarding nutrients, pond characteristics and groundwater level and flow in this section are wholly unsupported even by the reports cited. In addition, as in these previous proceedings, the developer and its consultants failed to conduct an environmental risk analysis. Even the most basic facts in this section are wrong; for example, Kaloko Fishpond waters are becoming less saline and are experiencing higher residence times, not the other way around. Groundwater flows into both ponds, not around them. Both ponds do not function as anchialine ponds, Kaloko is connected to the ocean. No effort was made to accurately portray the current status of the coastal water resources and ecosystems, or the endangered species that inhabit those ecosystems, nor was any effort put forward to assess direct, indirect, and cumulative impacts to the endangered species dependent upon the park’s water resources.

The DEIS states “*the potential exists that the development could pose secondary threats to the National Park and to its endangered birds if noxious substances such as petroleum, oils lubricants, and sewage were to migrate downslope (makai) from the project into the Park*” (p.3-57) but then makes no attempt to analyze these threats. The DEIS also does not assess the cultural impact to Native Hawaiian traditional and customary activities resulting from

degraded water quality and a restricted quantity of water. The project proponent appears to take the approach throughout the discussion of marine and brackish water resources that if the resources are currently experiencing degradation from anthropogenic activities then that is reason to continue to add to the degradation. The DEIS does not consider the proposed project in the context of other projects occurring in the National Park and elsewhere with regard to these resources. Moreover, the DEIS does not even attempt to analyze the amount of nutrients and other contaminants that will come from the proposed project, the fate and transport of those contaminants, or the risk posed to receptors (i.e. flora and fauna). The conclusions of no impact from the proposed development to water quality in the DEIS are unanalyzed and unsupported, and the document is utterly inadequate for decision makes and the public to understand the real consequences that will occur if the project is completed. It is pure speculation, contradictory to both common sense and logic, and unsupported by any credible scientific study to state that “*It is unlikely that there would be any effects to the nearshore marine environment as a result of increases in nutrient concentrations in groundwater.*”

The NPS is concerned that the cumulative effects of the combination of restricted groundwater flow from over-withdrawal and additional nutrient/pollutant inputs when the proposed developments in close proximity to the Park are built out, poses a significant threat to endangered species at ‘Aimakapā Fishpond. The U.S. Fish and Wildlife Service has identified ‘Aimakapā Fishpond as core recovery habitat for endangered Hawaiian waterbirds. The endangered Hawaiian stilt (*Himantopus mexicanus knudseni*) and endangered Hawaiian coot (*Fuliea alai*) are found at two fishponds at Kaloko-Honokohau National Historical Park. An avian botulism outbreak was documented there in 1994. The coot population was decimated, but the stilt population appeared to have been less impacted. Morin (1996) suggests that anthropogenic changes to water quality and quantity are likely to increase the potential for further botulism outbreaks. Because of the historical nature of the fishpond, the restoration actions are complex and traditional methods of draining and dredging are not readily available to the NPS, therefore additional nutrients and contaminants should be prevented from entering the fishponds.

35. Page 3-43. “*Future developments will be required to utilize the County wastewater treatment plants, hence eliminating the major source of nutrient subsidies.*” However, in Section 4.10.2, pg 4-124, the DEIS states, “*The Kealakehe Wastewater Treatment Plant shall be expanded to accommodate the projected sewage volume from the Urban Area extending south of Hina Lani Street to the Keauhou WWTP..... Representatives from the County DEM noted that there are no plans for construction of (a) decentralized WWTP in the immediately future.*” To our knowledge, there is no planned expansion of the Kealakehe WWTP. It is likely that most or all of the private developments surrounding the Park will be disposing their wastewater onsite before the County can improve their wastewater treatment capabilities; therefore, Kaloko Makai has significantly underestimated the “*cumulative changes to groundwater from the total assemblage of existing and proposed projects with the potential to alter pond and marine environments.*”



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36. Page 3-45 (and pages 3-66-67 and 3-75) the DEIS also mentions a groundwater monitoring plan to detect contaminants in the groundwater below the proposed project. The proposed groundwater-monitoring plan will include monitoring wells, and a sampling and analysis plan. Parameters to be analyzed include: pH, temperature, salinity, nitrate, ammonia, dissolved organic nitrogen, TDS, TN, phosphate, dissolved organic phosphorus and TP and any other parameters required by the DOH. The project proponents are proposing to start water sampling prior to the start of grading activity, and to sample quarterly for two years, or as required by the DOH. Two years of sampling starting at the initial grading of this project means that water quality sampling will last through the initial phases of construction and no monitoring would happen for any part of the actual use of the project site, including the use of the WWTP. Two years of sampling, regardless of when it started, is insufficient to monitor the impacts to groundwater from this project and inform decision makers and the public on how the project is adversely affecting the environment. Furthermore, DOH water monitoring protocols are designed to protect human health, not the ecological integrity of aquatic ecosystems. It is unlikely that all of the effluent generated by the WWTP will be used for irrigation. It is quite costly to install water lines to distribute the effluent and there may not be a sufficient need for all of the effluent for irrigation. Furthermore, systems breakdown and backup systems need to be in place. The DEIS does not mention what type of back-up system will be used to dispose of wastewater. The DEIS should disclose to the Kona community that injection wells will be used and to what extent. The DEIS must analyze the potential impacts to coastal resources from injection wells (utilizing the information from Maui). The DEIS does mention infiltration basins as a means of disposing of treated wastewater not needed for irrigation during wet periods. Infiltration basins should be well defined and described. The impacts of infiltration basins and injection wells on the coastal and marine resources along the Kona coast, including the resources within the National Park, were not mentioned, discussed or analyzed in the DEIS
37. Page 3-62. The information cited on this page regarding groundwater resources within the National Park suffers the same problems as identified for section 3.5.2.3.
38. Page 3-62. The statement in the DEIS that *“No adverse groundwater effects have been observed from any of the existing wells in the regions, individually or cumulatively. Therefore, no adverse effect is anticipated under the Kaloko Makai on or off-site groundwater wells”* is unsupported by references to existing scientific evidence relevant to the conclusion. The conclusion ignores the rise in chlorides due to pumping and saltwater intrusion at the Kahaluu shaft wellfield (3557-01 to -05), which skims water from the basal lens and provides much of the drinking water for the North Kona System. The conclusion also ignores reasonably foreseeable significant adverse impacts from groundwater withdrawals based upon theoretical approaches or research methods generally accepted in the scientific community, including but not limited to USGS Water Resources Investigations Report 99-4070 and State of Hawai‘i Department of Land and Natural Resources 2008 Hawai‘i Water Plan. The DEIS should have included references to credible scientific information to support the statement that existing groundwater development has had no adverse effects.

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39. Page 3-63. Alternatives to supply potable water to the proposed project include utilizing new and existing off-site high-level wells upgradient from the National Park. According to USGS Water Resources Investigations Report 99-4070, groundwater withdrawals from wells directly upgradient of the National Park will have a greater effect on freshwater discharge within the National Park. According to the DEIS, an analytical model developed by Tom Nance, Water Resources Engineering, indicates that pumping from high-level wells in the vicinity of the proposed project has the potential to raise the salinity of groundwater within the National Park by up to 53% (Table 3-6) . This predicted effect may cause unacceptable impacts to groundwater-dependent cultural and natural resources in the National Park and along the Kona coast. The NPS seeks to maintain the flow of fresh groundwater to all inland and nearshore marine waters in the National Park to fulfill the specific purposes for which the Park was established, including traditional and customary Native Hawaiian practices and the protection of endangered species. Groundwater pumping has the potential to limit both **the productivity and distribution** of culturally important flora and fauna. For these reasons, **pumping of high-elevation wells upgradient from the National Park is not an acceptable alternative to supply water to Kaloko Makai.**
40. Page 3-63. The DEIS states that *“With the addition of Palani Well No. 1, combined with the anticipated projects proposed in the region, salinity levels are estimated to increase”* in the National Park. The analysis upon which this predicted cumulative impact is based, however, did not include groundwater development associated with the proposed Kaloko Makai project (see Table 1, Appendix 7, Palani Well No. 1 (State Well No. 4158-03) North Kona, Island of Hawai‘i, State of Hawai‘i, Final Environmental Assessment). The DEIS should include the additional pumping of at least 4.8 Mgd ( but this is probably an underestimate) from high-level wells upgradient from the National Park, because this alternative is being investigated to supply water to Kaloko Makai.
41. Page 3-63. The DEIS references *“Montgomery 2009”* in several locations but this reference is not included in Chapter 11 References.
42. Page 3-64. The DEIS implies that the native orange-black damselfly can tolerate increasing salinity and temperature in anchialine pools due to the effects of pumping high-level wells. This assertion conflicts with the results of controlled laboratory experiments, which reveal that the eggs and naiads of the candidate-endangered orange-black Hawaiian damselfly (*Megalagrion xanthomelas*) are sensitive to increased salinity and temperature, and that naiads exhibit a threshold response to salinity above 15 ppt, with no naiads surviving at 20 ppt (Tango, L.K.K., 2010, The effect of salinity and temperature on survival of the orange-black Hawaiian damselfly, *Megalagrion xanthomelas*. Master’s Thesis, University of Hawai‘i at Hilo, 46 p).
43. Page 3-65. While it may be true that marine water within the National Park are already in violation of the State’s water quality standards for nutrients, including nitrates, ammonia, and phosphate, and chlorophyll-a and turbidity, this does not mean more nutrients (especially organic nutrients) would not further degrade the ecological integrity of the aquatic ecosystems within the National Park. It is pure speculation, contradictory to both common

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sense and logic, and unsupported by any credible scientific analysis to state that “It is unlikely that there would be any effects to the nearshore marine environment as a result of increases in nutrient concentrations in groundwater.” Some of the conclusions from these older studies have been contradicted in testimony and comments on previously proposed nearby developments.

44. Page 3-65 and 3-66 “Atkinson (1992) modeled the input of nutrients to the ocean down slope from two golf courses in West Hawai‘i over a four-year period. Results of the studies showed that at a location where fertilizer nutrients entered an embayment (Keauhou Bay) with restricted circulation relative to open coastal shorelines, nitrates increased by about 100% and phosphate increased by about 20% over natural input (Marine Research Consultants 2002).” To our knowledge, this model has never been validated. Model results should not be accepted as facts without sufficient validation.
45. Page 3-66. “These results indicated that even with long-term input of extremely high nutrient subsidies, there are situations where there are no negative effects to the receiving environment.” This is a false conclusion. Only a subset of the environment was reported to be sampled; no evidence offered that the proposed development is comparable to this case. The DEIS should have provided details on which nutrients, into what volume of water and coastline.
46. Page 3-67. “The physical and hydraulic characteristics of the vadose zone dampen the flux of water and contaminants to the water table. While transiting the vadose zone, contaminants such as fertilizers, pesticides, herbicides and industrial chemicals can be degraded by a process known as natural attenuation.” While natural attenuation does occur in areas that are more mesic and have deeper and more developed soil profiles, with the shallow soils, young geology and arid conditions at the proposed project site, natural attenuation is unlikely to remove all of the pollutants before they reach NPS resources. The DEIS should have contained peer-reviewed sources describing the “natural attenuation” capability of this area’s geological and climatic conditions.
47. Pages 3-68 to 3-74. The DEIS presents a summary of neighboring developments and concludes that upgradient wells and resorts have not had a negative impacts to the surrounding ecosystems. These conclusions are not supported by references to credible scientific analysis nor are the conclusions supported by any reference to scientific data. As stated, the conclusions are the unsubstantiated opinions of consultants for the Koloko Makia project proponent. The DEIS should include credible scientific evidence to support conclusions that upgradient wells and development have not had a negative impacts. It is unclear how the discussion of three resorts is relevant to the discussion of how the proposed project will adversely impact the coastal and marine resources within the National Park and along the Kona coast. Information dealing with impacts to the National Park or from situations posing similar threats (i.e. Maui) is more relevant.

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48. 3-74 and 3-75. As mentioned before, a PPP is a statement of good intentions and is not very self-executing or enforceable. PPP’s are difficult to enforce and monitor the effectiveness, and in fact, we know that they are sometimes simply ignored.
49. Page 3-75. Since this project is so large and includes a hospital, there should also be reporting for pharmaceuticals and endocrine disrupting compounds, in addition to reporting requirements to the DOH’s, Wastewater Branch.
50. Page 4-2. “Based on available information about the proposed development and the visual gravity of industrial/commercial development flanking the project area to the north and south, and Queen Kaahumanu to the west (makai), the proposed project is considered to add to an established urban trend in coastal North Kona.” This sentence is inaccurate regarding the visual gravity of industrial/commercial development flanking the project area. The majority of the areas surrounding the proposed project area is now open space.
51. Page 4-4. “Summary of Previous Archaeological Studies” this section (including Figure 4-1) needs to be updated to include more information, including but not limited to the data recorded in the following survey reports:
- Emory, K.P., and L.J. Soehren  
1971 Archaeological and Historical Survey, Honokōhau Area, North Kona, Hawai‘i. Prepared for State Department of Land and Natural Resources. Departmental Report Series 61-1. Department of Anthropology, B.P. Bishop Museum, Honolulu.
- O’Hare, Constance, and Susan T. Goodfellow  
1992 Kohana-Iki Resort, Phased Archaeological Mitigation Program, Phase II—Data Recovery. Land of Kohana-Iki, North Kona District, Island of Hawai‘i. Paul H. Rosendahl, Ph.D., Inc., Hilo.
- Tomonari-Tuggle, M.J., and H. David Tuggle  
2006 Archeological Survey of Lands Surrounding Kaloko Fishpond, Kaloko-Honokōhau National Historical Park (KAHO). International Archaeological Research Institute, Inc.
- Monahan, Christopher M., Trevor Yucha, and Connie O’hare  
2010 Draft Supplemental Archaeological Inventory Survey for the Proposed QueenKa’ahumanu Highway Widening Phase 2 Project, Kalaoa, Kalaoa-O’oma, O’oma 2, Kohanaiki, Kaloko, Honokōhau 1-2 and Kealakehe, North Kona and South Kohala Districts, Hawai‘i Island. Cultural Surveys Hawai‘i, Inc. Prepared for SSFM International, Inc.
- Reinecke, John E.  
1930 Survey of Sites on West Hawai‘i[also, Archaeology of Kona, Hawai‘i]. MS, in the files of the State Historic Preservation Division, Department of Land and Natural Resources, State of Hawai‘i .

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Renger, Robert C.

1974 Human adaptation to marginal coastal environments: the archaeology of Kaloko, North Kona, Hawai'i. Ph.D. dissertation, University of California, Santa Barbara.

52. Page 4-4. Summary of Previous Archeological Studies, Information needs to be provided clarifying whether these sites have assigned SIHP numbers.
53. Page 4.8. A total number of lava tubes encountered, including synopses of caves containing cultural materials found within the project area should be presented so that the public and decision makers can make an informed decision.
54. Page 4-12. Table 4-4, this table, along with site types, functions, and mitigations should not be considered finalized until the AIS is approved by SHPD. Regarding all the trail remnants listed with mitigations of "no further work," NPS supports the SHPD stance that trail segments should be preserved and incorporated into development plans whenever possible. These trails are prehistoric and fall under the Highways Act of 1892 (HRS 264b).
55. Page 4-18. The DEIS states that *"the archaeological surveys have been submitted to SHPD for their review. At the time of the preparation of this DEIS, SHPD was still reviewing the archaeological inventory surveys."* Until SHPD approval has been received, the information provided in the DEIS cannot be considered final as it is currently based on the unapproved AIS. If the AIS changes as a result of the SHPD's review and approval, then a new analysis will be required to analyze impacts to NPS lands, resources and associated landscapes.
56. Page 4-30 *"Historic properties north and south of the project area are of less concern due to the extensive industrial/commercial developments separating the project area from the potential sites there."* This statement is inaccurate. The majority of the areas to the north and south are now open space, with a high concentration of historic properties. The background research for these sections should be included in this study and the analysis of impacts to the cultural resources and cultural landscape of the area.
57. Page 4-33, ¶6 All appropriate parties, including the NPS, should be allowed to comment on the burial treatment plan(s) for the proposed project area.
58. Page 4-34. ¶1 The first sentence is contradictory to the information provided on page 4-29, the *"Off-Site Potable Well Field"* section, paragraph two *"The AIS recommended that seven burial sites (10701, 10717, 10722, 10728, 10740, and 10754) and one heiau with a burial (10736) be preserved. Four of these sites are located within parcel 062 and the remaining are located on parcels 057, 058, and 059. SHPD concurred with the recommendations on October 24, 2005. As a result, a preservation plan was submitted and approved by SHPD in 2006 and Kaloko Heights Associates, LLC, property owner, submitted a Declaration of Archaeological Easements for the preservation of all seven sites."* This is unclear. There should be an explanation of which surveys correlate to the offsite well field.

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59. Page 4-84. The vehicle emissions study only reports using traffic at intersections, while the proposed project is on a significant hill between two highways. Vehicles utilize greater amounts of fuel climbing up hill; the plans include 3 plus 2 lanes entering the project from the bottom of the hill vs. 1 lane entering the project from the top of the hill. The fuel usage and emissions from the bulk of a 5,000-home community driving vehicles uphill must be analyzed.
60. Page 4-52. Near Queen Ka'ahumanu Highway, near the present water tank, there are major sections of trail which are still intact and should be preserved. Kaloko Makai should consult with NPS, lineal and cultural descendants, Na Ala Hele and SHPD on this. These trail sections are not shown in any of the figures within this document and are within the Conservation area.
61. Page 4-53. The *"Mitigation Measures"* section is inadequate and does not provide specific mitigations. This section directly quotes what is outlined in the "recommendations" section of the CIA. However, no specifics are mentioned about how the Kaloko Makai project plans to use the recommendations as mitigation measures. For instance, the third bullet in this section notes that *"Efforts should be made to protect...water collection lava tubes"* yet many of these features are listed to receive no additional work in the AIS. It is unclear how these features be protected. The DEIS should have stated if these features will be avoided as a mitigation measure.
- This section should have specifically addressed how the proponent of the project will specifically address the concerns outlined in the community consultations, i.e. how Kaloko Makai will implement the recommendations into planning development.
62. Page 4-54. *"The trail entirely traverses pāhoehoe and is generally well defined throughout the eastern portion of the parcel, except near the makai parcel boundary where bulldozing and grading has nearly destroyed the ahupua'a wall and eliminated any definitive sign of the trail."* This statement is inaccurate. There are definitive signs of trail in the makai parcel. The trail within the project area is clearly visible up until it crosses Hina Lani (near the intersection of Hina Lani and Kamanu). Furthermore, although in some areas, the wall has been historically robbed for rock, some sections may have fallen over, or been bulldozed, the remnants of the wall are in clear view and the footprint (i.e. form and outline) of the original wall remain.
63. Page 4-54. *"Archaeological data created by others makai of the Queen Ka'ahumanu Highway"* should be clarified. What are the citations.
64. Page 4-55. ¶4 First Sentence *"Since the integrity of the historic trail is lost at that point, due to Hina Lani road construction.."* is misleading. The lower portion of the trail has been identified and the NPS has recommended the appropriate preservation measures.
65. Page 4-55. *"Community members and groups responsible for the long-term care of the Kohanaiki and Kaloko Ahupua'a, as well as cultural practitioners who utilize the area for*

*gathering and for cultural and educational activities, should be further consulted regarding the above issues and other concerns throughout the planning, development and operation of the proposed housing development. This consultation should include all interested community groups and individuals who have a stake in the project area.*” Using Kaloko Heights’ treatment measures that were reached between the “community” and Kaloko Heights is grossly inadequate as a treatment plan for Kaloko Makai’s preservation of the Kohanaiki/Road to the Sea Trail. NPS believes that the agreement that was accepted for Kaloko Heights is not acceptable for the remainder of the trail. Kaloko Makai has a responsibility to meet with community members, groups and cultural practitioners, as well as formally consult with the NPS to determine the best treatment for this and other trails within the project area. This trail is eligible for the National Register of Historic Places as a contributing element to the National Park and the National Historic Landmark.

66. Page 4-56 – 4-57. Potential Impacts and Mitigation Measures, NPS recommends rewriting this section to preserve the existing trail and buffer zone rather than altering it.

#1 The DEIS should explain how the trail will be “*retained in perpetuity.*”

#2. There should be a preservation corridor to be used such that schoolchildren, community members, etc. experience a more meaningful sense of place when using this ancient trail. The thirty foot trail right of way will not provide the user an authentic experience within the unique cultural landscape of this area, part of the historically significant lifeline between the historic mauka village and the makai coastal villages of Kaloko and Honokōhau, which now comprise the National Historical Landmark. Instead of a rigid thirty foot buffer, the corridor should be fluid to include significant cultural and natural features along the route. NPS archeological staff from Ala Kahakai National Historic Trail, working with descendent communities and the State Historic Preservation Division and local communities should be consulted to establish an appropriate corridor. Trail buffer areas should not be physically altered whatsoever. Altering the landscape within buffers negates the purpose of the trail buffer and adversely impacts the setting and character of the trail, as well as the integrity of the trail as a historic property.

#3. No physical scarring or alteration of existing trail features or buffer zones should take place. The priority should be that the trail is preserved. One option may be overpasses and bridges.

Cutting and filling within the trail corridor is not acceptable and should not be allowed. Altering the entire landscape and then marking where the trail used to be is not an adequate preservation measure for this trail. Removing the trail materials and replacing them in the same horizontal alignment is not acceptable treatment of a historic property under 6E or Section 106 preservation standards. State Historic Preservation Division and the NPS should be consulted as to the treatment plan for the trail. Cut and fill stepping of the landscape is not the only alternative for land modification in a subdivision. As an example, the developer could design grading pad areas only for planned structures; post and pier construction is also a method used to minimize destruction of the natural landscape and cultural features.

#4. The trail should not be physically altered. No vertical or any other changes to this historic trail are acceptable. The text should be revised to read “*The original trail surface, and other cultural resources located within the trail corridor, including, but not limited to, existing native trees will be retained.*”

#5. The NPS agrees that cultural features along the existing Trail shall be preserved and incorporated into the preservation corridor. When significant cultural resources are located further away from the Trail, the Trail preservation corridor should be adjusted to incorporate and preserve them. Cultural and natural resources should be preserved in place, as moving them destroys the spatial context and integrity of the resource.

#6. First sentence should read “*In further consideration of existing governmental rules and regulations pertaining to preservation of historic and cultural resources any trail crossing will not physically scar or alter the original trail fabric, features or corridor in any way.*” For example: Metal (e.g., marine aluminum) grate crossings-bridges can be built for any trail crossings. Metal grates can allow the entire original trail and buffer land surface to be preserved intact, allow people to view the original trail surface and walk the original trail route within inches of the tread elevation. In many cases only two tire width grates would be needed to allow automobiles to cross trails; large trucks and heavy construction equipment can be directed to alternative entrances for their occasional access needs on the two sides of the trail. Heavy construction equipment should not cross the trail, heavy equipment entry to areas near the trail should be made from adjacent land, not across the trail. Recommend defining heavy as the weight of a horse or cow (which are likely to have used or crossed the trail before).

Recommend if the developers are not willing to propose crossings that no trail crossings, except pedestrian traffic be allowed, without another environmental assessment; roadways already exist on both sides of the trail.

The NPS requests to be consulted with in regards to any and all Trail crossings.

#7. The NPS recommends that such details should be determined in the Final Preservation Plan for the Trail after the necessary and appropriate consultation with descendants, Na Ala Hele, the SHPD and the NPS.

#8. Existing rock walls should be preserved in situ. Replace existing text with “No rock walls will be moved or altered.” These are historic cultural structures to be preserved. Routes around existing rock walls will be developed or small bridges constructed for pedestrian crossing.

#6, 7 and 8 The sentence “*At this early stage of the planning process for Kaloko Makai it is premature for SCD to propose the number and location of specific Trail crossings.*” is inconsistent with the detailed figures provided in this EIS and the concept of an EIS. The numbers and locations of trail and wall crossings as well as changes in walls, trails, and

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buffer zones need to be disclosed so that their individual and cumulative effects can be evaluated in the EIS. A map-plan is provided in the DEIS. Does the above comment imply that Kaloko Makai does not intend to follow these plans? If the figures and the calculations in the DEIS are wrong, then the analysis presented of impacts to resources is premature and inadequate.

#9. This section's connection to the trail is unclear. Above it is noted that any native trees within the trail corridor will be preserved in place. NPS recommends removal of this point from this section of the EIS. In this harsh dry landscape the location where a tree can survive is uncommon and very unique. The spacing and location of the native trees can be vital to the survival of organisms that depend on them for shelter and food. Without specific details, removal of trees from this landscape is not advisable.

#11 "Where the Trail intersects with Hina Lani Street, SCD will realign the remaining lower portion of the Trail from that point to run parallel with and adjoining the Hina Lani right-of-way down to Queen Ka'ahumanu Highway." No existing historical structures or artifact (i.e. fragments of existing trail) should be altered; nothing existing should go away. New trails leading from the historic trail to the intersection, crosswalks, and walkways along the roads can be constructed where they do not physically alter existing historic trails and buffers. NPS should be consulted on the alignment of the trail between Ka'ahumanu Highway and the trail/Hina Lani intersection.

#12. Kaloko Makai should incorporate Hawaiian cultural perspectives into the overall planning and execution of the development including the treatment of the 'aina within the project area by preserving the natural contours, geologic features and existing cultural features, not terraforming the project area into a state unrecognizable from the original landscape.

67. Page 4-57. "Roadways and Traffic". As noted in the DEIS the existing traffic conditions are currently highly impacted and this proposed project will further add congestion. Park visitors use these roads to access the Park and traffic contributes to their overall park experience. No impact analysis of traffic, or its mitigation, to the National Park is made in the DEIS.

68. Page 4-73. Noise impacts to Kaloko-Honokōhau National Historical Park are not discussed. Significant noise increases are mentioned but only mentions that these impacts are to undeveloped property. The analysis needs to describe the impacts to the NPS resources. What are the Leq levels at 50 and 100 ft on Park property (Table 4, page 13)? Based on the information in the tables in Appendix N, there appear to be significant additional noise impacts from project related traffic increases. Since Kaloko-Honokōhau National Historical Park is a noise-sensitive area, there should be discussion of how traffic noise and construction noise will impact activities at the Park and what measures will be implemented to mitigate the noise impacts.

- a. Appendix N Table 6 Discussion needs to identify where the 65 DNL and 75 DNL setback contours fall on Park property for Year 2011 and 2035.

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- b. Appendix N Page 32 Chapter VII should discuss project-related noise impacts (traffic noise and construction noise) to Kaloko-Honokōhau National Historical Park and possible mitigation measures.

69. Page 4-81. Six-foot high sound attenuation "walls" along roadways are likely to look out of place in with the existing landscape, while six-foot piles of lava rock can likely be made to look like native 'a'a lava and edges of pahoehoe flows. Native plants on the sides and top of such a constructed lava barrier would contribute to sound attenuation and appearance of such a structure. Utility conduits and access points could be incorporated into lava rock if extensive sound barriers are necessary.

70. Page 4-84. The NPS disagrees with the conclusion that there "may potentially result in a long-term increase in emissions." There will be a long-term increase in emissions. Assuming that each household on average owns 1-2 vehicles, it is safe to say that this development will mean 5-10,000 additional vehicles in the vicinity which will mean a significant amount of pollutants being introduced into the air and water in the area. The DEIS contains no analysis of impacts to NPS resources and Native Hawaiian cultural practices from increased emissions.

71. Page 4-86. Section 4.7, this section needs to address the major visual impacts that this project will have on Kaloko-Honokōhau National Historical Park and the Honokōhau Settlement National Historic Landmark. The Park and Landmark house over 400 archaeological sites, numerous ethnographic resources as protected resources. These resources are also protected under Section 106 of the National Historic Preservation Act. Under this act visual impacts must be taken into consideration as they can affect the setting of historic properties eligible for the National Register of Historic Places. These sites, ethnographic resources, the Park and the NHL as a whole will be significantly impacted by the alteration of the viewshed by this project. Mitigation measures will need to address these impacts.

72. Page 4-86. Project lighting will also have a negative effect on visual resources and nightscape in the National Park. Light pollution of the night sky will interfere with visitor experience and evening traditional cultural practices. No impact analysis of light pollution, or its mitigation, to the National Park is made in the DEIS.

73. Page 4-87. "The proposed project will not impact significant mountain or mauka views..." This statement is inaccurate. Currently, this proposed project area consists of large expanses of open space, this project will drastically change the viewshed and visual resources of open space, highly valued in the Kona community, to an urban landscape and thus will have major impacts on both mauka and makai views of the area. In addition, the mauka changes to viewshed from the Park and National Landmark from over 400 National Register-eligible historic properties affects the integrity of these sites by affecting the setting, feeling and association of these resources.

74. Page 4-91. Section 4.8.5., this section does not analyze the impacts to the Park or Landmark or Ala Kahakai National Historic Trail. The plan does not address impacts that the influx of 5000 new residences in the immediate vicinity will have on resources in the park. Major impacts to Park facilities and resources will occur as a result of the Park becoming a "recreational facility" to many thousands of people. The NPS will be impacted at many levels responding to the inevitable damage to resources and increased facility demands. Protected green sea turtle habitat is dependent on low levels of human disturbance, as is other endangered waterbird habitat. The National Park is already experiencing high levels of visitation and dealing with overcrowding of facilities and overuse of resources along the coast. The introduction of thousands of new regular users would mean overextension of staff, rapid depletion of ocean resources, impacts to cultural practices and high potential of damage to cultural resources such as archaeological sites. The analysis in this section is inadequate.

75. Page 4-99. The National Park Service questions the need for 5,000 more homes in North Kona. During the 2010 census, one fifth of the homes on Hawai'i Island were vacant (West Hawai'i Today, June 15, 2011).

76. Page 4-107. Water demand calculated in Table 4-24 is incorrect due to several errors and results in a significant underestimation of water demand for the proposed project. Errors in Table 4-24 should be corrected to provide an accurate estimate of the water demand for this proposed project. More specifically:
- a. The 20-acre wastewater treatment plant and 1.7-acre desalination plant are not explicitly listed in Table 4-24. Revise Table 4-24 to include water demand of 4000 gpd/acre, per Hawai'i County Department of Water Supply guidelines, or explain why a different rate was used.
  - b. Water demand for Phase 1 Parks is 54,000 gpd/acre but is 6,000 gpd/acre for Phase 3 Parks in Table 4-24. These values are not consistent with the rate of 4,000 gpd/acre listed under "Assumptions" for Table 4-24. Correct the water demand for Parks or explain why different rates were used in Table 4-24.
  - c. Water demand for Phase 2 Parks is not included in Table 4-24. Table 2-6 indicates that Phase 2 will include a 13-acre park. Revise Table 4-24 to include the water demand for a 13-acre Phase 2 Park.
  - d. The acreage for the Phase 2 School in Table 4-24 is not consistent with Table 2-6. Revise Table 4-24 to include water demand for an 18-acre Phase 2 middle school.
  - e. Water demand for the Phase 2 School in Table 4-24 is 6,000 gpd/acre, which is not consistent with water demand of 4,000 gpd/acre used for Schools in Phases 1 and 3. Revise Table 4-24 to use a consistent water use rate for Schools or explain why different values were used.
  - f. A rate of 400 gpd per unit is used to estimate residential water demand in Table 4-24. This rate is not consistent with the rate used by the Hawai'i County Department of Water Supply to estimate water demand for North Kona. The 2011 Water Use and Development Plan Update (p. 2-12) uses a value of 1000 gpd per unit for single family residential units in North Kona based upon actual historic consumption data. Revise the residential water demand in Table 4-24 to be consistent with the

Department of Water Supply guidelines for North Kona.

77. Page 4-107. Table 4-24, total water demand was recalculated based upon information presented in Table 2-6 of the DEIS and the Hawai'i County Water Use and Development Plan Update water consumption guidelines (p. 2-12). The revised table below indicates that the average daily water demand for the proposed project could be as high as 6.9 Mgd, over two times that estimated in the DEIS. The DEIS should have (1) evaluated whether the proposed alternatives to supply potable water are sufficient to meet this water demand, and (2) evaluated the potential effects of each alternative on the water resources and groundwater-dependent ecosystems in the area of the proposed project.

NPS Recalculated Water Demand for Kaloko Makai Draft Environmental Impact Statement:

Zoning Designation	Units	Acres	Water Use Unit Rate (gpd/unit or acre)	Average Daily Demand (gpd)
Residential housing	5000		1000	5000000
Commercial		282	3000	846000
Light Industrial		75	4000	300000
Judiciary		10	3000	30000
Schools		42	4000	168000
Parks		57	4000	228000
Hospital		40	4000	160000
Police Substation		3	3000	9000
Wastewater treatment		24	4000	96000
Desalination Plant		1.7	4000	6800
<b>Project Total (Average Demand)</b>				<b>6928800</b>
<b>Average Demand (Mgd)</b>				<b>6.9</b>
<b>Maximum Daily Demand (Mgd)</b>				<b>10.4</b>
<b>Peak Hour Demand (Mgd)</b>				<b>34.6</b>

78. Page 4-110. The DEIS states that reverse osmosis concentrate will be discharged in on-site disposal wells at depths sufficient to reach groundwater with "30 parts per trillion (ppt) salinity." The notation is also defined on Page G-5 as "parts per trillion." This is inconsistent with the more feasible definition given on Page 3-26, which states that the concentrate will be disposed in strata where groundwater salinity is "30 parts per thousand (ppt) or greater." The DEIS should be revised to confirm the targeted salinity of the strata into which reverse osmosis concentrate will be disposed.

79. Page 4-126. "Wastewater Treatment Alternatives" While the use of recycled water to the R-1 level is the appropriate treatment to reduce viral and bacterial pathogens for irrigation uses

around residential areas, the stated level of nutrients contained in the wastewater effluent is a significant concern.

80. Page 4-129. *“During periods of wet weather, excess R-1 water will be disposed of via infiltration basins.”* The DEIS has no analysis of impacts to aquatic ecosystems resulting from the disposal of sewage effluent via infiltration basins.
81. Page 4-129. Table 4-25 lists potential uses for treated wastewater, however, there are no calculations for the actual amount of wastewater that will be disposed of via irrigation or other methods. The project will occur in phases and it is unlikely that the supply of treated wastewater and the demand for treated wastewater will be in synch. Considering the cost of installing separate waterlines for the treated wastewater, without specific volumes of wastewater and timelines, there is no guarantee that all of the treated wastewater will not be disposed of via the infiltration basins.
82. Page 4-132 *“It is assumed that approximately 15% of applied irrigation water will percolate down to the basal ground water. As the excess irrigation water percolates downward through the unsaturated zone to the groundwater, removal rates of nitrogen and phosphorus from the water will be significant.”* No scientific data or scientific studies are provided to support the assumptions that 1) fifteen percent of the irrigation water will reach groundwater and 2) nitrogen and phosphorous removal rates will be “significant.” Public review and decision-making actions cannot rely upon unsupported claims and assumptions regarding potential impacts to nationally significant resources.
83. At the proposed O’oma Beachside Village development, less than 1 mile from the proponent’s project, Waimea Water Services estimated that approximately 54% of the total irrigation water used would infiltrate into the aquifer. (The Water Development Impacts Study for the Shores of Kohanaiki, Figure 6, Waimea Water Services, Inc., 2007). There is a large discrepancy in the estimates for the two developments that are located in the same general area with the same soil composition. The DEIS should have explained this discrepancy and provide data to support the stated assumption of 15%.
84. Page 8-1. *“Relationship Between the Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity”* The DEIS fails to capture the cumulative impacts, secondary impacts, irreversible commitments of resources, and probable adverse environmental effects to the area, especially at Kaloko-Honokohau NHP, as suggested by the comments listed above.

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Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Dushesne:

Thank you for your letter dated October 6, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments, as referenced:

1. *Page 1.1 The size of the off-site potable well field is stated as 3.5 acres. This is inconsistent with other statements on this page, and elsewhere in the document, which refer to the size of the off-site well field as 18 acres.*

Response: The off-site potable well field has been omitted from consideration in the forthcoming Second DEIS.

2. *Pages 1-12 and 4-8. The DEIS does not state how many 1,2,3 etc. story buildings will be constructed and where will they be located. Page 1-12 and 4-81 mention "single story structures" and "multistory structures" but not how many or where they will be located. There is no clear way to evaluate the environmental impact (e.g., aesthetics) without knowing the basic size and shape of the buildings and where they will be located relative to existing features in the area.*

Response: The Project will be designed to be consistent with the Kona Community Development Plan (Kona CDP), which seeks to direct future growth patterns toward compact villages, preserving Kona's rural, diverse and historical character. The majority of future growth should be directed north of Kailua, with some future growth in the Kailua to Keauhou area, in the form of compact villages that offer increased density and mixture of homes, shops and places to work.



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The Kona CDP goes on to describe preferred building heights as follows: T-3 Suburban transects, Typical Building Height is 1- to 2-Story with some 3-Story; T-4 General Urban transects, Typical Building Height: 2- to 3-Story with a few taller Mixed Use buildings and for T-5 Urban Center transects, Typical Building Height: 2- to 5-Story with some variation (all, excluding attics and raised basements.) It further states, stories may not exceed 14 feet in height from finished floor to finished ceiling, except for a first floor commercial function, which shall be a minimum of 11 feet and may be a maximum of 24 feet. A single floor level exceeding 14 feet, or 25 feet at ground level, shall be counted as two (2) stories.

Kaloko Makai will conform to these design standards. At this stage in the planning process, the specific heights of improvements within the project have not been identified.

3. *Page 1-17. Section 1.7.8, lists unresolved issues related to the DEIS but does not list the uncertainty related to the hydrologic connection between the high-level and coastal groundwater systems. The hydrologic connection between the high-level and coastal groundwater systems is one of the main factors that will control how the withdrawal of fresh groundwater for the proposed development will affect the quantity and quality of groundwater resources in down gradient areas. The DEIS (p. 3-15) states the following, which highlights the uncertainty related to the connection between the high-level and coastal groundwater systems "In addition to it creating a substantial reservoir of potable quality water, this subsurface feature also controls the location and manner of groundwater movement into the down gradient basal lens. While the hydraulic relationship between the two groundwater bodies is not yet understood, it is undoubtedly the reason for the anomalous characteristics of basal groundwater in the Keahole to Kailua area (Nance 2008)." Also on p. 3-15, the DEIS states "Groundwater responses when these wells are ultimately used to their full capacity may shed light on the unknown aspects of this groundwater occurrence, including the geologic feature which creates the high-level water, the hydraulic relationships among the differing high-level groundwater compartments, and where, how and if the high-level groundwater drains into the basal lens (Nance 2008)." Both of these statements indicate that it would be appropriate to list the uncertain hydrologic connection between the high-level and coastal groundwater systems as one of the important unresolved issues in Section 1.7.8.*

Response: Two deep monitor wells (State Nos. 3858-01 and 3959-01) have provided insight on the occurrence of high level groundwater and its relationship to the brackish basal lens that exists in the nearshore area including Kaloko-Honokohau National Historic Park. These deep monitor wells establish that most, if not all of the high level groundwater passes far beneath the basal groundwater rather than discharging into it. Results of these





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two wells indicate that the subsurface "mechanism" creating the high level groundwater and its physical separation from the basal lens is a series of poorly permeable lavas flows which total hundreds of feet thick and create an effective hydrologic separation between the two groundwater bodies.

A deep test well is to be drilled at the upper end of the project site, the results of which will be used to determine the relationship of the high level and basal groundwater in the project's mauka-makai corridor.

The alternatives being considered for the Project's drinking water supply have been narrowed down to those that can be affirmatively demonstrated as having no impact on the basal lens. These are limited to use of the high level groundwater drawn from strata far below the basal groundwater so as not to impact it and desalinating saline groundwater, also drawn from below the basal lens. The water supply alternatives being considered are described in detail in the 2012 report by Tom Nance Water Resource Engineering, which will be included in the forthcoming Second DEIS. The alternative ultimately implemented will have to affirmatively demonstrated that its groundwater extraction will not diminish the flow of groundwater into Kaloko-Honokohau National Historic Park.

4. Page 2-10. "Kaloko Makai would consist of homes, ranging from traditional single-family homes to mixed-use, mid- and higher-density multifamily units." Figure 2-7, County General Plan Land Use Pattern Allocation Guide, does not indicate any medium or high-density zones at or near the proposed project.

Response: Almost the entire Kaloko Makai site is designated as Urban Expansion Area under the County General Plan Land Use Pattern Allocation Guide. The County of Hawaii General Plan defines Urban Expansion Areas to allow for a mix of high density, medium density, low density, industrial, industrial-commercial and/or open designations in areas where new settlements may be desirable, but where the specific settlement pattern and mix of uses have not yet been determined.

Furthermore, section 15.1 of the General Plan (February 2005, as amended) calls for the preparation of community development plans "to translate the broad General Plan statements to specific actions as they apply to specific geographical areas." The General Plan requires CDPs be adopted as an "ordinance", giving the plans force of law. The CDPs are long-term plans with a planning horizon to the year 2020, consistent with the General Plan.

The Kona CDP recognizes that the General Plan LUPAG Urban Expansion Area is larger than needed in order to accommodate the projected growth within the planning



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horizon, so it emphasizes that future growth within the urban area is encouraged in a pattern of compact villages at densities that support public transit.

Transit-Oriented Developments (TODs) and Traditional Neighborhood Developments (TNDs) are identified as the planning tool to manage this anticipated growth within the defined "Kona Urban Area." The Kona CDP defines these as compact mixed-use villages, characterized by a village center within a higher-density urban core, roughly equivalent to a 5-minute walking radius (1/4-mile), surrounded by a secondary mixed-use, mixed-density area with an outer boundary roughly equivalent to a 10-minute walking radius from the village center (1/2-mile).

The distinction between a TOD and TND is that the approximate location of a TOD is currently designated on the Official Kona Land Use Map along the trunk or secondary transit route and contains a transit station, while TND locations have not been designated and may be located off of the trunk or secondary transit route at a location approved by a rezoning action.

According to the Kona-CDP, Transit Oriented Development (TOD) and Traditional Neighborhood Design (TND) Village developments shall exhibit the following characteristics and conform to the following design principles:

- a) Commercial Village or Neighborhood Villages with mixed uses. A mixture of non-residential and residential uses of various densities, intensities and types designed to promote walking between uses and a variety of transportation modes such as bicycles, transit and automobiles.
- b) Functional Villages. Villages are located and designed to embrace a full range of urban facilities including neighborhood retail centers, a variety of housing types, public/civic space and a variety of open space amenities,
- c) Walkable streets. Village designs are based on reasonable walking distances, the location of parking and the design of streetlights, signs and sidewalks.
- d) Interconnected circulation network. An interconnected street system that prioritizes pedestrians and bicycle features and links neighborhoods to shopping areas, civic uses, parks and other recreational features.
- e) Respect for natural and cultural features. Development activity recognizes the natural and environmental features of the area and incorporates the protection, preservation and enhancement of these features.
- f) Public Transit. A major public transit stop shall be located within the Village Center of most Villages.

Transit Oriented Development (TOD) would integrate housing, employment, shopping and recreation opportunities. Villages would be designed around transit stations/stops which would reduce the need for daily trips and financially support the expanded transit system. TOD Urban Villages are located a minimum of one mile apart,



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between major transit stations, along Ane Keohokalole Highway trunk route in order to preserve the transit efficiency of this route.

Transect Zones (T-Zones) organize the density, complexity and intensity of the land use within the TOD Village. The operating principle is that there is an urban core with a main center focus such as a transit station and plaza. This urban core area, which is spatially defined based on walkable distances called Pedestrian Sheds, has the highest density, complexity and intensity of uses. The land uses transition to less dense uses moving away from the center.

The Transect Zones that correspond to the urban core, secondary area and greenbelt referred to in the Kona CDP and Village Design Guidelines are as follows (also noted are the allowable residential densities in each transect zone):

- i. Urban Core
  1. T-5 Urban Center (Maximum density by right - 30 units per acre)
    - i. Consists of higher density mixed use building that accommodate retail, offices, row-house and apartments. Shops mixed with townhouses, larger apartment houses, offices, work places and civic buildings,
  2. T-4 General Urban (Maximum density by right - 12 units per acre)
    - i. Mixed use but primarily residential urban fabric. Mix of houses, townhouses and small apartment buildings with scattered commercial activity.
- ii. Secondary Area
  1. T-3 Suburban (Maximum density by right - 6 units per acre)
    - i. Low density residential areas adjacent to higher zones that have some mixed use.
  2. GB1- Greenbelt Natural Zone
    - i. Lands approximating a wilderness condition, including land unsuitable for settlement due to topography, hydrology or vegetation.
  3. GB2 Rural (Maximum density by right - .25 units per acre)
    - i. Rural zone consists of sparsely settled lands in open or cultivated states. Typical buildings include farmhouses, agricultural buildings, cabins and villas.
- iii. Mixed-Use Industrial
  1. SD1 (Maximum density by right - 12 units per acre)

The Kaloko Makai project was conceived, planned and designed to be consistent with the Hawai'i County General Plan, the Keāhole to Kailua Development Plan (K to K Plan) and the Kona Community Development Plan (Kona CDP.) Kaloko Makai is



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situated in the Kona Urban Area of the Kona CDP and Urban Expansion Area in the General Plan and serves to implement these planning documents.

Kaloko Makai is a compact, mixed-use, master-planned community offering a wide range of housing types and affordability, and a variety of businesses and employment opportunities, focused around an initial urgent care medical facility with land available (at no cost) for a new Kona regional hospital.

Kaloko Makai has been designated as a Neighborhood Transit Oriented Development (TOD) in the Official Kona Land Use Map of the Kona Community Development Plan.

5. Page 2-16. Section 2.1.5, ¶2 The references for the radiocarbon dates are not given.

Response: The reference (Walker and Haun, 1988) from CSH report for Kaloko Makai for TMK 7-3-009:017, page 38, has been added to the forthcoming Second DEIS.

6. Page 2-31 to 2-38 (Figures 2-11 to 2-14). The use of the term "natural zone" is unclear.

Response: The forthcoming Second DEIS defines the Natural zone as a landscape buffer or open space area.

7. Page 2-14. No explanation is provided for the proposed change in land use designation from agriculture land to urban for the dryland forest preserve. If a land use designation change is necessary, conservation would be more appropriate for a forest preserve.

Response: Based on comments received, the reclassification of the Dryland Forest Preserve to the Urban district has been dropped from consideration. It will remain in the Agricultural district.

8. Page 2-44. "Archaeological data created by others makai of the Queen Kaahumanu Highway" should be clarified and the references listed.

Response: Studies conducted for areas makai of Queen Kaahumanu (makai of the project site) were conducted for other projects by Donham (1986) and Renger (1971); Cordy et al (1991). See CSH report for TMK 7-3-009:017, page 21. These references have been added to the forthcoming Second DEIS reference list.

9. Page 2-44. The discussion of where and how the trail will be realigned is unclear.

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Response: The Kohanaiki Trail ("Road to the Sea" Trail) bisects the project site and is well defined for most of its mauka alignment. Below Ane Keohokalole Highway the trail alignment is not certain.

The Alakahakai National Historic Trail (NHT) archeologist, the Petitioner's representatives and others have been on various site visits, including three site inspections with employees of the NPS.

After extensive consultation with the community, an agreement was reached on trail treatment. An archeologist for the Alakahakai NHT also made recommendations on the location of the trail. The Petitioner's representatives discussed these treatment measures with Na Ala Hele and the general consensus by all was that the treatment of the trail was appropriate.

Treatment of Kohanaiki Trail will closely follow the agreement established after extensive discussions with the interested community at Kaloko Heights.

This translates to a 10' wide trail pathway (meandering mauka to makai on what is believed to be the historic alignment) with a 10' wide buffer on each side of the trail (30' wide in total). In places where cut and fill are necessary, the elevation of the trail may change, but the general alignment will not be disturbed.

As noted in the DEIS, "Where the Trail intersects with Hina Lani Drive, Kaloko Makai will realign the remaining lower portion of the Trail from that point to run parallel with and adjoining the Hina Lani Street right-of-way down to Queen Kaahumanu Highway. Since the integrity of the historic trail is lost at that point, due to Hina Lani road construction, the adjoining industrial subdivision and the water tank, the Petitioner will realign the trail and have it run down the southern boundary of the property (fronting Hina Lani,) from the point of intersection with Hina Lani down to Queen Kaahumanu Highway. This alignment gives the users of the trail easy access to cross Queen Kaahumanu or Hina Lani at the bottom, as there are crosswalks with crossing signals at that point." This is also noted on the Site Plan map of the project.

10. Page 2-45. "Kaloko Makai will also incorporate two trails that run through the dryland forest" is unclear. The reader cannot tell if the trails will be protected. There also should incorporate a preservation corridor to protect the integrity of the trails as historic properties under Section 6E.

Response: The AIS states "Two (2) of the preserve sites are major intact trail systems (site -26371 and -26418) that run for over 500 meters each. The site -26371 trail (which is in poor condition in some places) is recommended for preservation only in part, with the section that intersects site -26418 of particular

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interest for preservation (see Figure 164). Site -26418 is largely in very good condition and is recommended for preservation with certain breaches allowable in the course of the preservation of the trail."

The trails within the interior of the Dryland Forest will be preserved in accordance with the State Historic Preservation Office and be accessible to the public.

11. Page 2-48; Page 4-106; Page 5-40. The DEIS states that average potable water demand will be approximately 3.2 Mgd and maximum water demand will be 4.8 Mgd. These values are incorrect and underestimate water demand due to several miscalculations in Table 4-24, Pages 2-48, 4-106 and 5-40 should be revised to accurately reflect the estimated water demand for the project.

Response: The forthcoming Second DEIS will include updated water demand estimates base on revised land uses.

12. Page 2-48. The preferred alternative to supply potable water for the project involves drilling up to four mid-level wells to tap a fresh water layer underlying the basal aquifer, about 2.5 miles upgradient of the National Park. No reference to credible scientific information is provided to support the sustainability of this new source of potable water. The DEIS acknowledges on p. 3-16 that the depth, inclination and geologic nature of the formation confining this layer of fresh water in this area are not known. The possibility that all, or even some, of the potable water needs of the project can supplied by an "underlying fresh water layer" at the project site is therefore speculative as this resource as never been developed for potable or irrigation water on the Kona Coast. The DEIS should have included information demonstrating that this resource can be developed and used in a manner that can be continued indefinitely, without causing unacceptable environmental, economic, or social consequences.

Response: The intent of the deep test well to be drilled at the upper end of the project site is to determine: (1) if fresh groundwater exists at depth below the basal lens and saline groundwater regimes; (2) if a sufficient supply can be developed from the fresh water at depth; and (3) if freshwater extraction at that depth will not diminish the flow of brackish basal groundwater flowing through Kaloko-Honokohau National Historic Park. If all three of these conditions are not met, the project's drinking water supply would be provided by desalinization of saline groundwater which would be extracted at a depth so as not to impact the overlying basal lens.

13. Page 2-48. Several alternatives being investigated to supply potable water for the proposed project, including the preferred alternative, may require an on-site desalination facility, about one mile from the National Park. However, no



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*information is presented on the proposed quantity of brackish water needed to produce potable water, nor is any information presented on the quantity or quality of effluent that will be generated as part of the desalination process. Statements indicating that the desalination water system will have "no impact" are unsubstantiated. More specifically:*

*(a.) Page 2-49; Page 4-114. The statement "The desalination water system will have no impact on potable or brackish groundwater. Likewise, it will not affect nearshore waters and will not affect groundwater used by neighboring projects or anchialine pools and fishponds in the area, including nearby Kaloko-Honokohau National Park" is unsupported by a quantitative analysis and no desalination plants have been used to supply potable water on a large-scale on the Kona Coast. The DEIS should have included credible scientific information to support this conclusion.*

Response: Desalinization of brackish basal groundwater is not among the supply alternatives being considered for the project as it would have an obvious and substantial reduction of the basal groundwater flowing through Kaloko-Honokohau National Historic Park. The two desalting alternatives being considered are: (1) desalting the "fresh" groundwater extracted at depth below saline groundwater that, due to its location and depth, is slightly brackish under an applied pumping stress; and (2) desalting saline groundwater extracted at depth below the basal lens. For the first of these possibilities, similar desalinization is being successfully undertaken at relatively large scale at the Hualalai and Kukio Resorts. For the second alternative, the desalinization of saline groundwater, the Honolulu Board of Water Supply has completed a pilot program to determine feasibility and cost. When potable groundwater on Oahu is essentially tapped out, the Honolulu Board of Water Supply plans to desalinate saline groundwater on a large scale (planned 5 MGD increments).

*(b.) The DEIS does not state the anticipated number of injection wells, their injection rate, or quality of the injected fluids that will be needed to desalinate brackish groundwater, yet finds there will be no impact on basal groundwater. The DEIS should have included this information to support the conclusion of no significant impact.*

Response: For each disposal practice, excess R-1 and, if applicable, concentrate from the RO desalting process, would have two disposal wells, with the second providing back up capacity. The impacts of these practices are dealt with in the 2012 report by TNWRE. In each case, disposal would be below the basal lens and take advantage of density differences and permeability anisotropy to avoid impact of the basal lens.



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*(c.) The DEIS does not evaluate the cumulative impact of the proposed desalination plant in addition to the The Shores at Kohanaiki desalination plant which began operating in November 2008 immediately downgradient of the proposed project site and adjacent to the National Park. This desalination plant includes eight pumping wells and one injection well and will further complicate the response of the basal aquifer to pumping and injection. The Shores at Kohanaiki are required to report chloride concentrations at all pumping wells and eight monitoring wells on a monthly basis, to monitor water quality at the injection well on a quarterly basis, and to collect a conductivity-temperature-depth profile at the deepest monitor well on a quarterly basis. The DEIS should have included a quantitative analysis of the cumulative effects of the proposed and existing desalination facility. This analysis should include a review of the monitoring data collected at the Kohanaiki desalination plant since it began operating in 2008.*

Response: The impact of the Kohanaiki Shores basal extraction and concentrate discharge are not dealt with in the 2012 TNWRE report because the alternatives for Kaloko Makai are completely different. There will be no extraction from the basal lens and concentrate disposal will be at far great depth. As such, Kaloko Makai will not add to the identifiable impacts caused by the groundwater use and disposal at Kohanaiki Shores.

*(d.) If desalination is required to produce potable water from on- or off-site wells, then the volume of brackish groundwater that must be pumped to produce potable water will be much greater than the water demand estimated in the DEIS. For example, The Shores at Kohanaiki estimated that the ratio of brackish (46% seawater) groundwater pumped to potable product was about 1.5 (Kohanaiki Non-potable Water Plan). Ooma Beachside Village estimated that the ratio of brackish (78% seawater) groundwater pumped to the potable product water would be about 2.25 (Exhibit 42, LUC Docket A07-774). The DEIS should have quantified the pumping rate of the on- or off-site brackish wells and evaluate the effect of pumping up to 2.25 times the estimated water demand to provide potable water for the project.*

Response: The first point to emphasize is that Kaloko Makai would not be pumping brackish basal groundwater as the feedwater supply. It would extract saline groundwater (80% or more of seawater salinity) from below the basal lens and affirmatively demonstrated as having no impact on the basal lens. The salt water supply and disposal wells that have been developed in West Hawaii demonstrate that this can be done. Second, the expectable product water will likely be in the range of 35 to 40 percent of the seawater supply. That means the amount of saline groundwater utilized to create a gallon of potable water may be as much as 2.8 gallons. Third, the supply of saline



groundwater, extracted without impact on the basal lens, is essentially unlimited.

*(e.) The DEIS does not estimate or consider the additional source of nitrate-nitrogen to groundwater from RO injection. The actual nitrate-nitrogen added to groundwater from the Kohanaiki injection well is greater than estimated for the project by nearly a factor of three (source: Kohanaiki injection well water quality reports and 2007 Kohanaiki Non-Potable Water Plan).*

Response: The desalting process does not add dissolved nitrate -nitrogen. It merely extracts it from the product water and puts it in the concentrate which will be delivered back into the saline groundwater zone with no impact on the basal lens.

- (a) There are three alternatives: 1) Utilize wells at 710 foot elevation 2) Utilize wells at 710-foot elevation: saline groundwater and desalination plant 3) desalination of on-site saline groundwater at lower elevation (363 ft.).
- (b) The project may have three types of disposal wells: concentrate from desalting; excess R-1 effluent; and stormwater drywells.
- (c) The impact of the Kohanaiki Shores basal extraction and concentrate discharge are not dealt with in the 2012 TNWRE report because the alternatives for Kaloko Makai are completely different. There will be no extraction from the basal lens and concentrate disposal will be at far great depth. As such, Kaloko Makai will not add to the identifiable impacts caused by the groundwater use and disposal at Kohanaiki Shores.
- (d) For saline groundwater desalting, the feedwater is expected to have a salinity of 28 parts per thousand (PPT) or greater and the product water will be 40 percent of the feedwater supply.
- (e) For each disposal practice, excess R-1 and, if applicable, concentrate from the RO desalting process, would have two disposal wells, with the second providing back up capacity. The impacts of these practices are dealt with in the 2012 report by TNWRE. In each case, disposal would be below the basal lens and take advantage of density differences and permeability anisotropy to avoid impact of the basal lens.

14. Page 2-48. *"Kaloko Makai is committed to water conservation strategies... the goal is to reduce the total water use through a combination of water saving equipment and strategies" The "equipment and strategies" are not discussed or described in any detail, and, therefore, there is no way to tell if this "commitment" is appropriate, effective, or implementable.*



Response: The "equipment and strategies" you reference are included in the Kaloko Makai Sustainability Plan which is included in the forthcoming Second DEIS.

The Sustainability Plan identifies a number of measures that may be implemented to facilitate end-user conservation, including water restrictions during drier periods, public education and more efficient landscaping practices.

Efficient fixtures and appliances will reduce indoor water use. The water distribution system will be maintained to prevent water loss and homeowners and businesses will be encouraged to maintain fixtures to prevent leaks. Landscaping will emphasize climate-adapted native and other appropriate plants suitable for coastal locations. Best management practices will be designed and implemented to minimize infiltration and runoff from daily operations.

Water-efficient fixtures such as high efficiency toilets, flow limiters for faucets, flow control valves, and water efficient showerheads reduce water and sewer costs, reduce demand on water supplies and treatment facilities, and reduce heating energy consumption and associated greenhouse gas emissions.

15. Page 2-48. *The DEIS does not identify how sustainable building design and LEED concepts and certifications will be implemented. There are no specific commitments from the project proponent to actually follow through with implementing sustainable building design and LEED concepts.*

Response: Sustainable building design is discussed in the Kaloko Makai Sustainability Plan which is included in the forthcoming Second DEIS. The Sustainability Plan discusses a variety of recognized sustainability programs and plans.

There are several consistent principles and themes that run through the various programs and plans. While some are broad-based and include several of these, others are focused on single issues. The following are some of the consistent messages found in these programs and plans:

- Soft touch on the land
- Respect and protection of natural and cultural resources
- Use of natural elements (shading, ventilation, lighting, etc)
- Diversity of land uses, housing types, prices
- Live, work, play, shop and learn
- Walking, bicycle and transit transportation focused
- Reuse and minimization of waste
- Renewable and efficient electric
- People and community focused



The Petitioner will implement, to the extent feasible and practicable, measures to promote energy conservation, sustainable design, environmental stewardship and protection of the natural and cultural resources into the project. These actions are in part, based on the recommendations noted in the Sustainability Plan.

16. Page 2-50. *"The projected wastewater generation demand for Kaloko Makai is 2.37 million gallons per day (mgd) average dry weather flow. The WWTP will be designed to reduce the concentrations of Total Nitrogen (TN) to <5 mg/l, and Total Phosphorous (TP) to <2 mg/l. Installation of the Private WWTP shall be subject to conditions of approval by the DOH, including any lower concentrations of TN and/or TP in the effluent, and HAR Chapter 11-62. The amount of recycled water produced will be essentially the same as the amount received for processing, or 2.37 mgd." A general rule of thumb for projecting wastewater generation (refer to Wastewater Engineering Treatment, Disposal, and Reuse by Metcalf and Eddy, EPA website, and other sources) is that it will equal the projected water use at full build-out, minus outdoor use (such as car washing and irrigation), minus loss and leakage (should be minimal). Since most of the proposed project's irrigation water is coming from R1 treated watered, the projected wastewater generation demand should be approximately equal to projected water use at full build-out (3.0-3.2 mgd (average) and 4.7-4.8 mgd (max)). Therefore, the DEIS has underestimated wastewater generation by as much as half of what can be expected based on the estimated water use in the DEIS - which is itself substantially underestimated. The amount of wastewater, therefore, will be significantly larger than stated in the DEIS.*

Response: Although we generally concur with the logic provided, the wastewater demand calculation follows County standard guidelines. Projections have been revised according to updated land use plan and in accordance with County standard guidelines.

*The DEIS does not provide any scientific justification for why these concentrations of TN and TP are protective and appropriate, or why lower concentrations would not be more appropriate and protective. The DEIS should provide scientific studies, not solely citations from engineering wastewater manuals, that support the selection of these concentrations. Before an appropriate analysis of the impacts from the disposal of wastewater (whether through irrigation, infiltration basins, or injection wells) on coastal and marine resources, including the resources within the National Park, can be completed, the DEIS must provide a more detailed description of the quality of the water to be discharged including what methods will be used to reduce nutrients and what methods will be used to prevent pharmaceuticals and other contaminants from reaching the National Park. If a hospital is built as part of the project as described, it is especially important to*



*analyze the full range of potential impacts from a hospital including the fate of pharmaceuticals in treated wastewater from the facility. For a wastewater facility this close to a national park, which will include injection wells as part of waste management, wastewater treatment should include maximum nutrient removal, be treated to tertiary standards including removal of pathogens, and de-chlorination should follow chlorination steps. The DEIS should describe why dry-lining for potential hookup to the Kealakehe WWTP is not an option as was required for Lanihau and TSA developments adjacent or near the project site.*

Response: Wastewater will be treated to meet R-1 water quality standards. The Second DEIS will be modified to include a description on why the project cannot connect to the Kealakehe WWTP.

17. Page 2-59. *Adequate justification is not made in the DEIS to support the density and number of housing units proposed. The NPS questions the need for an additional 4,180 multi-family units in North Kona. Especially since many thousand more single- and multi-family units are planned for construction in the immediate area. Given the impact to the community and the environment, the project proponents have not justified the need for the number and density of housing units in their preferred alternative.*

Response: The Kaloko Makai Market Assessment clearly notes that "Kaloko Makai has been planned to respond to its community's desires regarding future growth, as expressed in the Kona Community Development Plan. The Kona CDP directed growth to compact, higher density "villages" mostly located north of Kailua-Kona Town along the Ane Keohokalole Highway transit corridor. These growth centers were directed to 10 Transit-Oriented Development (TOD) Urban Villages, of which Kaloko Makai is identified as one."

That analysis also concluded that "even with aggressive and unprecedented levels of future development, the CRMA could experience a shortfall of some 9,400 primary homes by 2040, if no more lands are entitled and planned for this market."

It goes on to state, "The first residential product at Kaloko Makai is projected to be available for sale in 2015. Thereafter, it is anticipated that the 5,000 maximum proposed homes could be absorbed over 26 years at an average rate of about 190 units per year." And further concludes, "Actual sales would vary from year to year depending on market and construction cycles, and the types of units available for sale at any given time. At maximum build-out, Kaloko Makai's 5,000 units could provide a solution for about 45% of the anticipated future unplanned and un-entitled demand for primary resident housing units (RHUs) in the CRMA through 2040." The report includes a full explanation of these conclusions.

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18. Page 3-4. *The statements that the soils with Kaloko Makai are not suitable for cultivation are not accurate. The project location is known for high productivity of food crops, as evidenced by the numerous examples given within this document. This DEIS notes on page 4-10 that agriculture (including farming, horticulture and subsistence planting) and animal husbandry are "function types commonly encountered in this general area" and that there are "several pervasive agricultural sites in the project area with widespread clearing and planting mounds" (Table 4-2). On page 4-43 of the DEIS, "During the mid 1800s, Captain Charles Wilkes of the American Exploring Team comments on the agricultural use of pahoehoe excavations (similar to the modification of pahoehoe outcrop in the project) which he observed specifically in the Kona region." Page 4-50 of this document notes "During the 1930s to 1940s, the alahe'e along with mango, banana, uhi or yam (Dioscorea alata), and pia, a Polynesian arrowroot (Tacca leontopetaloides) used as medicine and food by Hawaiians, were also widely distributed in the project area."*

Response: The CIA states, "Maly (1993:29) explains that traditional accounts of Kaloko and Kohanaiki describe a lush environment that differs from its current state due to several factors. The Hualalai lava flow in 1801 covered the former agricultural and forested lands, residential areas, and fishponds. The loss of forests began the decrease in rainfall that was exacerbated by the introduction of livestock and ranching. Goats and cattle stripped the vegetation from the lands causing water resources to dry up. Thus, over the last 150 years, the environment has been significantly altered."

As described in the DEIS, various crops were traditionally cultivated within the Kekaha region and the project area. Lava tubes were utilized to capture dripping ground water almost without exception, even when the labor required to do so would have been very significant.

Sweet potato, the most abundantly grown crop, was commonly planted in mounds and in pahoehoe excavations. Accounts of the area note the labor intensive nature of the farming and that the potatoes were grown in lava.

"Wherever the lava could be pounded into scoria, a plantation of sweet potatoes was laboriously formed by digging among the stones and filling in the holes with dried grass brought from the mountainside."

During the mid 1800s, Captain Charles Wilkes of the American Exploring Team commented on the agricultural use of *pāhoehoe* excavations (similar to the modification of pahoehoe outcrop in the project) which he observed specifically in the Kona region:

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"Cultivation is carried on in many places where it would be deemed almost impracticable in any other country."

Sweet potatoes were also cultivated within walled fields or depressions in the walls themselves. E.S. Craighill Handy and Elizabeth Green Handy discuss this method from an account that appeared in the Hawaiian newspaper *Ka Nupepa Ku'oko'a* (March 24, 1922):

"Rocky lands in the olden days were walled up all around with the big and small stones of the patch until there was a wall (kuaiwi) about 2 feet high and in the enclosure were put weeds of every kind, 'ama'u tree ferns and so on, and then topped well with soil taken from the patch itself, to enrich it, or in other words to rot the rubbish and weeds to make soil.

After several months, the rotted weeds were converted into soil of the best grade. The farmer waited for the time when he knew that the rains would fall, then he made the patch ready for planting. If for sweet potatoes, he made mounds for them and for taro too, on some places on Hawaii. (Handy and Handy 1972:131)"

Thus, farming in this area was for subsistence, and not necessarily as a cash crop. As illustrated in past accounts, the terrain was harsh and crop cultivation came at great labor.

*Oral histories of the area, ethnographic evidence and archaeological evidence document that the upland Kaloko and neighboring areas are prime for agricultural purposes. Ethnographic and archaeological evidence for the Kaloko ahupua'a is a well developed part of the Kona Field System (Tuggle and Tuggle 2006, Cordy 2000, Newman 1970, Schilt 1984). Crops from this area included sweet potato, taro, banana, mountain apple, wauke and breadfruit historically (Tuggle and Tuggle 2006, Land Commission and Boundary Commission documents) and more recently was known to be plentiful in mango, pineapple and sweet potato. Areas slightly further south at the same elevation as the project area within the Kona field system are known to be fertile for production of sweet potato, wauke, and breadfruit (Kelly 1983).*

Response: The forthcoming Second DEIS has been revised with the following sentence added: "Oral histories of the area, ethnographic evidence and archaeological evidence document that the upland Kaloko and neighboring were, in the past, utilized for agricultural purposes."

19. Page 3-14. *The DEIS states that "The groundwater lens in the Keahole vicinity is brackish and discharges freely along the coast in a narrow band of a few feet wide in the intertidal zone." However, later the DEIS states on Page 3-35 that "A*



*somewhat unusual finding is that the lowest salinities in the ocean samples were not found nearest to the shoreline off of either fishpond. Rather, the lowest salinities were measured in surface ocean samples approximately 25-50-m offshore." These statements appear to contradict each other. The DEIS should have clarified the area where groundwater discharges into the ocean.*

Response: Discharge into the marine environment of the brackish basal lens is generally along the shoreline and possibly, in localized situations due to varying lava flow variability, at a modest distance off shore. Measurements of shoreline and nearshore salinities which are indicative of groundwater discharge reflect these spatial variations. They also reflect temporal variations as the phase of the tide has substantial impacts on this discharge.

20. Page 3-14. *The DEIS states that "Salinity, lens thickness and the diffuse transition zone are all indicative of a modest groundwater flow." The DEIS should define "modest" quantitatively. Also, the listed factors do not preclude the possibility of high groundwater flow (say greater than 5 Mgd per mile of width) with a large amount of mixing caused by hydrodynamic dispersion.*

Response: The 2012 report by TNWRE uses an estimate of 1.7 MGD per costal mile for the basal groundwater flowrate in the Kaloko Makai mauka-makai corridor. The suggestion that the actual flowrate is much higher (5 MGD or more per mile) but is masked by mixing through hydrodynamic dispersion is simply without basis in fact. If this were actually the case, brackish irrigation quality wells could be developed toward the inland margin of the basal lens. Every such well that has been tried encountered water initially too salty for irrigation use (nos. 3959-01 and 4058-01 for example) or became too salty under a modest pumping rate (nos. 4160-01 and 02).

21. Page 3-15. *The DEIS states that "While the hydraulic relationship between the two groundwater bodies is not yet understood, it is undoubtedly the reason for the anomalous characteristics of basal groundwater in the Keahole to Kailua area. (Nance 2008). The DEIS should explain what is meant by "anomalous characteristics".*

Response: The anomalous characteristics are those which would not be expected for the size of the potentially contributing watershed to the groundwater flow. The two most significant are: (1) groundwater that is substantially colder than in the high level aquifer directly inland; and (2) salinity that is far higher than would be the case if a significant portion of the rainfall-recharge on the upland watershed actually passed through the basal lens.



22. Page 3-15. *The DEIS states that "Use of Well 3857-01 at Wai'aha started in 2005." The State Commission on Water Resource Management lists this well as abandoned and sealed. Perhaps the correct well number should be 3857-04.*

Response: The Waiaha well that is in use by DWS is State No. 3857-04. The forthcoming Second DEIS will list the correct well number.

23. Page 3-15. *The DEIS states that fresh water was encountered at 1,060 ft below sea level at the Kamakana Villages Well (3959-01), but no information is provided to support this statement. Documenting the source of this information is important because this resource has never been developed for municipal use, yet it is the preferred alternative to supply over 3 Mgd of potable water for the project. The DEIS should have included credible scientific documentation of the circumstances under which fresh water was encountered at the Kamakana Well.*

Response: The 2012 report by TNWRE provides detailed information on the Kamakana Well (No. 3959-01). Similar information was presented to the Water Professionals group at one of its meetings earlier this year. The data was also made available to Delwyn Oki of the U. S. Geological Survey.

24. Page 3-25. Section 3.5.1 *"Due to high permeability of the natural ground surface across the project site, ...surface runoff does not occur on the project site even during the most intense rainfalls. Natural drainage of the project site consists of rainfall percolation through the layers of very porous lava to the ground water table." The more development at the project site (and on the upslope lands), the more difficult it will be for "green space" to take-in or absorb the surface water runoff water, as the "green space" will not have the same surface area it once did to percolate. Furthermore, the claim that rainfall percolates through the layers of very porous lava to the ground water table (with respect to surface water), is contradictory to the claim that wastewater effluent disposed onsite percolating through the same layers of very porous lava to the ground water table will not have significant impact.*

Response: The 2012 report by TNWRE provides analyses of the fate of nutrients in R-2 waste water disposed of by the County in a pit upgradient of Honokohau Harbor. Natural nutrient removal rates are very high. Nutrient in wastewater reused for irrigation of the project site will be removed by plant uptake. The small fraction of the applied wastewater that percolates to groundwater below will have nutrients removed naturally in a manner similar to the County's ongoing wastewater disposal. These factors are the basis for the conclusions in the Second DEIS.





25. Page 3-26. *The DEIS states that reverse osmosis concentrate will be injected into the basal aquifer in strata where groundwater salinity is 30 ppt or greater, and asserts on p. 4-110 that "Since the concentrate has a greater density than the surrounding saline groundwater it will flow seaward without rising above the surrounding saline groundwater and will not rise to the basal freshwater layer. It is then discharged into the ocean offshore at a substantial depth and distance from the shoreline." At the same time, the DEIS also notes on p. 3-16 the presence of a saltwater circulation system where "Saltwater flows landward in the deeper parts of the aquifer, rises and then mixes with seaward-flowing groundwater." The predicted fate and transport of the injected reverse osmosis concentrate is speculative and unsubstantiated by references to any credible scientific evidence. The DEIS should have included (1) the estimated salinity of the reverse osmosis concentrate from the proposed project, and (2) a quantitative analysis of the potential for the injected reverse osmosis concentrate to enter the saltwater circulation system and increase the salinity of inland and nearshore marine waters downgradient of the project site.*

Response: The 2012 TNWRE report provides information on the process of desalting with saline groundwater as the feedwater supply. Pragmatic evidence of the lack of an effect of subsurface disposal of hypersaline water is provided by ongoing practices of the cogeneration power plants in Ewa, Oahu. Disposal of their hypersaline cooling tower blowdown, which of comparable salinity to the concentrate from Kaloko Makai's desalting process, is at an average of about 10 million gallons per day (mgd). The practice has been in place for 20 years without any adverse environmental impact.

26. Page 3-26. *The DEIS should have discussed in detail how it will protect NPS resources downslope from the proposed project. The DEIS should have included a thorough and rigorous analysis of potential impacts, direct and cumulative, to groundwater and groundwater-fed ecosystems from termiticides and pesticides used on houses, buildings, grounds, and common areas; added nutrients from irrigation and fertilized green spaces; potential releases of contaminants from commercial businesses in the light-industrial/commercial parks who generate hazardous wastes (e.g., metal finishing, photoprocessing, automotive maintenance, dentistry, pesticide companies, printing, etc); potential releases of medical wastes, pathogens, and pharmaceuticals from the medical facilities; nutrients, pathogens, and pharmaceuticals carried in wastewater; contaminants associated with roadways and other impermeable surfaces including petroleum products, metals, pesticides, nutrients, and other pollutants.*

Response: The 2012 TNWRE report presents a complete analysis of the impact to groundwater flowrate, salinity, and nutrients. (Note: TNWRE report is limited to DOH water quality parameters. It does not address the other contaminants listed



in the comment, although these are not in DOH's standards and are not known to have caused an issue anywhere in North Kona).

27. Page 3-26. *"As the excess irrigation water percolates downward through the unsaturated zone to the groundwater, natural removal of nitrogen and phosphorus from the water will be significant." The DEIS should have quantified "significant." It is not possible to analyze impacts to NPS resources without an accurate understanding of the increased flow of nitrogen and phosphorus into NPS waters.*

Response: The 2012 TNWRE report quantifies the natural nutrient removal rates using data of the County's wastewater disposal in a pit nominally upgradient of Honokohau Harbor.

28. Pages 3-26 and 3-74. *Details regarding stormwater management and impacts to NPS aquatic resources are not provided in the DEIS. Surface runoff from impermeable surfaces associated with this development will occur. DOH and County drainage regulations do not address polluted runoff, only volume of runoff. Drywells are nothing more than holes in the ground; conduits for polluted runoff to groundwater. No specific pollution reduction devices or methods with numerical removal efficiencies are proposed beyond stating BMPs will be used. Moreover, there is no discussion of how the BMPs will be implemented, who will monitor the BMPs, or how they will be enforced. It is not adequate for purposes of an EIS to merely state "Innovative and more natural ways to handle drainage improvements will be sought to comply with the County drainage standards." The details of these "innovative" means should be explained. Potential environmental impacts to coastal and marine resources, including the resources in the National Park, have not been evaluated and the statement that "Kaloko Makai is not expected to have an adverse effect on groundwater or coastal marine waters" is completely unsupported. No data have been presented to support this conclusion.*

Response: BMP description will be revised to include compliance with local Permanent and Construction implementation standards. Prior to disposal into drywells, removal of solids and other pollutants from stormwater runoff will include natural methods, such as retention basins, grass swales, biofilters and sediment basins. Where applicable, mechanical methods will be utilized, including, but not limited to, filter inserts, sand filters, or hydrodynamic filter units.

The design concept for the drainage system is to eliminate surface runoff from leaving the site. Natural areas, pits, and dry wells will collect runoff and allow it to infiltrate rather than leave the site as surface water. The passage of such runoff from the ground surface to the groundwater below, though the unsaturated



(vadose) zone, provides natural filtration and adsorption. Surface runoff from most of the developed areas in Kailua-Kona is handled in a similar manner without identifiable adverse impacts to groundwater or the Makai environment.

The 2012 TNWRE report includes an analysis of the potential impact of the subsurface disposal of stormwater runoff.

29. Page 3-27. *"Control of contaminated surface water can be achieved through the development of a PPP designed to address all pollutants associated with the development and to identify measures that will contain and treat such pollutants in order to prevent any release into the environment, including the groundwater. There will be no anticipated adverse impact on groundwater quality from the development of this project." These statements are highly speculative with no analysis to support the conclusion that there will be no adverse impacts to groundwater quality, and are not substantiated by any data presented. PPPs, although a statement of good intentions, are difficult to implement, monitor, or enforce. PPPs, even good ones, cannot guarantee that no contaminated surface water will reach the groundwater. There is no discussion of how the project proponent will implement the PPP, which is especially problematic given the multitude of land uses (industrial, recreational, and single and multi-family housing units) and length of time to complete this development. CCRs are an inadequate mechanism to prevent pollution offsite of the development as there is no reason for landowners to self-police for offsite damages and no governmental agency - local, state or federal - can enforce them.*

Response: The design concept for the drainage system is to eliminate surface runoff from leaving the site. Natural areas, pits, and dry wells will collect runoff and allow it to infiltrate rather than leave the site as surface water. The passage of such runoff from the ground surface to the groundwater below, through the unsaturated (vadose) zone, provides natural filtration and adsorption. Surface runoff from most of the developed areas in Kailua-Kona is handled in a similar manner without identifiable adverse impacts to groundwater or the Makai environment.

30. Page 3-28. *The DEIS states: "Nutrient loading and its subsequent impact is one of the more important issues concerning conservation and protection of coral reefs" and then goes on to say "However, according to Atkinson (2003) [sic], the conclusion that nutrients are deleterious to a reef ecosystem is incorrect." Although some of the statements made in this section of the DEIS are indeed in Atkinson and Falter (2003) book chapter (cited in the DEIS as Atkinson 2003), this statement must be taken in context with other statements in Atkinson and Falter that are not mentioned in the DEIS. Overall the comments in the DEIS that were derived from Atkinson and Falter (2003) are one sided, incomplete, and are not*



*fully supported for Kaloko-Honokohau marine waters. Atkinson and Falter (2003) focuses on the flux of nutrients in and out of coral systems, not on indirect effects of nutrients on the coral. In fact, the Atkinson and Falter (2003) states that significant anthropogenic impacts of nutrients on coral tend to occur "in areas of groundwater or surface water where relatively large areas are discharge into shallow reef flats." This is the situation at the National park, where approximately three million gallons per day of groundwater discharge to marine waters in Honokohau and Kaloko Bays. Atkinson and Falter also state there is a need for more studies in which the organism or community responses are a function of actual nutrient loading, per area of bethos, not a function of concentration. The DEIS should have stated that nutrient impacts to coral reefs are probably indirect and long term and that it is possible that nutrients can stimulate bacteria and other disease vectors that might harm coral. Overall, the statements that are quoted from Atkinson and Falter in the DEIS seem to have been selectively picked to include only the ones that support the hypothesis that excess nutrients have little or no impacts on coral health in order to mislead the reader. The statements that tell the other side of the story, such as those quoted just above, are not included in the DEIS. There are many cases in the publish scientific literature where excess nutrients, as well as the pathogens that will be associated with this development, can result in coral reef degradation due to various indirect processes. There is no conclusive evidence presented in the DEIS that corals cannot be harmed by excess nutrients and/or an unnatural ratio of organic to inorganic nutrients on human pathogens. Excessive nutrients cause excess algae growth that can lead to depletion in oxygen available for other organism associated with a coral reef and can lead to depletion in oxygen available for other organisms associated with a coral reef and can lead to algae blooms that take over sections of coral, blocking the sunlight and hurting its ability to thrive. The state of Hawaii is experiencing a significant decline in some of Maui's coral reefs experiencing a significant decline where excess nutrients are implicated in invasive algae blooms. Although the factors influencing Maui's reef decline are complex, the DAR reported (Williams et al 2007) "strong indications that human impacts have been very important." Supporting data include proximity of private and county sewage injection wells, which place nutrient loads close to the coral substrate, high levels of nitrogen and phosphorus, and stable isotope ratios indicative of animal waste (presumably sewage) in algae. The potential for a hospital associated with this development is another concern. Pathogens, pharmaceuticals, and endocrine disrupting compounds are associated with hospital waste, many of these are unlikely to be fully eliminated by the proposed sewage treatment plan. The effects of these pathogens and compounds on coral reefs were not mentioned or analyzed in the DEIS, therefore the DEIS is seriously inadequate to evaluate impacts to coral reefs.*



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Response: Naturally occurring groundwater nutrient discharge to the ocean in many areas of West Hawaii is far greater (at least twice) than that at Kaloko-Honokohau area with no negative effect to coral reef development. The shallow reef flat fronting the Kaloko-Honokohau area (project site) results in vigorous mixing action owing to breaking waves that thoroughly mix nutrient concentrations to background oceanic values within meters of the shoreline. Hence, even with the small increase of projected groundwater nutrients in groundwater flux there is likely to be little or no effective increases to offshore areas where reefs occur. Should such vigorous mixing not occur, then incoming groundwater would be maintained as a buoyant surface lens, with no contact with benthos (corals grow on the bottom). There is much scientific literature documenting coral growth in areas of high nutrients, such as in areas of upwelling, or the Waikiki Aquarium, where corals growing in saline groundwater with substantially elevated nutrient concentrations grow at rates higher than measured in natural areas.

31. Page 3-29 to 3-34. "3.5.3.1.1. Assessment of Coral Ecosystem Health of Kealahou Bay and Honokohau Bay." *The discussion in this section supports the conclusion that inputs of nutrients from the Kaloko Makai development will likely result in adverse impacts to the natural and cultural resources within the National Park. None of the arguments or information presented supports the assertion that more nutrients and other pollutants will not result in impacts to the NPS natural and cultural resources. Furthermore, none of the other sites discussed in the DEIS for comparison are in pristine conditions. The NPS mission is to maintain its marine waters in as pristine conditions as possible.*

Response: An *Assessment of Marine and Pond Environments* was prepared for the Project by Marine Research Consultants report. The report will be included in the forthcoming Second DEIS.

According to the assessment, it is unlikely that there will be any effect to the nearshore marine environment as a result of increases in nutrient concentrations in groundwater. Dollar and Atkinson (1992) modeled input of nutrients to the ocean downslope from two golf courses in West Hawaii over a four year period. In summary, nitrates and phosphorous increased in Keauhou Bay, however with rapid circulation along the Bay, the benthos was not exposed to the nutrients and prevented phytoplankton blooms. These results indicated that even with long-term input of high nutrient subsidies, there are situations where there are no negative effects to the receiving environment. Similar lack of impact is expected at the Kaloko-Honokohau region where nutrient subsidies are less than Keauhou.

Seasonal long-period swells result in turbulence along Kaloko-Honokohau National Historic Park shoreline. Such turbulence is the reason coral communities



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are poorly developed along this area. Hence, owing to the high and consistent rates of mixing, as well as minimal input of materials from the land to the ocean, it is not likely that nutrient concentrations in the waters downslope from the project site have any effect on marine communities.

It is perceived that nutrients damage coral reef. However scientific literature does not show this. Corals have been observed growing successfully in area(s) with high nutrient concentrations as discussed in MRC's report.

32. Pages 3-33 and 3-34. *"Coral ecosystems will not normally recover from chronic stresses until the stressors are removed (Grigg, 1995; Edinger et al., 1998). If elevated nutrients and/or algal cover are chronic stressors to the coral ecosystems of this study as the results indicate, and future human population growth and development continue to increase nutrient inputs to these bays, then it is likely that future degradation is imminent..." The DEIS did not discuss how the coral reef ecosystems within NPS boundaries, or North Kona, will be affected by cumulative nutrient stresses associated with the proposed development and other nearby developments. Compare these pages with lack of any discussion on pages 8-2 to 8-4.*

Response: See response above. With respect to algal cover, there is essentially no "algal cover" on reefs in West Hawaii today, including in areas with far greater nutrient input than projected for the Kaloko-Honokohau area.

33. Page 3-34. "3.5.2.2. Endangered Marine Species" *The presence of endangered species, and the difficulty of assigning specific impacts to specific causes in these complex environments, argues for using the precautionary principle to significantly limit additional inputs of human sewage including organic nutrients, pharmaceuticals, and other contaminants into the groundwater that flows through, under, and in the National Park.*

Response: As mentioned previously, an *Assessment of Marine and Pond Environments* and an *Assessment of the Potential Impact on Water Resources* was prepared for the Project by Marine Research Consultants and Tom Nance Water Resource Engineering, respectively. Both reports will be included in the forthcoming Second DEIS.

Excess R-1 treated wastewater effluent will be disposed of in injection wells located at the Project's on-site wastewater treatment plant. This may require the injection wells to deliver the water at depths of 300 feet or more below sea level. The disposal depth is warranted to avoid having a significant impact on basal groundwater moving through the Kaloko-Honokohau region or the Park's nearshore waters. Results of the analysis is further discussed in TNWRE's report.



34. Section 3.5.2.3. This section of the DEIS is a long review of very old, non-peer reviewed reports, containing in large part data collected nearly a decade or more ago. These reports and the data therein were presented in the TSA and Lanihau Dockets and were refuted by the LUC at those hearings. (TSA FFCLDO 2002, Lanihau FFCLDO 2002). The discussion and conclusions regarding nutrients, pond characteristics and groundwater level and flow in this section are wholly unsupported even by the reports cited. In addition, as in these previous proceedings, the developer and its consultants failed to conduct an environmental risk analysis. Even the most basic facts in this section are wrong; for example, Kaloko Fishpond waters are becoming less saline and are experiencing higher residence times, not the other way around. Groundwater flows into both ponds, not around them. Both ponds do not function as anchialine ponds, Kaloko is connected to the ocean. No effort was made to accurately portray the current status of the coastal water resources and ecosystems, or the endangered species that inhabit those ecosystems, nor was any effort put forward to assess direct, indirect, and cumulative impacts to the endangered species dependent upon the park's water resources.

Response: The 2012 TNWRE report presents an updated assessment of groundwater conditions in the mauka / makai corridor that includes the Kaloko Makai project site and Kaloko-Honokohau National Historic Park. The calculated potential changes to groundwater in that report have been used.

All of the statements made in Marine Research Consultants (2012) are based on recently acquired data and rely on information provided by TNWRE as well as other scientific documentation. Many of the statements in the comment above are reiterated in these reports based on these data.

Both reports will be included in the forthcoming Second DEIS.

The DEIS states "the potential exists that the development could pose secondary threats to the National Park and to its endangered birds if noxious substances such as petroleum, oils, lubricants, and sewage were to migrate downslope (makai) from the project into the Park" (p. 3-57) but then makes no attempt to analyze these threats. The DEIS also does not assess the cultural impact to Native Hawaiian traditional and customary activities resulting from degraded water quality and a restricted quantity of water. The project proponent appears to take the approach throughout the discussion of marine and brackish water resources that if the resources are currently experiencing degradation. The DEIS does not consider the proposed project in the context of other projects occurring in the National Park and elsewhere with regard to these resources. Moreover, the DEIS does not even attempt to analyze the amount of nutrients and other contaminants



that will come from the proposed project, the fate and transport of those contaminants, or the risk posed to receptors (i.e. flora and fauna). The conclusions of no impact from the proposed development to water quality in the DEIS are unanalyzed and unsupported, and the document is utterly inadequate for decision making and the public to understand the real consequences that will occur if the project is completed. It is pure speculation, contradictory to both common sense and logic, and unsupported by any credible scientific study to state that "It is unlikely that there would be any effects to the nearshore marine environment as a result of increases in nutrient concentrations in groundwater."

Response: The 2012 TNWRE report provides the analysis of potential impacts requested. Along with the analysis in Makai Research Consultants (2012), sufficient information for decision making is provided. Both reports will be included in the forthcoming Second DEIS.

The NPS is concerned that the cumulative effects of the combination of restricted groundwater flow from over-withdrawal and additional nutrient/pollutant inputs when the proposed developments in close proximity to the Park are built out, poses a significant threat to endangered species at 'Aimakapa Fishpond. The U.S. Fish and Wildlife Service has identified 'Aimakapa Fishpond as recovery habitat for endangered Hawaiian waterbirds. The endangered Hawaiian stilt (*Himantopus mexicanus knudseni*) and endangered Hawaiian coot (*Fuliea alai*) are found at two fishponds at Kaloko-Honokohau National Historical Park. An avian botulism outbreak was documented there in 1994. The coot population was decimated, but the stilt population appeared to have been less impacted. Morin (1996) suggests that anthropogenic changes to water quality and quantity are likely to increase the potential for further botulism outbreaks. Because of the historical nature of the fishpond, the restoration actions are complex and traditional methods of draining and dredging are not readily available to the NPS, therefore additional nutrients and contaminants should be prevented from entering the fishponds.

Response: If there is a link between anthropogenic changes to water quality and quantity and the potential for the outbreak of avian botulism, we concur that draining and dredging the fishpond would be the most effective solution. Nevertheless, the project will not be utilizing the brackish basal groundwater that flows through Kaloko-Honokohau National Historic Park. The Second Draft EIS assesses three alternative water sources now being considered for the project's drinking water supply.

1. On-site wells at 710-foot elevation
2. On-site wells at 710-foot elevation with reverse osmosis (RO) Treatment

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3. Desalinization of saline groundwater from 363-foot elevation on-site wells

These alternatives can be affirmatively demonstrated as having no impact on the basal lens. They are limited to use of the high level groundwater drawn from strata far below the basal groundwater so as not to impact it, and desalinizing saline groundwater, also drawn from below the basal lens. Brine from the desalinization alternative would also be discharged far below the basal groundwater.

35. Page 3-43. "Future developments will be required to utilize the County wastewater treatment plants, hence eliminating the major source of nutrient subsidies." However, in Section 4.10.2, pg 4-24, the DEIS states, "The Kealahou Wastewater Treatment Plant shall be expanded to accommodate the project sewage volume from the Urban Area extending south of Hina Lani Street to the Keauhau WWTP.... Representatives from the County DEM noted that there are no plans for construction of (a) decentralized WWTP in the immediately future." To our knowledge, there is no planned expansion of the Kealahou WWTP. It is likely that most or all of the private developments surrounding the Park will be disposing their wastewater onsite before the County can improve their wastewater treatment capabilities; therefore, Kaloko Makai has significantly underestimated the "cumulative changes to groundwater from the total assemblage of existing and proposed projects with the potential to alter pond and marine environments."

Response: Flow in the brackish basal lens proceeds from mauka to makai, is discharged into the marine environment at or near the shoreline, and is then rapidly mixed to background levels. For this circumstance, the analytical methods in TNWRE (2012) and Makai Resources Consultants (2012) appropriately quantify the impact to groundwater and the marine environment in Kaloko Makai's Mauka/Makai corridor.

36. Page 3-45 (and pages 3-66-67 and 3-75) the DEIS also mentions a groundwater monitoring plan to detect contaminants in the groundwater below the proposed project. The proposed groundwater-monitoring plan will include monitoring wells, and a sampling and analysis plan. Parameters to be analyzed include: pH, temperature, salinity, nitrate, ammonia, dissolved organic nitrogen, TDS, TN, phosphate, dissolved organic phosphorus and TP and any other parameters required by the DOH. The project proponents are proposing to start water sampling prior to the start of grading activity, and to sample quarterly for two years, or as required by the DOH. Two years of sampling starting at the initial grading of this project means that water quality will last through the initial phases of construction and no monitoring would happen for any part of the actual use of the project site, including the use of the WWTP. Two years of sampling,

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regardless of when it started, is insufficient to monitor the impacts to groundwater from this project and inform decision makers and the public on how the project is adversely affecting the environment. Furthermore, DOH water monitoring protocols are designed to protect human health, not the ecological integrity of aquatic ecosystems. It is unlikely that all of the effluent generated by the WWTP will be used for irrigation. Furthermore, systems breakdown and backup systems need to be in place. The DEIS does not mention what type of back-up system will be used to dispose of wastewater. The DEIS should disclose to the Kona community that injection wells will be used and to what extent. The DEIS must analyze the potential impacts to coastal resources from injection wells (utilizing the information from Maui). The DEIS does mention infiltration basins as a means of disposing of treated wastewater not needed for irrigating during wet periods. Infiltration basins should be well defined and described. The impacts of infiltration basins and injection wells on the coastal and marine resources along the Kona coast, including the resources within the National Park, were not mentioned, discussed or analyzed in the DEIS.

Response: The 2012 TNWRE report provides complete information on potential groundwater impacts. The developer will conduct quarterly monitoring prior to the start of construction, monthly during initial construction and one year following, and then quarterly thereafter for five years.

37. Page 3-62. The information cited on this page regarding groundwater resources within the National Park suffers the same problems as identified for section 3.5.2.3.

Response: The 2012 TNWRE report provides updated water quality data, descriptions of the groundwater occurrence, and a qualification of potential groundwater impacts.

38. Page 3-62. The statement in the DEIS that "No adverse groundwater effects have been observed from any of the existing wells in the regions, individually or cumulatively. There, no adverse effect is anticipated under the Kaloko Makai on or off-site groundwater wells" is unsupported by references to existing scientific evidence relevant to the conclusion. The conclusion ignores the rise in chlorides due to pumping and saltwater intrusion at the Kahaluu shaft wellfield (3557-01 to 05), which skims water from the basal lens and provides much of the drinking water for the North Kona System. The conclusion also ignores reasonable foreseeable significant adverse impacts from groundwater withdrawals based upon theoretical approaches or research methods generally accepted in the scientific community, including but not limited to USGS Water Resources Investigations Report 99-4070 and State Hawai'i Department of Land and Natural Resources 2008 Hawai'i Water Plan. The DEIS should have included references

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*to credible scientific information to support the statement that existing groundwater development has had no adverse effects.*

Response: The 2012 TNWRE report provides updated water quality data, descriptions of the groundwater occurrence, and a qualification of potential groundwater impacts. The over pumping of the Kahaluu Shaft and its consequent rising salinity is irrelevant to the Kaloko Makai project which will develop its own source of supply.

39. Page 3-63. *Alternatives to supply potable water to the proposed project include utilizing new and existing off-site high-level wells upgradient from the National Park. According to USGS Water Resources Investigations Report 99-4070, groundwater withdrawals from wells directly upgradient of the National Park will have a greater effect on freshwater discharge within the National Park, according to the DEIS, an analytical model developed by Tom Nance, Water Resources Engineering, indicates that pumping from high-level wells in the vicinity of the proposed project has the potential to raise the salinity of groundwater within the National Park by up to 53% (Table 3-6). This predicted effect may cause unacceptable impacts to groundwater-dependent cultural and natural resources in the National Park and along the Kona coast. The NPS seeks to maintain the flow of fresh groundwater to all inland and nearshore marine waters in the National Park to fulfill the specific purposes for which the Park was established, including traditional and customary Native Hawaiian practices and the protection of endangered species. Groundwater pumping has the potential to limit both the productivity and distribution of culturally important flora and fauna. For these reasons, pumping of high-elevation wells upgradient from the National Park is not an acceptable alternative to supply water to Kaloko Makai.*

Response: Impacts to groundwater based on the alternative sources of water supply being considered are quantified in the 2012 TNWRE report. The previous analysis you cite, USGS Report 99-4070 and the analytical model developed by TNWRE, were based on assumed full flow of high level groundwater into the basal lens which does not actually appear to be occurring. In any event, the water supply alternative that will ultimately be implemented will not draw from or otherwise reduce the flowrate in the basal lens, meaning that the predictions in the two analyses you cite are not applicable to the Kaloko Makai project.

40. Page 3-63. *The DEIS states that "With the addition of Palani Well No. 1, combined with the anticipated projects proposed in the region, salinity levels are estimated to increase" in the National Park. The analysis upon which this predicted cumulative impact is based, however, did not include groundwater development associated with the proposed Kaloko Makai project (see Table 1, Appendix 7, Palani Well No. 1 (State Well No. 4158-03) North Kona, Island of*

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*Hawai'i, State of Hawai'i, Final Environmental Assessment). The DEIS should include the additional pumping of at least 4.8 Mgd (but this is probably an underestimate) from the high-level wells upgradient from the National Park, because this alternative is being investigated to supply water to Kaloko Makai.*

Response: As stated in the previous response above, impacts to groundwater based on the alternative sources of water supply being considered are quantified in the 2012 TNWRE report. The previous analysis you cite, USGS Report 99-4070 and the analytical model developed by TNWRE, were based on assumed full flow of high level groundwater into the basal lens which does not actually appear to be occurring. In any event, the water supply alternative that will ultimately be implemented will not draw from or otherwise reduce the flowrate in the basal lens, meaning that the predictions in the two analyses you cite are not applicable to the Kaloko Makai project.

41. Page 3-63. *The DEIS references "Montgomery 2009" in several locations but this reference is not included in Chapter 11 References.*

Response: The reference, Montgomery, Steven L. Ph. D. (2009) "Memorandum to Jimmy Greenwell, Subject: Comments on NPS Letter ref. Palani Well" Honolulu, has been added to the forthcoming Second DEIS.

42. Page 3-64. *The DEIS implies that the native orange-black damselfly can tolerate increasing salinity and temperature in anchialine pools due to the effects of pumping high-level wells. This assertion conflicts with the results of controlled laboratory experiments, which reveal that the eggs and naiads of the candidate-endangered orange-black Hawaiian damselfly (Megalagrion xanthomelas) are sensitive to increased salinity and temperature, and that naiads exhibit a threshold response to salinity above 15 ppt, with no naiads surviving at 20 ppt (Tango, L.K.K., 2010, The effect of salinity and temperature on survival of the orange-black Hawaiian damselfly, Megalagrion xanthomelas. Master's Thesis, University of Hawai'i at Hilo, 46 p).*

Response: The Second Draft EIS assesses three alternative water sources now being considered for the project's drinking water supply.

1. On-site wells at 710-foot elevation
2. On-site wells at 710-foot elevation with reverse osmosis (RO) Treatment
3. Desalinization of saline groundwater from 363-foot elevation on-site wells



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These alternatives can be affirmatively demonstrated as having no impact on the basal lens. They are limited to use of the high level groundwater drawn from strata far below the basal groundwater so as not to impact it, and desalinating saline groundwater, also drawn from below the basal lens. Brine from the desalination alternative would also be discharged far below the basal groundwater. Therefore, no impact on the damselfly could be attributed to the proposed project.

43. Page 3-65. *While it may be true that marine water within the National Park are already in violation of the State's water quality standards for nutrients, including nitrates, ammonia, and phosphate, and chlorophyll-a and turbidity, this does not mean more nutrients (especially organic nutrients) would not further degrade the ecological integrity of the aquatic ecosystems within the National Park. It is pure speculation, contradictory to both common sense and logic, and unsupported by and credible scientific analysis to state that "It is unlikely that there would be any effects to the nearshore marine environment as a result of increases in nutrient concentrations in groundwater." Some of the conclusions from these older studies have been contradicted in testimony and comments on previously proposed nearby developments.*

Response: An *Assessment on Potential Impact on Water Resources* and *Assessment of Marine and Pond Environments* were prepared for the project by TNWRE and MRC, respectively. Both reports will be included in the forthcoming Second DEIS. According to these studies, there will be little effect to the nearshore environment as a result of increases in nutrient concentrations in groundwater.

44. Page 3-65 and 3-66 *"Atkinson (1992) modeled the input of nutrients to the ocean down slope from two golf courses in West Hawai'i over a four-year period. Results of the studies showed that at a location where fertilizer nutrients entered an embayment "Keauhou Bay" with restricted circulation relative to open coastal shorelines, nitrates increased by about 100% and phosphate increased by about 20% over natural input (Marine Research Consultants 2002)." To our knowledge, this model has never been validated. Model results should not be accepted as facts without sufficient validation.*

Response: This paper was based on long-term evidential data collection. The "model" in this case is not a numerical model, but was simply using salinity as a conservative tracer to determine fate of nutrients in two areas of West Hawaii. The references in the publication and data (e.g., model) is widely validated in the scientific literature. Hence, utilization of this data treatment was a complete validation of the model.



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45. Page 3-66. *"These results indicated that even with long-term input of extremely high nutrient subsidies, there are situations where there are no negative effects to the receiving environment." This is a false conclusion. Only a subset of the environment was reported to be sampled; no evidence offered that the proposed development is comparable to this case. The DEIS should have provided details on which nutrients, into what volume of water and coastline.*

Response: Refer to Response no. 31. There are real "situations" occurring in West Hawaii (Honokohau Harbor, Keauhou Bay) where this statement is true. The use of "situations" makes it clear that this is not necessarily a universal occurrence.

46. Page 3-67. *"The physical and hydraulic characteristics of the vadose zone dampen the flux of water and contaminants to the water table. While transiting the vadose zone, contaminants such as fertilizers, pesticides, herbicides and industrial chemicals can be degraded by a process known as natural attenuation." While natural attenuation does occur in areas that are more mesic and have deeper and more developed soil profiles, with the shallow soils, young geology and arid conditions at the proposed project site, natural attenuation is unlikely to remove all of the pollutants before they reach NPS resources. The DEIS should have contained peer-reviewed sources describing the "natural attenuation" capability of this area's geological and climatic conditions.*

Response: The "natural attenuation" that is referred to is quantified in the 2012 TNWRE report using the County's ongoing practice of disposing of R-2 wastewater from the Kealakehe WWTP in a pit upgradient of Honokohau Harbor. Based on the calculations in that report, natural removal rates during passage through the vadose zone and movement with groundwater to the shoreline is substantial.

47. Pages 3-68 to 4-74. *The DEIS presents a summary of neighboring developments and concludes that upgradient wells and resorts have not had a negative impacts to the surround ecosystems. These conclusions are not supported by references to credible scientific analysis nor are the conclusions supported by any reference to scientific data. As stated, the conclusions are the unsubstantiated opinions of consultants for the Kaloko Makai project proponent. The DEIS should include credible scientific evidence to support conclusions that upgradient wells and development have not had a negative impacts. It is unclear how the discussion of three resorts is relevant to the discussion of how the proposed project will adversely impact the coastal and marine resources within the National Park and along the Kona coast. Information dealing with impacts to the National Park or from situations posing similar threats (i.e. Maui) is more relevant.*

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Response: An Assessment of the Potential Impact on Water Resources and Assessment of Marine and Pond Environments were prepared for the Project by TNWRE and MRC. Both reports will be included in the forthcoming Second DEIS. Please reference the TNWRE report (2012) and Marine Research Consultants, Inc. Report (2012). Citations regarding other areas of West Hawaii and Maui are relevant as they are analogous to the project at hand in that human activities change the composition and flux of groundwater. Response of the environment over years to decades of such human inputs provides a useful comparison.

48. Pages 3-74 and 3-75. *As mentioned before, a PPP is a statement of good intentions and is not very self-executing or enforceable. PPP's are difficult to enforce and monitor the effectiveness, and in fact, we know that they are sometimes simply ignored.*

Response: According to the EPA "Pollution prevention (P2) is reducing or eliminating waste at the source by modifying production processes, promoting the use of non-toxic or less-toxic substances, implementing conservation techniques, and re-using materials rather than putting them into the waste stream. Since pollution prevention is a key policy in national environmental protection activities EPA has developed a 2010-2014 Pollution Prevention Program Strategic Plan. A number of Partnership Programs and other EPA initiatives utilize pollution prevention approaches in their work."

"Preventing pollution offers important benefits, as pollution never created avoids the need for expensive investments in waste management and cleanup. By anticipating the future, Pollution Prevention reduces both financial costs (waste management and cleanup) and real environmental costs (health problems and environmental damage). As a result, Pollution Prevention holds the exciting potential of protecting the environment and strengthening economic growth through more efficient production and natural resource use."

"Pollution Prevention has been declared the "environmental policy of the United States." Under Section 6602(b) of the Pollution Prevention Act of 1990, Congress established a national policy to prioritize environmental management. Pollution Prevention was identified as the *highest priority.*" <http://www.epa.gov/region09/waste/p2/whatis.html>

49. Page 3-75. *Since this project is so large and includes a hospital, there should be reporting for pharmaceuticals and endocrine disrupting compounds, in addition to reporting requirements to the DOH's, Wastewater Branch.*

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Response: The builder and future operator of the hospital will be responsible for conforming to all DOH standards, as well as all other applicable standards, rules and laws.

50. Page 4-2. *"Based on available information about the proposed development and the visual gravity of industrial/commercial development flanking the project area to the north and south, and Queen Kaahumanu to the west (makai), the proposed project is considered to add to an established urban trend in coastal North Kona." This sentence is inaccurate regarding the visual gravity of industrial/commercial development flanking the project area. The majority of the areas surrounding the proposed project area is now open space.*

Response: The "established urban trend in coastal North Kona, Kailua", would appear beyond dispute. The comment regarding "visual gravity" sought only to point out that much of the north side of the project area is flanked by the Hulikoia Drive light industrial area and that the southwest corner is flanked by the Kaloko light industrial complex southeast of the intersection of Queen Kaahumanu Highway and Hinalani Street). Much of the viewplane of the project area from Queen Kaahumanu Highway is presently blocked by these industrial/commercial developments.

51. Page 4-4. *"Summary of Previous Archaeological Studies" this section (including Figure 4-1) needs to be updated to include more information, including but not limited to the data recorded in the following survey reports (list).*

Response: Several specific reports referenced are discussed in the archaeological inventory survey reports themselves. At least one report referenced was completed two years after the project's archaeological inventory survey reports were written. Your request to include additional references in the final AIS is acknowledged.

52. Page 4-4. *Summary of Previous Archaeological Studies, Information needs to be provided clarifying whether these sites have assigned SIHP numbers.*

Response: Cultural Surveys Hawaii looks forward to attempting to provide clarification whether sites previously reported have assigned SIHP numbers or not, as well as including that information in the final archaeological inventory survey reports. Sometimes SIHP numbers were assigned retroactively and sometimes they were not.

53. Page 4.8. *A total number of lava tubes encountered, including synopses of caves containing cultural materials found within the project area should be presented so that the public and decision makers can make an informed decision.*





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Response: Determination of “a total number of lava tubes” is a somewhat subjective task as lava tube systems in the project area often have collapsed segments, bifurcate, and/or are often braided. Cultural Surveys Hawaii will attempt to quantify the number of lava tubes and the relative frequency and nature of evidence of use in the final archaeological inventory survey reports.

54. Page 4-12. Table 4-4, this table, along with site types, functions, and mitigations should not be considered finalized until the AIS is approved by SHPD. Regarding all the trail remnants listed with mitigations of “no further work,” NPS supports the SHPD stance that trail segments should be preserved and incorporated into development plans whenever possible. These trails are prehistoric and fall under the Highways Act of 1892 (HRS 264b).

Response: It should be understood that all discussion of site types, functions, and mitigations should not be considered finalized until the AIS is approved by SHPD. A total of 57 trail remnants are described. While many of these are recommended for preservation it is true that many are recommended for no further work. Many of these trail segments are on the order of 10 m. long. The SHPD has always supported judicious consideration of site preservation typically on a case by case basis.

55. Page 4-18. The DEIS states that “the archaeological surveys have been submitted to SHPD for their review. At the time of the preparation of this DEIS, SHPD was still reviewing the archaeological inventory surveys.” Until SHPD approval has been received, the information provided in the DEIS cannot be considered final as it is currently based on the unapproved AIS. If the AIS changes as a result of the SHPD’s review and approval, then a new analysis will be required to analyze impacts to NPS lands, resources and associated landscapes.

Response: The AIS reports were prepared pursuant to the applicable legal requirements. Typically SHPD requires some revisions to an AIS before deeming it final. Nevertheless, until SHPD approval has been received, the information provided in the DEIS cannot be considered final. If the AIS changes significantly as a result of the SHPD’s review and approval, it is conceivable that a new analysis could be required to analyze impacts to NPS lands, resources and associated landscapes.

56. Page 4-30 “Historic properties north and south of the project area are of less concern due to the extensive industrial/commercial developments separating the project area from the potential sites there.” This statement is inaccurate. The majority of the areas to the north and south are now open space, with a high concentration of historic properties. The background research for these sections



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should be included in this study and the analysis of impacts to the cultural resources and cultural landscape of the area.

Response: The findings of studies for adjacent areas have been included in the analyses of the archaeological inventory survey reports. This will be revisited prior to submittal of the final archaeological inventory survey reports

57. Page 4-33, ¶6 All appropriate parties, including the NPS, should be allowed to comment on the burial treatment plan(s) for the proposed project area.

Response: State law will be followed in regard to burial treatment plan(s) for the project area.

58. Page 4-33. ¶6 The first sentence is contradictory to the information provided on page 4-29, the “Off-Site Potable Well Field” section, paragraph two “The AIS recommended that seven burial sites (10701, 10717, 10722, 10728, 10740, and 10754) and one heiau with a burial (10736) be preserved. Four of these sites are located within parcel 062 and the remaining are located on parcels 057, 058, and 059. SHPD concurred with the recommendations on October 24, 2005. As a result, a preservation plan was submitted a Declaration of Archaeological Easements for the preservation of all seven sites.” This is unclear. There should be an explanation of which surveys correlate to the offsite well field.

Response: The off-site potable well site has been omitted from consideration.

59. Page 4-84. The vehicle emissions study only reports using traffic at intersections, while the proposed project is on a significant hill between two highways. Vehicles utilize greater amounts of fuel climbing up hill; the plans include 3 plus 2 lanes entering the project from the bottom of the hill vs. 1 lane entering the project from the top of the hill. The fuel usage and emissions from the bulk of a 5,000-home community driving vehicles must be analyzed.

Response: The air quality study focused on maximum carbon monoxide concentrations near roadway intersections and assessed compliance with air quality standards. There are no specific standards that apply to overall emissions from traffic using Hina Lani Street. Nevertheless, while it is true that traffic traveling up hill will emit more emissions than traffic traveling over level terrain, traffic traveling downhill will tend to emit less. The net emissions from traffic traveling up hill and downhill may not be significantly different from traffic traveling over level terrain. In general, carbon monoxide concentrations are a concern when severe traffic congestion occurs during extremely calm wind conditions. Stationary idling cars in such conditions can raise carbon monoxide



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levels in the immediate vicinity. Moving cars disperse emissions as do winds, reducing carbon monoxide levels.

60. Page 4-52. *Near Queen Ka'ahumanu Highway, near the present water tank, there are major sections of trail which are still intact and should be preserved, Kaloko Makai should consult with NPS, lineal and cultural descendants, Na Ala Hele and SHPD on this. These trail sections are not shown in any of the figures within this document and are within the Conservation area.*

Response: The Petitioner's representatives have had numerous discussions and consultations with the State Na Ala Hele Program.

The archaeological inventory survey for TMK [3] 7-3-009:017 (Bell et al. 2008) addresses the portion of the project lands adjacent to Queen Kaahumanu Highway. This study identifies twenty-one trails (21.2 percent of the total features) encountered during the inventory survey that were encompassed within sixteen sites (State sites 13493, 15324, 15325, 20704, 20722, 20724, 20726, 20732, 20733, 20736, 20737, 20739, 20744, 20745, 20747, and 26259). Six of these trail segments lie within 200 m. to the northeast of the westernmost water tank. This study has not been finalized. We will continue to consult with NPS, lineal and cultural descendants, Na Ala Hele and SHPD on this." for SHPD consideration.

Figure 4-3 shows trails identified during the AIS. We acknowledge that a segment of the western portion of Road to Sea Trail and other trail segments are within the Conservation District.

61. Page 4-53. *The "Mitigation Measures" section is inadequate and does not provided specific mitigations. This section directly quotes what is outlined in the "recommendations" section of the CIA. However, no specifics are mentioned about how the Kaloko Makai project plans to use the recommendations as mitigation measures. For instance, the third bullet in this section notes that "Efforts should be made to protect...water collection lava tubes" yet many of these features are listed to receive no additional work in the AIS. It is unclear how these features will be protected. The DEIS should have stated if these features will be avoided as a mitigation measure.*

*This section should specifically address the concerns outlined in the community consultations, i.e. how Kaloko Makai will implement the recommendations into planning development.*

Response: The need for "specific mitigations" is noted. None of the four archaeological inventory surveys have been accepted at this time. Detailed



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mitigation plans will be prepared following SHPD acceptance of the archaeological inventory surveys.

62. Page 4-54. *"The trail entirely traverses pahoehoe and is generally well defined throughout the eastern portion of the parcel, except near the makai parcel boundary where bulldozing and grading has nearly destroyed the ahupua'a wall and eliminated any definitive sign of the trail." This statement is inaccurate. There are definitive signs of trail in the makai parcel. The trail within the project area is clearly visible up until it crosses Hina Lani (near the intersection of Hina Lani and Kamanu). Furthermore, although in some areas, the wall has been historically robbed for rock, some sections may have fallen over, or been bulldozed, the remnants of the wall are in clear view and the footprint (i.e. form and outline) of the original wall remain.*

Response: The Kohanaiki Trail bisects the project site and is well defined for most of its mauka alignment; below Ane Keohokalole Highway the trail alignment is not certain.

The Alakahakai NHT archeologist (Mr. Rick Gmirkin), the Petitioner's representatives and others have been on various site visits, including three site inspections with employees of the NPS.

After extensive consultation with the community, an agreement was reached on trail treatment. An archeologist for the Alakahakai NHT also made recommendations on the location of the trail. The Petitioner's representatives discussed these treatment measures with Na Ala Hele and the general consensus by all was that the treatment of the trail was appropriate.

Treatment of Kohanaiki Trail will closely follow the agreement established after extensive discussions with the interested community at Kaloko Heights.

This translates to a 10' wide trail pathway (meandering mauka to makai on what is believed to be the historic alignment) with a 10' wide buffer on each side of the trail (30' wide in total). In places where cut and fill are necessary, the elevation of the trail may change, but the general alignment will not be disturbed.

As noted in the DEIS, "Where the Trail intersects with Hina Lani Drive, Kaloko Makai will realign the remaining lower portion of the Trail from that point to run parallel with and adjoining the Hina Lani Street right-of-way down to Queen Kaahumanu Highway. Since the integrity of the historic trail is lost at that point, due to Hina Lani road construction, the adjoining industrial subdivision and the water tank, the Petitioner will realign the trail and have it run down the southern boundary of the property (fronting Hina Lani,) from the point of intersection with



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Hina Lani down to Queen Kaahumanu Highway. This alignment gives the users of the trail easy access to cross Queen Kaahumanu or Hina Lani at the bottom, as there are crosswalks with crossing signals at that point." This is also noted on the Site Plan map of the project.

63. Page 4-54. "Archaeological data created by others makai of the Queen Ka'ahumanu Highway" should be clarified. What are the citations.

Response: Regarding "Archaeological data created by others makai of the Queen Kaahumanu Highway" (archaeological documentation of trails within NPS lands) we will include references to Cordy et. al (1991), Donham (1986) and Renger (1971).

- Cordy, Ross and Joseph Tainter and Robert Renger and Robert Hitchcock. 1991 An Ahupua'a Study: The 1971 Archaeological Work at Kaloko Ahupua'a North Kona, Hawaii: Archaeology at Kaloko-Honokohau National Park, Western Archaeological and Conservation Center Publications in Anthropology No. 58. Tucson: National Park Service, 1991.
- Renger, Robert. 1971 Archaeological Surface Survey of the Coastal Areas of Kaloko and Kukio, North Kona, Hawaii.
- Donham, Theresa K. 1986. Full Archaeological Reconnaissance Survey, Kohana-Iki Development Project Area, Land of Kohana-Iki, North Kona, Island of Hawaii (TMK: 3-7-9: 3, 14), PHRI Report 216-04020861, Hilo, HI.

64. Page 4-55. ¶4 First Sentence "Since the integrity of the historic trail is lost at that point, due to Hina Lani road construction.." is misleading. The lower portion of the trail has been identified and the NPS has recommended appropriate preservation measures.

Response: See response to comment no. 62 above.

65. Page 4-55. Community members and groups responsible for the long-term care of the Kohanaiki and Kaloko Ahupua'a, as well as cultural practitioners who utilize the area for gathering and for cultural and educational activities, should be further consulted regarding the above issues and other concerns throughout the planning, development and operation of the proposed housing development. This consultation should include all interested community groups and individuals who have a stake in the project area. Using Kaloko Heights' treatment measures that were reached between the "community" and Kaloko Heights is grossly inadequate as a treatment plan for Kaloko Makai's preservation of the Kohanaiki/Road to the Sea Trail. NPS believes that the agreement that was accepted for Kaloko Heights is not acceptable for the remainder of the trail. Kaloko Makai has a responsibility



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to meet with community members, groups and cultural practitioners, as well as formally consult with the NPS to determine the best treatment for this and other trails within the project area. This trail is eligible for the National Register of Historic Places as a contributing element to the National Park and the National Historic Landmark.

Response: As stated previously, the Petitioner has been in regular communication with Na Ala Hele regarding the Kohanaiki Trail. Additionally, the Petitioner has consulted with community members and cultural practitioners who were involved in the development of Kaloko Heights' treatment measures.

Kaloko Heights' mitigation measures were negotiated between State representatives, cultural practitioners and community members. In addition, these mitigation measures were brought before the Board of Land and Natural Resources and were approved by them.

The final archeological inventory survey will include reference to the NPS finding that "This trail is eligible for the National Register of Historic Places as a contributing element to the National Park and the National Historic Landmark."

66. Page 4-56 - 4-57. Potential Impacts and Mitigation Measures, NPS recommends rewriting this section to preserve the existing trail and buffer zone rather than altering it.

#1. The DEIS should explain how the trail will be "retained in perpetuity."

#2. There should be a preservation corridor to be used such that school children, community members, etc. experience a more meaningful sense of place when using this ancient trail. The thirty foot trail right of way will not provide the user an authentic experience within the unique cultural landscape of this area, part of the historically significant lifeline between the historic mauka village and the makai coastal villages of Kaloko and Honokohau, which now comprise the National Historical Landmark. Instead of a rigid thirty foot buffer, the corridor should be fluid to include significant cultural and natural features along the route. NPS archaeological staff from Ala Kahakai National Historic Trail, working with descendent communities and the State Historic Preservation Division and local communities should be consulted to establish an appropriate corridor. Trail buffer areas should not be physically altered whatsoever. Altering the landscape within buffers negates the purpose of the trail buffer and adversely impacts the setting and character of the trail, as well as the integrity of the trail as a historic property.

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*#3. No physical scarring or alteration of existing trail features or buffer zones should take place. The priority should be that the trail is preserved. One option may be overpasses and bridges.*

*Cutting and filling within the trail corridor is not acceptable and should not be allowed. Altering the entire landscape and then marking where the trail used to be is not an adequate preservation measure for this trail. Removing the trail materials and replacing them in the same horizontal alignment is not acceptable treatment of a historic property under 6E or Section 106 preservation standards. State Historic Preservation Division and the NPS should be consulted as to the treatment plan for the trail. Cut and fill stepping of the landscape is not the only alternative for land modification in a subdivision. As an example, the developer could design grading pad areas only for planned structures; post and pier construction is also a method used to minimize destruction of the natural landscape and cultural features.*

*#4. The trail should not be physically altered. No vertical or any other changes to this historic trail are acceptable. The text should be revised to read "The original trail surface, and other cultural resources located within the trail corridor, including, but not limited to, existing native trees will be retained."*

*#5. The NPS agrees that cultural features along the existing trail shall be preserved and incorporated into the preservation corridor. When significant cultural resources are located further away from the Trail, the Trail preservation corridor should be adjusted to incorporate and preserve them. Cultural and natural resources should be preserved in place, as moving them destroys the spatial context and integrity of the resource.*

*#6. First sentence should read "in further consideration of existing governmental rules and regulations pertaining to preservation of historic and cultural resources any trail crossing will not physically scar or alter the original trail fabric, features or corridor in any way." For example: Metal (e.g., marine aluminum) grate crossings-bridges can be built for any trail crossings. Metal grates can allow the entire original trail and buffer land surface to be preserved intact, allow people to view the original trail surface and walk the original trail route within inches of the tread elevation. In many cases only two tire width grates would be needed to allow automobiles to cross trails; large trucks and heavy construction equipment can be directed to alternative entrances for their occasional access needs on the two sides of the trail. Heavy construction equipment should not cross the trail, heavy equipment entry to areas near the trail should be made from adjacent land, not across the trail. Recommend defining heavy as the weight of a horse or cow (which are likely to have used or crossed the trail before).*

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*Recommend if the developers are not willing to proposed crossings that no trailcrossings, except pedestrian traffic be allowed, without another environment assessment; roadways already exist on both sides of the trail.*

*The NPS requests to be consulted with in regards to any and all Trail crossings.*

*#7. The NPS recommends that such details should be determined in the Final Preservation Plan for the Trail after the necessary and appropriate consultation with descendants, Na Ala Hele, the SHPD and the NPS.*

*#8. Existing rock walls should be preserved in situ. Replace existing text with "No rock walls will be moved or altered." These are historic cultural structures to be preserved. Routes around existing rock walls will be developed or small bridges constructed for pedestrian crossing.*

*#6, 7 and 8. The sentence "At this early stage of the planning process for Kaloko Makai it is premature for SCD to propose the number and location of specific Trail crossings." is inconsistent with the detailed figures provided in the EIS and the concept of an EIS. The numbers and locations of trail and wall crossings as well as changes in walls, trails, and buffer zones need to be disclosed so that their individual and cumulative effects can be evaluated in the EIS. A map-plan is provided in the DEIS. Does the above comment imply that Kaloko Makai does not intend to follow these plans? If the figures and the calculations in the DEIS are wrong, then the analysis presented of impacts to resources is premature and inadequate.*

*#9. This section's connection to the trail is unclear. Above it is noted that any native trees within the trail corridor will be preserved in place. NPS recommends removal of this point from this section of the EIS. In this harsh dry landscape the location where a tree can survive is uncommon and very unique. The spacing and location of the native trees can survive is uncommon and very unique. The spacing and location of the native trees can be vital to the survival of organisms that depend on them for shelter and food. Without specific details, removal of trees from this landscape is not advisable.*

*#11. Where the Trail intersects with Hina Lani Street, SCD will realign the remaining lower portion of the Trail from the point to run parallel with and adjoining the Hina Lani right-of-way down to Queen Ka'ahumanu Highway. No existing historical structures or artifact (i.e. fragments of existing trail) should be altered; nothing existing should go away. New trails leading from the historic trail to the intersection, crosswalks, and walkways along the roads can be constructed where they do not physically alter existing historic trails and buffers.*



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*NPS should be consulted on the alignment of the trail between Ka'ahumanu Highway and the trail/Hina Lani intersections.*

*#12. Kaloko Makai should incorporate Hawaiian cultural perspectives into the overall planning and execution of the development including the treatment of the 'aina within the project area by preserving the natural contours, geologic features and existing cultural features, not transforming the project area into a state unrecognizable from the original landscape.*

Response: As requested, the forthcoming Second DEIS has been revised to read "The original trail surface, and other cultural resources located within the trail corridor, including, but not limited to, existing native trees will be retained."

As stated previously, the Petitioner has been in regular communication with Na Ala Hele regarding the Kohanaiki Trail. Additionally, the Petitioner has consulted with community members and cultural practitioners who were involved in the development of Kaloko Heights' treatment measures.

Kaloko Heights' mitigation measures were negotiated between State representatives, cultural practitioners and community members. In addition, these mitigation measures were brought before the Board of Land and Natural Resources and were approved by them.

The Petitioner stands by these mitigation measures and will continue using them as the project moves forward.

*67. Page 4-57. "Roadways and Traffic". As noted in the DEIS the existing traffic conditions are currently highly impacted and this proposed project will further add congestion. Park visitors use these roads to access the Park and traffic contributes to their overall park experience. No impact analysis of traffic, or its mitigation, to the National Park is made in the DEIS.*

Response: the Petitioner acknowledges that a project of this size will increase traffic and impact nearby roadways. Mitigation measures, including roadway improvements have been proposed and are included in the forthcoming Second DEIS.

*68. Page 4-73. Noise impacts to Kaloko-Honokohau National Historical Park are not discussed. Significant noise increases are mentioned but only mentions that these impacts are to undeveloped property. The analysis needs to describe the impacts to the NPS resources. What are the Leq levels at 50 and 100 ft on Park property (Table 4, page 13)? Based on the information in the tables in Appendix N, there appear to be significant additional noise impacts from project related traffic*



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*increases. Since Kaloko-Honokohau National Historical Park is a noise-sensitive area, there should be discussion of how traffic noise and construction noise will impact activities at the Park and what measures will be implemented to mitigate noise impacts.*

*a. Appendix N Table 6 Discussion needs to identify where the 65 DNL and 75 DNL setback contours fall on Park property for Year 2011 and 2035.*

Response: As previously mentioned, the Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. As a result, several of the studies, including the Traffic Impact Study and Noise Study have been updated.

*b. Appendix N Page 32 Chapter VII should discuss project-related noise impacts (traffic noise and construction noise) to Kaloko-Honokōhau National Historical Park and possible mitigation measures.*

Response: Noise levels during construction activities on the project site will probably be highest at the northeast corner of the Kaloko-Honokohau National Historical Park during site preparation work north of the existing Kaloko Industrial Park. Minimum separation distances between the construction activities and the northeast boundary of the park are 300 to 400 feet, with construction noise levels of 62 to 75 dBA anticipated along the northeast park boundary. These construction noise levels are similar to existing traffic noise levels along the Queen Kaahumanu Highway ROW, and represent a relatively small portion of the total construction activities planned over the entire project site. The vast majority of potential construction work sites on the Kaloko Makai project site are at 1,000 to 11,000 feet distance from the east park boundary, with corresponding construction noise levels of 60 to 22 dBA.

The Park Visitor Welcoming House is located at least 4,200 feet from the potential construction work areas of the project. As a result, predicted construction noise levels at the Park Visitor Welcoming House are 40 dBA or less.

If noise sensitive park activities or functions are planned near the northeast corner of the park property, it may be possible to schedule the project's construction work north of Kaloko Industrial Park during periods mutually acceptable to the NPS and the Kaloko Makai Project construction contractor. The use of quiet machinery, broadband backup alarms instead of high frequency, beeper type alarms, cast in place piles instead of impact driven piles, and alternatives to the use of hoe rams for breaking rock may be considered for use in order to minimize potential noise impacts during project construction.



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69. Page 4-81. *Six-foot high sound attenuation "walls" along roadways are likely to look out of place in with the existing landscape, while six-foot piles of lava rock can likely be made to look like native 'a'a lava and edges of pāhoehoe flows. Native plants on the sides and top such a constructed lava barrier would contribute to sound attenuation and appearance of such a structure. Utility conduits and access points could be incorporated into lava rock if extensive sound barriers are necessary.*

Response: There are several materials that can be used for sound attenuation walls. The rock walls utilized along Hina Lani Street and within the Kaloko Industrial Park will be considered when designing sound attenuation walls for the proposed project.

70. Page 4-84. *The NPS disagrees with the conclusion that there "may potentially result in a long-term increase in emissions." There will be a long-term increase in emissions. Assuming that each household on average owns 1-2 vehicles, it is safe to say that this development will mean 5-10,000 additional vehicles in the vicinity which will mean a significant amount of pollutants being introduced into the air and water in the area. The DEIS contains no analysis of impacts to NPS resources and Native Hawaiian cultural practices from increased emissions.*

Response: You are correct in that Kaloko Makai will result in increased motor vehicle traffic in the project area and increased emissions from motor vehicles. Computerized emission and atmospheric dispersion models were used to predict the impacts from these emissions on ambient carbon monoxide concentrations in the project area. The results of this analysis indicate that although carbon monoxide concentrations will increase with the project, worst-case concentrations should remain within state and federal ambient air quality standards.

Although the DEIS does not specifically address the potential impacts to NPS resources and Native Hawaiian cultural practices from increased air pollution emissions related to project traffic, it is expected that these emissions would not cause or contribute to the exceedance of any ambient air quality standards. State and federal ambient air quality standards are designed to protect both human health and welfare. Although the standards do not specifically address the issues of impacts on NPS resources and Native Hawaiian cultural practices, it is believed that the expected adherence to ambient air quality standards will serve to protect NPS resources and Native Hawaiian cultural practices.

It should be noted that the air quality study for this project has been revised since the DEIS and was completed to include additional future scenarios both with and without the project. The basic conclusions remain unchanged, and that is that any



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increases in air pollution emissions related to project traffic would not result in any violations of state or federal ambient air quality standards. The revised air quality study will be included in the forthcoming Second Draft EIS.

71. Page 4-86. *Section 4.7, this section needs to address the major visual impacts that this project will have on Kaloko-Honokohau National Historical Park and the Honokohau Settlement National Historic Landmark. The Park and Landmark house over 400 archaeological sites, numerous ethnographic resources as protected resources. These resources are also protected under Section 106 of the National Historic Preservation Act. Under this act visual impacts must be taken into consideration as they can affect the setting of historic properties eligible for the National Register of Historic Places. These sites, ethnographic resources, the Park and the NHL as a whole will be significantly impacted by the alteration of the viewshed by this project. Mitigation measures will need to address these impacts.*

Response: The development will change the visual appearance of the property from vacant land to a built environment. The project area is flanked by light industrial uses along Hulikoa Drive and Kaloko Industrial Park to the south. In addition, the Kaloko Heights development is proposed immediately mauka of Kaloko Makai. Much of the viewplane of the project area from Queen Kaahumanu Highway is presently blocked by industrial/commercial developments.

72. Page 4-86. *Project lighting will also have a negative effect on visual resources and nightscape in the National Park. Light pollution of the night sky will interfere with visitor experience and evening traditional cultural practices. No impact analysis of light pollution, or its mitigation, to the National Park is made in the DEIS.*

Response: Kaloko Makai will result in an increase of streetlights. Appropriate outdoor lighting will be used and adhere to Hawaii County Ordinance.

73. Page 4-87. *"The proposed project will not impact significant mountain or mauka views..." This statement is inaccurate. Currently, this proposed project area consists of large expanses of open space, this project will drastically change the viewshed and visual resources of open space, highly valued in the Kona community, to an urban landscape and thus will have major impacts on both mauka and makai views of the area. In addition, the mauka changes to viewshed from the Park and National Landmark from over 400 National Register-eligible historic properties affects the integrity of these sites by affecting the setting, feeling and association of these resources.*

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Response: The statement will be corrected to state "The proposed project will not obstruct views from Queen Kaahumanu Highway or from the shoreline to the summit of Hualalai because of its location on the lower slope of the mountain.

The development will change the visual appearance of the property from vacant land to a built environment. The project area is flanked by light industrial uses along Hulikoia Drive and Kaloko Industrial Park to the south. In addition, the Kaloko Heights development is proposed immediately mauka of Kaloko Makai. Much of the viewplane of the project area from Queen Kaahumanu Highway is presently blocked by industrial/commercial developments.

74. Page 4-91. Section 4.8.5., this section does not analyze the impacts to the Park or Landmark or Ala Kahakai National Historic Trail. The plan does not address impacts that the influx of 5000 new residences in the immediate vicinity will have on resources in the park. Major impacts to Park facilities and resources will occur as a result of the Park becoming a "recreational facility" to many thousands of people. The NPS will be impacted at many levels responding to the inevitable damage to resources and increased facility demands. Protected green sea turtle habitat is dependent on low levels of human disturbance, as is other endangered waterbird habitat. The National Park is already experiencing high levels of visitation and dealing with overcrowding of facilities and overuse of resources along the coast. The introduction of thousands of new regular users would mean overextension of staff, rapid depletion of ocean resources, impacts to cultural practices and high potential of damage to cultural resources such as archaeological sites. The analysis in this section is inadequate.

Response: Should Kaloko Makai not be developed, residents whose demand for housing would have drawn them to Kaloko Makai would likely have their demand met by other developments in neighboring areas. While Kaloko Makai's proximity to the Park and Historic Trail may create somewhat greater demand on those particular resources, given the mobility of residents in the area, the difference would likely be relatively small. In recent years, the booming population growth in West Hawaii has tempered. Nevertheless, even at a slower pace of growth, demand on park resources will likely increase over time. As a result, the NPS will need to protect their integrity by appropriately managing their use by the public, regardless of whether Kaloko Makai is developed or not.

75. Page 4-99. The National Park Service questions the need for 5,000 more homes in North Kona. During the 2010 census, one fifth of the homes on Hawai'i Island were vacant (West Hawai'i Today, June 15, 2011).

Response: The Kona Community Development Plan (Kona CDP) seeks to direct future growth patterns toward compact villages, preserving Kona's rural, diverse

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and historical character. The majority of future growth should be directed north of Kailua, with some future growth in the Kailua to Keauhou area, in the form of compact villages that offer increased density and mixture of homes, shops and places to work.

76. Page 4-107. Water demand calculated in Table 4-24 is incorrect due to several errors and results in a significant underestimation of water demand for the proposed project. Errors in Table 4-24 should be corrected to provide an accurate estimate of the water demand for this proposed project. More specifically:
- The 20-acre wastewater treatment plant and 1.7-acre desalination plant are not explicitly listed in Table 4-24. Revise Table 4-24 to include water demand of 4,000 gpd/acre, per Hawai'i County Department of Water Supply guidelines, or explain why a different rate was used.
  - Water demand for Phase 1 Parks is 54,000 gpd/acre but is 6,000 gpd/acre for Phase 3 Parks in Table 4-24. These values are not consistent with the rate of 4,000 gpd/acre listed under "Assumptions" for Table 4-24. Correct the water demand for Parks or explain why different rates were used in Table 4-24.
  - Water demand for Phase 2 Parks is not included in Table 4-24. Table 2-6 indicates that Phase 2 will include a 13-acre park. Revise Table 4-24 to include the water demand for a 13-acre Phase 2 Park.
  - The acreage for the Phase 2 School in Table 4-24 is not consistent with Table 2-6. Revise Table 4-24 to include water demand for an 18-acre Phase 2 middle school.
  - Water demand for the Phase 2 School in Table 4-24 is 6,000 gpd/acre, which is not consistent with water demand of 4,000 gpd/acre used for Schools in Phases 1 and 3. Revise Table 4-24 to use a consistent water use rate for Schools or explain why different values were used.
  - A rate of 400 gpd per unit is used to estimate residential water demand in Table 4-24. This rate is not consistent with the rate used by the Hawai'i County Department of Water Supply to estimate water demand for North Kona. The 2011 Water Use and Development Plan Update (p. 2-12) uses a value of 1,000 gpd per unit for single family residential units in North Kona based upon actual historic consumption data. Revise the residential water demand in Table 4-24 to be consistent with the Department of Water Supply guidelines for North Kona.

Response: The water demand calculated in Table 4-24 has been revised in the forthcoming Second DEIS.

77. Page 4-107. Table 4-24, total water demand was recalculated based upon information presented in Table 2-6 of the DEIS and the Hawai'i County Water Use and Development Plan Update water consumption guidelines (p. 2-12). The

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July 25, 2013

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*revised table below indicates that the average daily water demand for the proposed project could be as high as 6.9 Mgd, over two times that estimated in the DEIS. The DEIS should have (1) evaluated whether the proposed alternatives to supply potable water are sufficient to meet this water demand, and (2) evaluated the potential effects of each alternative on the water resources and groundwater-dependent ecosystems in the area of the proposed project.*

Response: If the water supply implemented is to desalinate saline groundwater, the feedwater supply is essentially unlimited. If the implemented alternative is to be high level groundwater extracted from below saline groundwater and affirmatively demonstrated to have no impact the basal lens, the available supply will be pragmatically determined during the project's build out. Toward this end, however, recent recharge calculations by the USGS for the Keauhou Aquifer indicate that the sustainable supply is substantially greater than previously thought.

The water demand calculated in Table 4-24 has been revised in the forthcoming Second DEIS.

78. Page 4-110. *The DEIS states that reverse osmosis concentrate will be discharged in on-site disposal wells at depths sufficient to reach groundwater with "30 parts per trillion (ppt) salinity." The notation is also defined on Page G-5 as "parts per trillion." This is inconsistent with the more feasible definition given on Page 3-26, which states that the concentrate will be disposed in strata where groundwater salinity is "30 parts per thousand (ppt) or greater." The DEIS should be revised to confirm the targeted salinity of the strata into which reverse osmosis concentrate will be disposed.*

Response: The forthcoming Second DEIS will be revised to confirm and consistently refer to the targeted salinity of the strata into which reverse osmosis concentrate will be disposed is "30 parts per thousand (ppt) or greater."

79. Page 4-126. *"Wastewater Treatment Alternatives" While the use of recycled water to the R-1 level is the appropriate treatment to reduce viral and bacterial pathogens for irrigation uses around residential areas, the stated level of nutrients contained in the wastewater effluent is a significant concern.*

Response: The standards established by the State Department of Health for nutrient levels in R-1 reclaimed water is appropriate for irrigation purposes. Application of reclaimed water is regulated to assure total uptake by plants within the root zone.

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80. Page 4-129. *"During periods of wet weather, excess R-1 water will be disposed of via infiltration basins." The DEIS has no analysis of impacts to aquatic ecosystems resulting from the disposal of sewage effluent via infiltration basins.*

Response: The forthcoming Second DEIS has been revised to note that during periods of wet weather, excess R-1 water will be disposed of via disposal wells.

81. Page 4-129. *Table 4-25 lists potential uses for treated wastewater, however, there are no calculations for the actual amount of wastewater that will be disposed of via irrigation or other methods. The project will occur in phases and it is unlikely that the supply of treated wastewater and the demand for treated wastewater will be in synch. Considering the cost of installing separate waterlines for the treated wastewater will be in synch. Considering the cost of installing separate waterlines for the treated wastewater, without specific volumes of wastewater and timelines, there is no guarantee that all the treated wastewater will not be disposed of via the infiltration basins.*

Response: Storage capacity for reclaimed water is based on projected use rates and wet weather frequency and duration. In the earlier phases of development, the potential for disposal of excess reclaimed wastewater during wet-weather may be greater due to smaller volumes and irrigation areas. In the later phases, however, demand is projected to exceed volume produced. The project is committed to installing R-1 water infrastructure to meet ultimate demand as well as interim demand.

82. Page 4-132. *"It is assumed that approximately 15% of applied irrigation water will percolate down to the basal ground water. As the excess irrigation water percolates downward through the unsaturated zone to the groundwater, removal rates of nitrogen and phosphorus from the water will be significant." No scientific data or scientific studies are provided to support the assumptions that 1) fifteen percent of irrigation water will reach groundwater and 2) nitrogen and phosphorus removal rates will be "significant." Public review and decision-making actions cannot rely upon unsupported claims and assumptions regarding potential impacts to nationally significant resources.*

Response: The 2012 TNWRE report identifies and quantifies the sources of water that will percolate to and impact the basal lens using actual field data.

83. *At the proposed O'oma Beachside Village development, less than 1 mile from the proponent's project, Waimea Water Services estimated that approximately 54% of the total irrigation water used would infiltrate into the aquifer. (The Water Development Impacts Study for the Shores of Kohanaiki, Figure 6, Waimea Water Services, Inc., 2007). There is a large discrepancy in the estimates for the two*



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July 25, 2013

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*developments that are located in the same general area with the same soil composition. The DEIS should have explained this discrepancy and provide data to support the stated assumption of 15%.*

Response: We have not seen the basis of the assertion that 54 percent of applied irrigation water would percolate to groundwater and cannot be responsible for it. That would mean applying more than twice the plant evaporation requirement during irrigation, a highly unlikely practice. Actual percolation at Kaloko Makai will be on the order of 10 to 15 percent of the applied irrigation water. No reasonable person would apply more than twice the plant evaporation requirement.

*84. Page 8-1. "Relationship Between the Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity" The DEIS fails to capture the cumulative impacts, secondary impacts, irreversible commitments of resources, and probable adverse environmental effects to the area, especially at Kaloko-Honokohau, as suggested by the comments listed above.*

Response: The forthcoming Second DEIS will revisit the assessments cited above in the context of changes in project description and impacts, to comply with the EIS content requirements established by Chapter 343, Hawaii Revised Statutes and Title 11, Chapter 200, Hawaii Administrative Rules.

Your letter, along with this response, will be reproduced and included in the forthcoming Second Draft EIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", written over a circular stamp or seal.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

NEIL ABERCROMBIE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

BRUCE A. COPPA  
COMPTROLLER  
JAN S. GOUVEIA  
DEPUTY COMPTROLLER

(P)1182.1



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7469-01  
July 25, 2013

Mr. Dean H. Seki, Acting Comptroller  
Department of Accounting and General Services  
State of Hawaii  
P.O. Box 119  
Honolulu, HI 96810-0119

AUG 23 2011

EM

Mr. Earl Matsukawa, AICP  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii'i 96826

AUG 23 2011

Dear Mr. Matsukawa:

Subject: Draft Environmental Impact Statement  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Island of Hawai'i  
TMK: (3) 7-3-009: 017, 019 (por.), 026, 026, 028, 062 (por.), 63

This is in response to your letter dated August 3, 2011 regarding the subject project. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400 or have your staff call Mr. David DePonte of the Public Works Division at 586-0492.

Sincerely,

BRUCE A. COPPA  
State Comptroller

cc: Mr. Orlando Dan Davidson, DBEDT SLUC  
Mr. Peter Phillips, SCD-TSA Kaloko Makai, LLC

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Seki:

Thank you for your letter dated August 23, 2011 (Ref No. P1182.1). The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we acknowledge that the proposed project does not impact any of the Department's projects or existing facilities and you have no comments to offer at this time.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodnenker, State Land Use Commission



LAND USE COMMISSION  
Department of Business, Economic Development & Tourism  
State of Hawaii

September 12, 2011

EM  
TF

Mr. Earl Matsukawa  
Ms. Tracy Fukuda  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

RECEIVED  
SEP 13 2011  
WILSON OKAMOTO CORPORATION

Dear Mr. Matsukawa and Ms. Fukuda:

Subject: Docket No. A07-778/SCD Kaloko Makai, LLC  
Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: 7-3-09: 17, por. 25, 26, 28, and 63  
Offsite Well Field: 7-3-09: por. 19 and por. 62

We have reviewed the DEIS for the subject project and have the following comments to offer:

- 1) In accordance with subsection 11-200-17(e), Hawaii Administrative Rules (HAR), a project description should be provided. Based on our review of the DEIS, we note that the Petition Area has decreased from 952.165 acres as represented in the Petition for Land Use District Boundary Amendment (Petition) filed on December 28, 2007, to 948.866 acres despite the subsequent addition of Tax Map Key: 7-3-09: 63 to the Petition Area.<sup>1</sup> We further note that Tax Map Key: 7-3-09: 25 is designated within both the Urban and Agricultural Districts, and that the exact acreage within the Agricultural District is subject to a boundary interpretation. If Petitioner has not already done so, we suggest that the request for this interpretation be filed with our office as soon as possible as our determination may impact the description of the Petition Area identified in the Final EIS.

<sup>1</sup> The acreage of the Petition Area cited on page 1-3 of the *Introduction and Summary* reflects a mathematical error as the area of the proposed land use designation is identified as 948.666 acres.

Review of the Kaloko Makai Land Use Plan in the DEIS also reveals various changes to the proposed development since the filing of the Petition, including but not limited to the addition of a hospital, light industrial uses, and a wastewater treatment plant.<sup>2</sup>

Given the extent of these changes, please be advised that an amendment to the Petition will need to be filed with the necessary narrative/maps documenting the current description of the Petition Area and the proposed development.

By letter dated January 23, 2008, we provided comments on the Petition in which we requested that additional information be provided to specifically address how affordable housing will be provided within the context of the applicable housing policies of the State and County of Hawaii. We acknowledge that the DEIS includes information on conforming affordable housing prices relative to the County guidelines effective September 1, 2010, and that of the 5,000 housing units proposed in the development, 700 will be affordable units. Further clarification should be provided on the projected breakdown of these 700 units between single-family and multi-family units and their respective sales prices/rental rates.

Finally, we note that the development timetable for the construction of infrastructure improvements has changed since the filing of the Petition. According to the Petition, the primary infrastructure systems necessary to accommodate substantial development were projected to be completed within ten years. The DEIS, on the other hand, states that the major infrastructure will be developed by 2025, with the development implemented in three phases and completed in approximately 30 years. We acknowledge that the DEIS includes three maps generally depicting each phase. As you may know, subsection 15-15-50(c)(3), HAR, requires that a metes and bounds map and description of the Petition Area as well as of the increments/phases be provided when incremental development is proposed as it is in this case. As such, as part of the content requirements for the Petition, the above maps should be supplemented with the applicable metes and bounds of the boundaries of each phase.

<sup>2</sup> Although an onsite wastewater treatment plant now appears to be the preferred alternative for processing wastewater generated by the development, according to the Petition it was anticipated that the development would connect to the County's wastewater system and be served by the Kealakehe Wastewater Treatment Plant.

To the extent that easements are present on the Petition Area, they should be reflected on any metes and bounds map submitted as we pointed out in our January 23, 2008, comment letter on the Petition. Additionally, since Phases 1 and 2 involve other lands previously urbanized under Docket No. A84-566/TSA International, Ltd., metes and bounds should be provided for the acreage of each phase within the Agricultural District in conjunction with the aforementioned boundary interpretation.

- 2) In accordance with subsection 11-200-17(h), HAR, a statement of the proposed action to land use plans, policies, and controls for the affected area should be provided. We acknowledge that the DEIS includes an assessment of the proposed development in relation to the applicable objectives, policies, and priority guidelines of the State Plan. Please be advised that SB 283, SD 1, HD 1, CD 1, was recently signed into law as Act 181. The Act added a new section to Part III of chapter 226, Hawaii Revised Statutes, which provides, among other things, priority guidelines and principles to promote sustainability. We request that the current assessment in the DEIS be amended to include a discussion of how the proposed development conforms to these sustainability criteria.

The status of each identified approval should also be described. We acknowledge that the DEIS includes a listing of anticipated permits and approvals. We request that to the extent possible the projected submittal dates (i.e., by month/year) of the various applications be provided.

- 3) In accordance with subsection 11-200-17(i), HAR, a discussion of the probable impact of the proposed action on the environment shall be provided, including an assessment of the interrelationships and cumulative environmental impacts of the proposed action and other related projects. We acknowledge that the DEIS contains a section on cumulative impacts, including a table of planned residential and commercial developments in the vicinity of the Petition Area. We further acknowledge this section states that a discussion of existing human and natural environmental conditions in the project area is found in Chapters 3 and 4. However, given that this section is entitled *Cumulative Impacts*, we request that in addition to the impacts from the proposed development, this section addresses the specific impacts from each of the identified developments to determine the extent of their cumulative impacts on the environment.

We also note that there is no discussion in the DEIS on the existing civil defense facilities in the area as well as on the potential impacts on such facilities from the proposed development. We request that the Final EIS address this matter, including any plan to fund and construct adequate civil defense measures (sirens) to serve the Petition Area as may be required by the State Department of Defense, Office of Civil Defense.

- 4) In accordance with subsection 11-200-17(n), HAR, the DEIS shall include a separate and distinct section that summarizes unresolved issues. We acknowledge that the DEIS includes such a section. However, discussion is needed to address how the unresolved issue of transportation improvements to address cumulative traffic impacts will be resolved prior to commencement of the action or the overriding reasons for proceeding without resolving the matter. This discussion should include the provision of a timetable(s) for resolution and the options available to Petitioner if the matter is not resolved in a timely manner relative to the commencement of the proposed development.
- 5) We acknowledge that a Motion to Amend Conditions (Motion) for the approximately 190-acre portion of the proposed development in the Urban District will be filed with our office to conform this acreage (previously proposed for golf course use and related facilities) to the development. We strongly recommend that coordination with our office be done prior to the filing of the Motion to ensure its orderly processing.
- 6) In the DEIS, there are numerous references to the terms *potable water* and *non-potable water*. We request that it be replaced by the term *drinking water* and *non-drinking water*, respectively. We have been advised that although potable water has generally been used to mean drinking water, the Department of Health (DOH) uses the latter term specifically to indicate water for human consumption that is derived from surface water and/or groundwater and is regulated by the DOH pursuant to chapter 11-20, HAR.
- 7) We note that SCD Kaloko Makai, LLC, is the Petitioner of record in the Petition. However, the name of the Petitioner/Applicant identified in the DEIS is SCD - TSA Kaloko Makai, LLC. Clarification should be provided on the distinction, if any, between the two entities, so that the record in the district boundary amendment proceeding including, but not limited to, the landowner's authorization, affidavits, balance sheet, and

Mr. Earl Matsukawa  
Ms. Tracy Fukuda  
September 12, 2011  
Page 5

notification of petition filing reflects the appropriate entity seeking relief from the Land Use Commission.

- 8) For your information, a portion of the Petition Area, identified as TMK: 7-3-09: por. 17, was the subject of a previous boundary amendment petition filed under Docket No. A95-716/Tokyo Green Hawaii, Inc., which proposed to reclassify the parcel to the Urban District for residential, commercial, school, and park uses. The request was subsequently withdrawn by the Petitioner.

We have no further comments to offer at this time. Thank you for the opportunity to comment on the subject DEIS.

Should you have any questions, please feel free to call me or Bert Saruwatari of our office at 587-3822.

Sincerely,



ORLANDO DAVIDSON  
Executive Officer

c: Peter Phillips



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7469-01  
July 25, 2013

Mr. Daniel Orodener, Executive Officer  
Land Use Commission  
State of Hawaii  
234 South Beretania Street, Suite 406  
Honolulu, HI 96813

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Orodener:

Thank you for your letter dated September 12, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

*(1) In accordance with subsection 11-200-17(e), HAR, a project description should be provided. Based on our review of the DEIS, we note that the Petition Area has decreased from 952.165 acres as represented in the Petition for Land Use District Boundary Amendment (Petition) filed on Dec. 28, 2007, to 948.866 acres despite the subsequent addition of TMK 7-3-09:063 to the Petition Area\*. We further note that TMK 7-3-9:25 is designated within both Urban and Ag Districts, and that the exact acreage within the Ag District is subject to boundary interpretation. If Petitioner has not already done so, we suggest that the request for this interpretation be filed with our office as soon as possible as our determination may impact the description of the Petition Area identified in the FEIS. (\* The acreage of the Petition area cited on pg 1-13 of the Introduction and Summary reflects a mathematical error as the area of the proposed land use designation is identified as 948.666 acres)*

Response: The difference in land area between what is stated in the initial petition and what is reported in the DEIS results from approximately five acres of land that was conveyed to the County of Hawaii for the Ane Keohokalole Highway.

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Letter to Mr. Daniel Orodener

July 25, 2013

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Additionally, 150 acres will not be subject to the petition because the dryland forest preserve will remain in Agricultural District, as will be documented in the forthcoming Second DEIS.

Discrepancies in the acreage for the petition area have been corrected throughout the Second DEIS.

In addition, a request for a boundary interpretation was submitted to the State Land Use Commission and found the survey map to be consistent (Boundary Interpretation No. 07-41).

*Review of the Kaloko Makai Land Use Plan in the DEIS also reveals various changes to the proposed development since the filing of the Petition, including but not limited to the addition of a hospital, light industrial uses, and a WWTP\*. (\*Although an onsite wastewater treatment plant now appears to be the preferred alternative for processing wastewater generated by the development, according to the Petition it was anticipated that the development would connect to the County's wastewater system and be served by the Kealakehe Wastewater Treatment Plant.)*

*Given the extent of these changes, please be advised that an amendment to the Petition will need to be filed with necessary narrative/maps documenting the current description of the Petition Area and the proposed development.*

Response: The site plan has undergone further revisions since the filing of the Petition. A Second DEIS has been prepared as a result of the changes to the site plan, project description and impact assessment.

Once the HRS Chapter 343 environmental review process is complete, Petitioner will prepare an amendment to the Petition to incorporate all of the appropriate changes.

*By letter dated January 23, 2008, we provided comments on the Petition in which we requested that additional information be provided to specifically address how affordable housing will be provided within the context of the applicable housing policies of the State and County of Hawaii. We acknowledge that the DEIS includes information on conforming affordable housing prices relative to the County guidelines effective September 1, 2010, and that of the 5,000 housing units proposed in the development, 700 will be affordable units. Further clarification should be provided on the projected breakdown of these 700 units between single-family and multi-family units and their respective sales prices/rental rates.*

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July 25, 2013

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Response: Kaloko Makai will comply with the County of Hawaii's ordinances concerning affordable housing requirements. Moving through the entitlement process, the Petitioner will continue to work with Hawaii County's Office of Housing and Community Development on the appropriate amount, price points and rental amounts that are appropriate for this development.

*Finally, we note that the development timetable for the construction of infrastructure improvements has changed since the filing of the Petition. According to the Petition, the primary infrastructure systems necessary to accommodate substantial development were projected to be completed within 10 years. The DEIS on the other hand, states that the major infrastructure will be developed by 2025, with the development implemented in 3 phases and completed in 30 years. We acknowledge that the DEIS includes three maps generally depicting each phase. As you may know, subsection 15-15-50(c)(3), HAR, requires that a metes and bounds map and description of the Petition Area as well as of the increments, phases be provided when incremental development is proposed as it is in this case. As such, as part of the content requirements for the Petition, the above maps should be supplemented with the applicable metes and bounds of the boundaries of each phase.*

Response: Applicable metes and bounds descriptions and mapping will be filed with the Land Use Commission when Petitioner files its Amendment to State Land Use District Boundary Amendment Petition.

*To the extent that easements are present on the Petition Area, they should be reflected on any metes and bounds map submitted as we pointed out in our Jan. 23, 2008 comment letter on the Petition. Additionally, since Phases 1 and 2 involve other lands previously urbanized under Docket No. A84-566/TSA International Ltd., metes and bounds should be provided for the acreage of each phase within the Ag District in conjunction with the aforementioned boundary interpretation*

Response: As stated above, appropriate mapping will be provided when Applicant submits State Land Use Boundary Amendment Petition

*(2) In accordance with subsection 11-200-17(h), HAR, a statement of the proposed action to land use plans, policies, and controls for the affected area should be provided. We acknowledge that the DEIS includes an assessment of the proposed development in relation to the applicable objectives, policies, and priority guidelines of the State Plan. Please be advised SB 283, SD 1, HD 1, CD 1, was recently signed into law as Act 181. The Act added a new section to Part III Chapter 226, HRS, which provides, among other things, priority guidelines and principles to promote sustainability. We request that the current assessment in the DEIS be amended to*



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Letter to Mr. Daniel Orodenker  
July 25, 2013  
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*include a discussion of how the proposed development conforms to these sustainability criteria.*

Response: Attached within the Appendices of the forthcoming Second DEIS is a Sustainability Plan which includes a discussion of priority guidelines and principles to promote sustainability within the project.

The forthcoming Second DEIS fully complies with the requirements set forth in Title 11, Chapter 200 of the Hawaii Administrative Rules (HAR) and includes a discussion of the proposed project's conformance with sustainability criteria outlined in Act 181.

*The status of each identified approval should also be described. We acknowledge that the DEIS includes a listing of anticipated permits and approvals. We request that to the extent possible the projected submittal dates (ie, by month/year) of the various applications be provided.*

Response: The forthcoming Second DEIS will discuss the status of each identified approval. Furthermore, the listing of anticipated permits and approvals within the Second DEIS will include anticipated submittal dates, to the extent that such dates can be projected at this time.

*(3) In accordance with subsection 11-200-17(i), HAR, a discussion of the probable impact of the proposed action on the environment shall be provided, including an assessment of the interrelationships and cumulative environmental impacts of the proposed action and other related projects. We acknowledge that the DEIS contains a section on cumulative impacts, including a table of planned residential and commercial developments in the vicinity of the Petition Area. We further acknowledge this section states a discussion of existing human and natural environmental conditions in the project area is found in Chp. 3 & 4. However, given that this section is entitled cumulative impacts, we request that in addition to the impacts from the proposed development, this section addresses the specific impacts from each of the identified developments to determine the extent of these cumulative impacts on the environment.*

Response: As requested, in the forthcoming Second DEIS, Section 8.2 Cumulative Impacts will address cumulative impacts from other proposed developments.

*We also note that there is no discussion in the DEIS on the existing civil defense facilities in the area as well as on the potential impacts of such facilities from the proposed development. We request that the FEIS address this matter, including any*



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Letter to Mr. Daniel Orodenker  
July 25, 2013  
Page 5 of 6

*plan to fund and construct adequate civil defense measures (sirens) to serve the Petition Area as may be required by the State Dept. of Defense, Office of Civil Defense.*

Response: The forthcoming Second DEIS will include a discussion of existing and proposed civil defense facilities in the area.

*(4) In accordance with subsection 11-200-17(n), HAR, the DEIS shall include a separate and distinct section that summarized unresolved issues. We acknowledge that the DEIS includes such a section. However, discussion is needed to address how the unresolved issue of transportation improvements to address cumulative traffic impacts will be resolved prior to commencement of the action or the overriding reasons for proceeding without resolving the matter. This discussion should include the provision of a timetable(s) for resolution and the options available to Petitioner if the matter is not resolved in a timely manner relative to the commencement of the proposed development.*

Response: Transportation improvements to address cumulative traffic impacts is no longer an "unresolved issue." Therefore, the forthcoming Second DEIS will reflect this. An updated traffic study has been prepared for the Second DEIS. The roadway system will conform to County design standards and intersections improvements with State roadways will be consistent with State design standards.

*(5) We acknowledge that a Motion to Amend Conditions (Motion) for the approximately 190-acre portion of the proposed development in the Urban District will be filed with our office to conform this acreage (previously proposed for golf course use and related facilities) to the development. We strongly recommend that coordination with our office be done prior to the filing of the Motion to ensure its orderly processing.*

Response: The Petitioner will coordinate with the LUC prior to filing a Motion to Amend Conditions for the approximately 190-acre portion of the proposed project in the Urban District.

*(6) In the DEIS, there are numerous references to the terms potable water and non-potable water. We request that it be replaced by the term drinking water and non-drinking water, respectively. We have been advised that although potable water has generally been used to mean drinking water, the DOH uses the latter term specifically to indicate water for human consumption that is derived from surface water and/or groundwater and is regulated by the DOH pursuant to Chapter 11-20, HAR.*

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Letter to Mr. Daniel Orodener

July 25, 2013

Page 6 of 6



Response: References to the terms “potable water” and “non-potable water” have been replaced by the terms “drinking water” and “non-drinking water” in the forthcoming Second DEIS.

*(7) We note that SCD Kaloko Makai, LLC is the Petitioner of record in the Petition. However, the name of the Petitioner/Applicant identified in the DEIS is SCD-TSA Kaloko Makai, LLC. Clarification should be provided on the distinction, if any, between the two entities, so that the record in the district boundary amendment proceeding including, but not limited to, the landowner's authorization, affidavits, balance sheet, and notification of petition filing reflects the appropriate entity seeking relief from the LUC.*

Response: The name of the Petitioner has changed since the original filing of the Petition. The appropriate documents will be submitted to the LUC regarding this change, and the current name of the landowner will be identified as the Petitioner in the Amendment to Land Use District Boundary Amendment, which will be filed with the Commission after the HRS Chapter 343 process is completed..

*(8) For your information a portion of the Petition Area, identified as TMK: 7-3-9: por. 17, was the subject of a previous boundary amendment petition filed under Docket No. A95-716/Tokyo Green Hawaii, Inc., which proposed to reclassify the parcel to the Urban District for residential, commercial, school, and park uses. The request was subsequently withdrawn by the Petitioner.*

Response: The Petitioner acknowledges that parcel 17 was subject to a previous boundary amendment, which was subsequently withdrawn.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development





**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

**OFFICE OF PLANNING**

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DIRECTOR  
OFFICE OF PLANNING

Mr. Orlando Davidson  
Page 2  
October 7, 2011

Ref. No. P-13425

October 7, 2011

Mr. Orlando Davidson, Executive Officer  
State Land Use Commission  
Department of Business, Economic Development and Tourism  
P.O. Box 2359  
Honolulu, Hawai'i 96804

Dear Mr. Davidson:

Subject: Draft Environmental Impact Statement  
Land Use Commission Docket No. A07-778, Kaloko Makai  
Tax Map Key Nos. (3) 7-3-009: 017, 025, 026, and 028  
Kaloko and Kohanaiki, North Kona, Hawai'i

The Office of Planning (OP) has reviewed the Draft Environmental Impact Statement (DEIS) prepared for the above referenced project. Petitioner, SCD-TSA Kaloko Makai, LLC, proposes to reclassify a total of approximately 952.165 acres of land from the State Agricultural and Conservation Districts to the State Urban District, for the development of the Kaloko Makai project, a mixed-use urban center planned for approximately 1,142.165 acres within the designated Kona Urban Area of the County of Hawai'i's Kona Community Development Plan.

The Office represents the State as a mandatory party in proceedings before the Land Use Commission (LUC) for amendments to district boundaries involving land areas greater than fifteen acres, pursuant to Section 205-4(e), Hawai'i Revised Statutes (HRS). The Office evaluates proposed projects and petitions with respect to the LUC decision-making criteria in Section 205-17, HRS, and Chapter 15-15, Hawai'i Administrative Rules (HAR). In addition, the Office strongly encourages petitioners to review their proposals with respect to the Administration's priorities in implementing the goals of the Hawai'i State Plan, Chapter 226, HRS. These priorities are set out in the Administration's New Day Comprehensive Plan, which is available at <http://hawaii.gov/about/a-new-day>.

The Office offers the following comments on the subject DEIS. These comments are intended to ensure that the Final Environmental Impact Statement (FEIS) provides a more complete and accurate discussion of project impacts pertinent to LUC decision-making criteria.

1. **Act 181. Session Laws of Hawai'i 2011. Priority guidelines for sustainability.** Act 181, signed into law on July 5, 2011, sets forth in Part III of Chapter 226, HRS, new priority guidelines to promote sustainability in Hawai'i. The new priority guidelines should be included in FEIS Section 5.1.4, and the FEIS should discuss how the project addresses the priority guidelines for sustainability.
2. **Sustainable development and resource use.** OP reviews proposed projects with respect to their demonstrated commitment to incorporating and implementing sustainable design and development practices that align with State energy initiatives and the Administration's priorities to move toward clean energy, energy independence, and a green economy. The DEIS discusses a variety of green building practices that will be "considered" in project design and development. OP recommends that the FEIS identify those measures that are proposed to be or will be incorporated in project design and construction to reduce resource use and energy demand, maximize energy efficiency and resource reuse and recycling, promote use of alternative, renewable energy sources.

OP also recommends that petitioners consider preparing a sustainability plan that outlines guidelines, actions, and performance standards to be implemented in the design, development, and operation of projects to minimize and mitigate the long-term energy and resource impacts of proposed projects. Castle and Cooke Homes Hawai'i (Koa Ridge) and DR Horton-Schuler Homes (Ho'opili) have prepared sustainability plans for their respective projects; these documents are available for review at the LUC website.

3. **Groundwater and coastal water quality.** The section on groundwater resources would be improved by including a brief description of the project's estimated potable and non-potable water demand, potential recharge or infiltration due to wastewater effluent disposal, irrigation, and stormwater runoff, and preferred water source, to provide a context for evaluating reasonably foreseeable impacts. On page 3-27, the statement regarding no anticipated impacts to groundwater sources should be qualified to read that with appropriate mitigation there are no anticipated impacts.

Given comments received from the State Department of Land and Natural Resources' Division of Aquatic Resources and the U.S. National Park Service (NPS), that the evidence to date is inconclusive as to the potential impacts—adverse or otherwise—that may result from development of the project and other projects in the region on the Class AA and Class A coastal receiving waters and the water quality of the anchialine ponds and other coastal resources found at the Kaloko-Honokōhau National Historical Park (NHP) and Monument makai of the proposed project. The NPS is concerned about the quality of groundwater and

surface runoff entering the NHP. To strengthen the evaluation of the reasonably foreseeable impacts, the FEIS should include the following:

- a. All studies referenced in the groundwater section should be fully cited in the References section, e.g., Dollar 2002 is not listed in the References.
  - b. As recommended by the NPS, the FEIS should include an analysis of preventative measures such as restricted use of termiticides, pesticides, and herbicides and the incorporation of water quality treatment features, like filtration devices, that can be incorporated in drainage improvements to remove potential contaminants like petrochemicals before disposal in drywells or infiltration into groundwater underlying the project site.
  - c. The project proposes to adopt mitigation measures including a pollution prevention plan and groundwater monitoring plan, similar to plans worked out between the NPS and other developers in area. The FEIS should provide an update on consultations with the NPS and whether there is substantive agreement about the scope and content of the plans. The FEIS should also identify what entity will be responsible for preparing and implementing these plans.
  - d. The DEIS states that the groundwater monitoring plan will be implemented for a two-year period. Given the questions and concerns as to the long-term, cumulative impacts of urban development of this and other projects on coastal waters, it is more reasonable for the groundwater monitoring plan to be long-term, to enable an assessment of conditions with full buildout of the project.
4. **Proposed dryland forest preserve.** The FEIS should discuss potential impacts and possible mitigation measures related to increased accessibility due to urban development and the trail restoration proposed in the remnant forest. The FEIS should also clarify and/or discuss, in the appropriate section, preservation and management of the dryland forest with respect to the following:
- a. **Habitat conservation plan.** The FEIS should clarify whether the habitat conservation plan is of similar or narrower scope than the management plan the U.S. Fish and Wildlife Service recommended be prepared and implemented for the preserve in its October 29, 2010 letter.
  - b. **Implementation of habitat conservation plan or management plan.** The FEIS should clarify who will be responsible for managing the preserve? How will management activities be funded over the long-term?
  - c. **Phasing of implementation.** Figure 2-12 includes the dryland forest in Phase 1 of the project. Table 2-6 lists the dryland forest in Phase 3. Given the sensitivity of the forest ecosystem and protected plant species within, it would be preferable for the dryland forest preserve to be established and

management measures in place in Phase 1, early in the project prior to major construction activity.

- d. **Consistency with County Plan land use designation and variant for Alternatives section.** The County General Plan Land Use Allocation Pattern Guide Map designates much of the dryland forest area as 'Conservation'. The FEIS should discuss consideration of reclassification of the lands underlying the proposed preserve to the State Conservation District as a reasonable alternative to reclassification to the Urban District.
5. **Archaeological and cultural resources.** The northeastern portion of the project property features numerous archaeological and cultural resources, such as burials in lava tubes, which are proposed for preservation. Low-density residential uses are proposed for development in Phase 3 of the project; the residential units are proposed to be interspersed among the preservation clusters. As a reasonable alternative, the final EIS should consider avoiding development in this area, reallocating planned units to other residential and mixed use areas within the project property, and creating a much larger cultural preserve to ensure that residential development and future residents do not encroach on these resources and to provide an open space buffer for the proposed mixed-use urban center.
- OP recommends that the State Na Ala Hele Program be consulted to determine whether Program staff concurs with the DEIS finding that the Road to Honokōhau trail does not traverse the project property.
6. **Highways and roads.** The FEIS should identify which of the recommended planned roadway improvements, if not all, the project developer will undertake as mitigation of project impacts.
7. **Water source and system improvements.** The FEIS should clarify in the discussion of the preferred alternative for an off-site well field whether a long-term agreement for use of the land for this purpose will be required. It should also clarify whether pumping will be required to distribute water produced by the desalination plant, should one be needed for the project.
8. **Agricultural lands.** The FEIS should identify and describe any existing or planned agricultural activities on lands in the State Agricultural District adjoining or in proximity to the proposed project, and discuss what impact, if any, the project will have on agricultural use and viability on these lands.
9. **Biota.** The FEIS should describe precautionary measures that may be required during development and after buildout to avoid adverse impacts on Hawaiian hoary bat populations that may forage or transit the project property.

10. **Development timetable, Section 2.4.** The DEIS states that “major infrastructure” will be developed by 2025, although elsewhere in the section associated infrastructure will also be included in each of the project’s proposed phases. The FEIS should clarify what will constitute “major infrastructure.”
11. **Approvals and permits.** The FEIS should include in the list of approvals and permits those required for the development of a private water system, including those for a desalination system.
12. **Miscellaneous Comments, Clarifications, and Corrections.**
  - a. The FEIS should correct the non-substantive typographic and spelling errors found in Volume 1 of the DEIS.
  - b. The FEIS preparer should carefully review the comment letters to ensure that the FEIS is responsive to substantive concerns and comments in the comment letters. In particular, OP reviews the FEIS for evidence of ongoing consultation with impacted State agencies and responsiveness to State agency concerns.
  - c. Conventional strategies for noise mitigation and maintenance of traffic flow and safety along the proposed Ane Keohokālole Highway may conflict with the creation of a pedestrian-friendly, vibrant mixed-use center and the successful integration and use of the mauka-makai Kohanaiki Trail, which will cross the new highway. The FEIS may want to note that special attention, perhaps the use of complete streets strategies, will be needed to create a successful streetscape for all modes of transportation and promote community livability in alignment with the Kona Community Development Plan.
  - d. Page 1-8, Section 1.7.1. The FEIS should provide a brief explanation of the need for a boundary interpretation for the amount of acreage being proposed for reclassification from the Agricultural to the Urban District.
  - e. Page 1-14, State Functional Plans. The correct number of State functional plans is thirteen.
  - f. Page 1-17, Rationale for Proceeding. This section could include the preservation and restoration of the Kohanaiki Trail as well as preservation of archaeological and cultural sites, including burials.
  - g. Figure 2-11, Land Use Plan. Consideration should be given to revising this figure to provide a graphic treatment of Kohanaiki Trail like that in Figure 2-1 of the Environmental Impact Statement Preparation Notice (EISPN), which illustrates the trail alignment with its open space buffer and better reflects the archaeological, cultural, recreational, and place-making significance of restoration and preservation of this trail.
  - h. Page 2-30, Table 2-5, footnote for interchange. We recommend that “taking” be replaced with “land acquisition” or a more neutral term.

- i. Figures 2-12 through 2-14 and related phasing table/discussion on page 2-59. It might be helpful if one or more of the phasing maps were revised to display the approximate location of the planned Queen Ka’ahumanu Highway interchange, and to identify, if possible, in the phasing table the appropriate timeframe for interchange improvements. It would provide a clearer picture if the extent of the general neighborhoods described in Section 2.4 were delineated on the phasing maps.
- j. Page 3-1, Climate. The FEIS should acknowledge that the project will help offset the loss of vegetation, but will result in a significant change in land cover, replacing vegetation with heat-absorbing materials and impervious surfaces.
- k. Page 3-2, National Pollutant Discharge Elimination System permit. The FEIS should replace “stormwater construction activities” with “stormwater discharges associated with construction activities.”
- l. Page 3-4, Offsite well field. Soils of the potable well field include rKED soils.
- m. Figure 3-2 might read better if the rating class was symbolized using a color ramp with consistently lighter gradations from ‘A’ to ‘E’.
- n. Page 3-8, Section 3.4, Hazards. The FEIS should reference any concerns and planned actions contained in the County Hazard Mitigation Plan that are relevant for development in the proposed project area and region.
- o. Page 3-8, Sections 3.4 and 3.4.1. The introduction states the project site is susceptible to hazards including flooding; the section goes on to state the project is not anticipated to result in flooding of the project site or lands downslope of the project. The FEIS should clarify the flood risk posed by the proposed development. The FEIS should also clarify whether a stormwater management program and guidelines will be adopted for the proposed project, or whether the narrative in Section 3.4.1 is simply reporting the Kona Community Development Plan Policy for urban stormwater management.
- p. Page 3-10, Section 3.4.3. The FEIS should clarify whether the “Prescriptive Details for Hurricane-Resistant Construction” is part of the County’s adopted Uniform Building Code or is a set of higher standards yet to be adopted.
- q. Figure 4-3, Archaeological Sites. It might be helpful to display the parcel boundaries and label with their tax map key numbers, since the sites are discussed by parcel.
- r. Page 4-81, Aircraft noise. The DEIS notes that there are occasional aircraft overflights of the project property. The FEIS should reflect the recommendations of the State Department of Transportation, Airports Division regarding disclosure of aircraft noise.
- s. Page 4-82, Table 4-16. The notes for the table are missing.

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- t. Page 4-87, Fire protection. The text notes a 30-mile radius for fire protection service for the Kailua-Kona Fire Station. This seems rather large for an urban or urbanizing area.
- u. Page 4-89, Schools. This section should note that the project is within the West Hawai'i School Impact Fee District, and provide an update on consultations with the State Department of Education. The capacity of Kealakehe High School should be provided.
- v. Pages 4-89 through 4-102. There are some discrepancies in the numbers used in the text and those in Tables 4-21 and 4-23, which should be resolved or explained.
- w. Page 4-9.2.1.2, Fiscal impacts. The FEIS should clarify whether the fiscal analysis assumed dedication of infrastructure to the County or not.
- x. Page 4-105, Second paragraph. Your conclusions should be supported by findings and facts.
- y. Table 4-24. It would be helpful if the table showed water demand by potable vs. non-potable water. There are redundant school footnotes.
- z. Page 4-123, Section 4.10.2, Wastewater system and Figure 4-20. The colors in the legend and map shown in Figure 4-20 are confusing and make this map difficult to read with respect to the narrative. We recommend the map and text be reviewed to see how the figure and legend might be improved, for example, in distinguishing between the petition area and the County's financing district, etc.
- aa. Page 4-126, Wastewater treatment alternatives. This section could be improved by stating at the outset that the preferred alternative for the project is to develop a private wastewater treatment plant.
- bb. Pages 4-124 through 4-132. The FEIS should be consistent in the numbers used for average wastewater flow, average dry weather flow, and design peak flow and the number of acres that can be irrigated with recycled water flow.
- cc. Page 4-132, Section 4.10.3, Drainage. This section should include estimates of potential stormwater runoff at buildout and the volume of runoff at buildout that will be required to be retained onsite under County drainage standards.
- dd. Page 5-8, Comment for Section 5.1.3, Chapter 205A, HRS, Scenic and Open Space Resources. The comment should be revised to discuss the project's impact on open space resources as well as views mauka-makai in the coastal viewshed. The comment should also acknowledge that the project is not coastal dependent and is located inland.
- ee. Page 5-9, Economic Uses. The policy emphasis here is on the appropriate siting of coastal dependent facilities and improvements. Since the project is not coastal dependent, no comment is really necessary here.

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- ff. Page 8-2, Section 8.2, Cumulative impacts. With the exception of traffic, the impacts on the identified issue areas are not discussed in a cumulative context.
- gg. Page 8-6, Section 8.4. This section should include the irretrievable and irreversible commitment of State and County funds to operate and maintain induced public facility growth and services, such as schools, public libraries, highways and roads dedicated to the State or County, potential residential refuse collection, etc.
- hh. Page 8-7, Section 8.5, Environmental effects that cannot be avoided. This section should include the taking of endangered species and the potential threat to other protected plant species, potential threats and alteration to archaeological and cultural sites, and the contribution of vehicular emissions and emissions from power generation to air quality.

The Office appreciates the opportunity to comment on the DEIS. We look forward to receiving the FEIS. If you have any questions, please call Ruby Edwards, Land Use Division, at 587-2817.

Sincerely,



Jesse K. Souki  
Director

- c: Mr. Peter Phillips, SCD-TSA Kaloko Makai, LLC
- ✓Mr. Earl Matsukawa, Wilson Okamoto Corporation
- Ms. Bobbie Jean Leithead Todd, County of Hawai'i Planning Department



7469-01  
July 25, 2013

Mr. Jesse K. Souki, Director  
Office of Planning  
Department of Business, Economic Development, & Tourism  
State of Hawai'i  
235 South Beretania Street, 6<sup>th</sup> Floor  
Honolulu, Hawai'i 96804

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Souki:

Thank you for your letter dated October 7, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

(1) *Act 181, Session Laws of Hawaii 2011, Priority Guidelines for Sustainability - Act 181, signed into law on July 5, 2011, sets forth in part III Chapter 226, HRS, new priority guidelines to promote sustainability in Hawaii. The new priority guidelines should be included in the FEIS Section 5.1.4 and the FEIS should discuss how the project addresses the priority guidelines for sustainability.*

Response: The forthcoming Second DEIS includes a discussion of the proposed project's conformance with sustainability criteria outlined in Act 181. It will also include a Sustainability Plan establishing priority guidelines and principles to promote sustainability within the project

(2) *Sustainable development and resource use - OP reviews proposed projects with respect to their demonstrated commitment to incorporating and implementing sustainable design and development practices that align with State energy initiatives and the Administration's priorities to move toward clean energy, energy independence, and a green economy. The DEIS discusses a variety of green building practices that will be "considered" in project design and development. OP recommends that the FEIS identify those measures that are proposed to be or will be incorporated in project design and construction to reduce resource use and energy demand, maximize energy efficiency and resource reuse and recycling, promote use of alternative, renewable energy sources.*



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*OP also recommends that petitioners consider preparing a sustainability plan that outlines guidelines, actions, and performance standards to be implemented in the design, development, and operation of projects to minimize and mitigate the long-term energy and resource impacts of proposed projects. CCH (Koa Ridge) and DR Horton (Hoopili) have prepared sustainability plans for their respective projects, these documents are available for review at the LUC website.*

Response: As noted above, the forthcoming Second DEIS includes a Sustainability Plan which establishes priority guidelines and principles to promote sustainability within the project and green building practices that will be considered in project design and development.

(3) *Groundwater and coastal water quality - The section on groundwater resources would be improved by including a brief description on the projects estimated potable and non-potable water demand, potential recharge or infiltration due to wastewater effluent disposal, irrigation, and stormwater runoff, and preferred water source, to provide a context for evaluating reasonably foreseeable impacts. On pg 3-27, the statement regarding no anticipated impacts to groundwater sources should be qualified to read that with appropriate mitigation measures there are no anticipated impacts.*

Response: Pursuant to your recommendation, revisions have been made to the Groundwater and Coastal Water Quality section in the forthcoming Second DEIS.

*Given comments received from DLNR Div. of Aquatic Res and the NPS, that the evidence to date is inconclusive as to the potential impacts - adverse or otherwise - that may result from development of the project and other projects in the region on the Class AA and Class A coastal receiving waters and the water quality of the anchialine ponds and other coastal resources found at the Kaloko Honokohau NHP and Monument makai of the proposed project. The NPS is concerned about the quality of groundwater and surface runoff entering the NHP. To strengthen the evaluation of the reasonably foreseeable impacts, the FEIS should include the following:*

a. *All studies referenced in the groundwater section should be fully cited in the References section, eg, Dollar 2002 is not listed in the References*

Response: All references in the text of the DEIS have been cross-checked and will be appropriately cited in the reference section of the forthcoming Second DEIS.

b. *As recommended in by NPS, the FEIS should include an analysis of preventative measures such as restricted uses of termiticides, pesticides, and herbicides and the incorporation of water quality treatment features, like*

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*filtration devices, that can be incorporated in drainage improvements to remove potential contaminants like petrochemicals before disposal in drywells or infiltration into groundwater underlying the project site.*

Response: An analysis of preventive measures discussed above, is included in the forthcoming Second DEIS. Analysis of sediment from fishponds and anchialine pool showed no presence of any pesticide or herbicide. The present lack of these materials in pond sediments indicates that existing methods of disposal are adequate for prevention of reaching Kaloko-Honokohau National Historic Park assets. Continued monitoring can be one of the preventive measures to promote continual lack of presence.

As mentioned in the Draft EIS, all drainage improvements will be developed in accordance with the applicable Department of Health (DOH) and County drainage requirements regarding runoff and non-point source pollution.

To reduce the potential for non-point source pollution to impact groundwater and marine waters Kaloko Makai will:

- Design and construct best management practices (BMPs) to prevent violation of State water quality standards as a result of storm runoff discharges originating from Kaloko Makai. To the extent practicable and consistent with applicable laws, Kaloko Makai will design storm and surface runoff BMPs to treat the first flush runoff volume to remove pollutants from storm and surface runoff.
- Where applicable, design sub-surface drainage structures with a debris catch basin to allow the detention and periodic removal of rubbish and sediments deposited by runoff. Storm water runoff shall first enter the debris catch basin before flowing into any subsurface drainage structures. The debris catch basin's volume will be designed using current industry and engineering standards.
- Design and construct to the extent practicable and consistent with applicable laws, landscaped areas, including grassed or vegetative swales, grass filter strips, vegetated open space areas, or other advance storm water BMPs.
- Provide signs for all subsurface drainage structures with warnings such as "Dump No Wastes. Goes to Groundwater and Ocean. Help Protect Hawaii's Environment."
- Develop Pollution Prevention Plan (PPP), before constructing Kaloko Makai that: 1) addresses environmental stewardship and non-point sources of water pollution that can be generated in residential areas, 2) provides BMPs for pollution prevention. The PPP will include water conservation, landscape runoff, erosion control, use of fertilizers and other chemicals, environmentally safe automobile maintenance, and management of household chemicals. The PPP will also include information on the

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July 25, 2013

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National Park and the significant natural and cultural resources within the Park.

- c. *The project proposes to adopt mitigation measures including a pollution prevention plan and groundwater monitoring plan, similar to plans worked out between the NPS and other developers in the area. The FEIS should provide an update on consultations with NPS and whether there is substantive agreement about the scope and content of the plans. The FEIS should also identify what entity will be responsible for preparing and implementing these plans.*

Response: We are aware of a pollution prevention plan and groundwater monitoring plan that the National Park Service (NPS) negotiated with other developers in the area, and the terms of those agreements have informed some of the mitigation measures proposed in the Second DEIS. Although it is premature for SCD-TSA Kaloko Makai to be negotiating terms of an agreement with NPS, we anticipate that SCD-TSA Kaloko Makai will enter into an agreement similar to those entered into by other developers as the project moves forward. We also anticipate that SCD-TSA Kaloko Makai, or its designee, will be responsible for preparing the implementation of such plans.

- d. *The DEIS states that the groundwater monitoring plan will be implemented for a two year period. Given the questions and concerns in the long-term, cumulative impacts or urban development of this and other projects on coastal waters, it is more reasonable for the groundwater monitoring plan to be long-term, to enable an assessment of conditions with full build out of the project.*

Response: The specific timeframe for groundwater monitoring will be determined in consultation with a variety of entities including NPS, DLNR and the County of Hawaii.

- (4) *The FEIS should discuss potential impacts and possible mitigation measures related to increased accessibility due to urban development and the trail restoration proposed in the remnant forest.*

Response: There are two trails that start near the same point on Hina Lani Street; one is an old stepping stone trail that leads mauka and the other runs across the dryland forest. Should the project get developed, these trails are intended to be open for public use.

However, the trail system within the dryland forest will allow it to be accessed by residents and visitors and afford the opportunity to conduct educational programs as well. Appropriate signage will be developed to encourage public cooperation and discourage trespassing, vandalism or arson within the Kaloko Makai Dryland



Forest Preserve. In addition, in connection with project development, SCD-TSA Kaloko Makai has plans to fence the Preserve in order to prevent ungulates, and to remove all ungulates from the Preserve area when the fencing is installed.

*The FIES should also clarify and/or discuss, in the appropriate section, preservation and management of the dryland forest with respect to the following:*

- a. *HCP- The FEIS should clarify whether the HCP is of similar or narrower scope than the management plan the USFWS recommended to be prepared and implemented for the preserve in its October 29, 2010 letter.*

Response: No listed threatened or endangered plant species will be "taken" in the development and construction of the Kaloko Makai project. Therefore, a HCP will not be required.

Three individual endangered plants (two hala pepe and one 'aiea) found outside the dryland forest preserve will be buffered by setbacks and enclosures (fence/wall). Kaloko Makai will develop a 50-ft. buffer between the two hala pepe and one 'aiea and any structure. The plants will be incorporated into landscaping within the 50-ft. buffers.

Based on comments received during the DEIS, reclassification of the 150-acre Dryland Forest to the Urban district is no longer being considered. It will remain in the Agricultural district.

If the Kaloko Makai petition to the LUC is successful, the Petitioner will seek to subdivide the preserve into a single parcel through the applicable County processes. The Petitioner is also considering incorporating a restrictive covenant or condition into the property deed to assure that the parcel containing the preserve shall remain undeveloped and that appropriate access shall be provided in perpetuity.

- b. *Implementation of HCP or management plan - The FEIS should clarify who will be responsible for managing the preserve? How will management activities be funded over the long-term?*

Response: See previous response no. 4a.

Should the necessary land use entitlements be obtained to allow for development of the Kaloko Makai project, it is anticipated that long-term management of the preserve will be funded by residents and business owners within Kaloko Makai. Alternatively, management may become the responsibility of a conservation group, similar to the arrangements utilized in the establishment of a conservation easement. .



- c. *Phasing of implementation - Figure 2-12 includes the dryland forest in Phase 1 of the project. Table 2-6 lists the dryland forest in Phase 3. Given the sensitivity of the forest ecosystem and protected plant species within, it would be preferable for the dryland forest preserve to be established and management measures in place in Phase I, early in the project prior to major construction activity.*

Response: The Dryland Forest will be established during Phase 1 of the project as shown in Figure 2-12. Table 2-6 has been revised in the Second DEIS.

- d. *Consistency with County Plan land use designation and variant for alternative section - The County GP LUPAG designates much of the dryland forest area as "conservation". The FEIS should discuss consideration of reclassification of the lands underlying the proposed preserve to the State Conservation District as a reasonable alternative to reclassification to the Urban District.*

Response: Based on comments received, reclassification of the Dryland Forest Preserve to the Urban District is no longer being considered. It will remain in the Agricultural District. Retaining the preserve area in the Agricultural District is a more reasonable alternative than seeking to reclassify the preserve to the Conservation District due to the cumbersome permitting requirements in effect within the Conservation District, which could inhibit the installation of signs and fencing, and make subdivision of the preserve are more difficult.

If the Kaloko Makai petition to the LUC is successful, the Petitioner will seek to subdivide the preserve into a single parcel through the applicable County processes. Irrespective of the State Land Use designation, the proposed preserve will remain consistent with the Conservation designation under the County General Plan LUPAG.

- (5) *Archeological and cultural resources. The northeastern portion of the project property features numerous archaeological and cultural resources, such as burials in lava tubes, which are proposed for preservation. Low-density residential uses are proposed for development in Phase 3 of the project; the residential units are proposed to be interspersed among the preservation clusters. As a reasonable alternative, the FEIS should consider avoiding development in this area, reallocating planned units to other residential and mixed use areas within the project property, and creating a much larger cultural preserve to ensure that residential development and future residents to not encroach on these resources and to provide an open space buffer for the proposed mixed-use urban center.*

Response: In consideration of your comments, Phase 3 of the project has been redesigned around the archaeological and cultural preserve sites, and the amount

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July 25, 2013

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of developed space has been reduced. An updated land use plan reflecting this is included in the Second DEIS.

*OP recommends that the State Na Ala Hele Program be consulted to determine whether Program staff concurs with the DEIS finding that the Road to Honokōhau trail does not traverse the project property.*

Response: The Petitioner's representatives have been in the field with State Na Ala Hele staff and have had numerous discussions with the State Na Ala Hele Program. Na Ala Hele has not indicated that there are any discrepancies in the DEIS finding that the Road to Honokohau trail does not traverse the project property. The Honokōhau Trail is in the Honokohau ahupua'a, not within the project area.

The Petitioner will preserve the Kohanaiki Trail (Road to the Sea) within the project area as discussed in the DEIS and forthcoming Second DEIS.

*(6) Highways and Road - The FEIS should identify which of the recommended planned roadway improvements, if not all, the project developer will undertake as mitigation of project impacts.*

Response: An updated traffic impact study (TIS) has been incorporated into the forthcoming Second DEIS. The roadway system will conform to County design standards and intersections improvements with State roadways will be consistent with State design standards. The TIS describes the improvements needed at each phase of project development.

*(7) Water Source and system improvements - The FEIS should clarify in the discussion of the preferred alternative for an off-site well field whether a long-term agreement for use of the land for this purpose will be required. It should also clarify whether pumping will be required to distribute water produced by the desalination plant, should one be needed for the project*

Response: The off-site well field mauka of the Project Site will not be pursued.

The alternatives now being considered for the project's drinking water supply have been narrowed down three alternatives that can be affirmatively demonstrated as having no impact on the basal lens. These are limited to use of the high level groundwater drawn from strata far below the basal groundwater so as not to impact it and desalinating saline groundwater, also drawn from below the basal lens. The three alternatives are:

1. On-site wells at 710-foot elevation within the project site (
2. On-site wells at 710-foot elevation with reverse osmosis (RO) treatment
3. Desalination of saline groundwater from 363-foot elevation on-site wells

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Letter to Mr. Jesse K. Souki

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The preferred alternative as described in the forthcoming Second DEIS is on-site wells.

Depending on the results of the test well to be drilled at the upper end (710 ft. elevation) of the project site, reverse osmosis or desalination of groundwater might be undertaken. The first might be RO treatment of high level groundwater which, due to the location and depth from which it is extracted, is slightly brackish. In this case, the fraction of the well water supply converted to potable water is likely to be about 65% based on the current desalinating being done at the Kukio and Hualalai resorts. The 30% remainder, referred to as concentrate, would be disposed of in wells located makai of the UIC line and designed to deliver the concentrate into a groundwater zone of equivalent or greater salinity.

In the event that Alternatives 1 and 2 are not feasible, desalination of on-site saline groundwater extracted from beneath the basal lens in wells that would be located at about mid-elevation or 363-foot elevation on the project site. Based on prototype testing conducted by the Honolulu Board of Water Supply using saline groundwater from wells at the makai end of Campbell Industrial Park on Oahu, the recovery of potable water may be on the order of 40% of the saline feedwater supply, in effect pumping about 2.85 gallons of saline groundwater to produce one gallon of potable water. The other 65 % of the feedwater supply would be hypersaline concentrate (salinity of about 1.5 times that of seawater) that would be disposed of in deep wells makai of the UIC line. To reduce the desalination plant power requirements, pressure transfer devices would be installed to recover energy from the RO concentrate stream.

Potential pumping demands required to distribute water produced by the desalination plant have been included in the Second DEIS.

Since elevation pressure will be used to force water through the RO membrane, the desalinated water comes out at a lower elevation. It will need to be pumped up to higher elevation reservoir(s) to achieve required pressure for fire protection / domestic use.

An Assessment of the Potential Impact on Water Resources has been prepared by Tom Nance Water Resource Engineering (TNWRE) and will be included in the forthcoming Second DEIS.

*(8) Agricultural lands - The FEIS should identify and describe any existing or planned agricultural activities on land in the State Agricultural District adjoining or in proximity to the proposed project, and discuss what impact, if any, the project will have on agricultural use and viability on these lands.*



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Response: Although a portion of the property is within the Agricultural land use district, there is currently no agricultural use on the property. Areas to the east (Kona Heavens) and south (Lanihau and Kona View Estates) of Kaloko Makai are designated State Agricultural District, but these lands have residential or commercial / industrial uses.

While most of the property adjoining or in proximity to the Kaloko Makai lands are not classified in the State Agricultural District, SCD-TSA Kaloko Makai will comply with HRS § 205-3.5 with respect to lands that are "contiguous or adjacent to lands in the agricultural district." That is to say, there will be prohibitions on any action that would interfere with or restrain farming operations; provided the farming operations are conducted in a manner consistent with generally accepted agricultural and management practices' and, to the extent applicable, notification will be given to all prospective developers or purchasers of land that farming operations and practices on adjacent or contiguous land in the agricultural district are protected under Chapter 165, the Hawaii Right to Farm Act.

- (9) *Biota - The FEIS should described precautionary measures that may be required during development and after build out to avoid adverse impacts on Hawaiian hoary bat populations that may forage or transit the project property.*

Response: The principal potential impact that the project pose to Hawaiian hoary bat is during the clearing and grubbing phases of the project. Clearing of dense vegetation should not occur between June 1 – September 15, when bats may be carrying young and potentially could be at risk as a result of such clearing activities. In addition, the clearing of dense vegetation, including woody plants beyond 15 feet should also not be cleared during this period.

- (10) *Development Timetable, Section 2.4 - The DEIS states that "major infrastructure" will be developed by 2025, although elsewhere in the section associated infrastructure will also be included in each of the project's proposed phases. The FEIS should clarify what will constitute "major infrastructure."*

Response: The term "major infrastructure" is clarified in the forthcoming Second DEIS.

- (11) *Approvals and Permits - The FEIS should include in the list of approvals and permits those required for the development of a private water system, including those for a desalination system.*

Response: The forthcoming Second DEIS includes an updated list of approvals and permits.

- (12) *Miscellaneous Comments, Clarifications, and Corrections.*

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Letter to Mr. Jesse K. Souki

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- a. *The FEIS should correct the non-substantive typographic and spelling errors found in Volume 1 of DEIS.*

Response: The forthcoming Second DEIS corrects the non-substantive typographic and spelling errors found in Volume 1 of the DEIS.

- b. *The FEIS preparer should carefully review the comment letters to ensure that the FEIS is responsive to substantive concerns and comments in the comment letters. In particular, OP reviews the FEIS for evidence of ongoing consultation with impacted State agencies and responsiveness to State agency concerns.*

Response: All comments to the DEIS have been carefully reviewed to ensure that the forthcoming Second DEIS is responsive to substantive concerns. The Second DEIS documents on-going consultation with impacted State agencies regarding State agency concerns.

- c. *Conventional strategies for noise mitigation and maintenance of traffic flow and safety along the proposed Ane Keohokalole Highway may conflict with the creation of pedestrian friendly, vibrant mixed-use center and the successful integration and use of the mauka-makai Kohanaiiki Trail, which will cross the highway. The FEIS may want to note that special attention, perhaps the use of complete streets strategies, will be needed to create a successful streetscape for all modes of transportation and promote community livability in alignment with the Kona CDP.*

Response: Kaloko Makai will be developed under the eight Kona CDP guiding principles and strategies, which will enhance the ability to develop the project with streetscapes for all modes of transportation. The Sustainability Plan, to be appended to the forthcoming Second DEIS, includes a discussion on complete streets and multi-modal modes of transportation. Concepts are discussed in the Kona CDP and will be applicable to Kaloko Makai.

- d. *Page 1-8, Section 1.7.1 - The FEIS should provide a brief explanation of the need for a boundary interpretation for the amount of acreage being proposed for reclassification from the Agricultural to Urban Districts.*

Response: A request for a boundary interpretation was submitted to the State Land Use Commission and they found the survey map to be consistent (Boundary Interpretation No. 07-41).

- e. *Page 1-14, Station Functional Plans - The correct number of State Functional Plans is 13.*



Response: The forthcoming Second DEIS has been revised to accurately reflect the number of State Functional Plans.

- f. *Page 1-17, Rational for Proceeding - This section could include the preservation and restoration of the Kohanaiki Trail as well as preservation of archaeological and cultural sites, including burials.*

Response: The preservation and restoration of the Kohanaiki Trail and the preservation of archaeological and cultural sites, including burials have been added to the list in section 1.7.7 of the forthcoming Second DEIS.

- g. *Figure 2-11 Land Use Plan - Consideration should be given to revising this figure to provide graphic treatment of Kohanaiki Trail like that in Figure 2-1 of the EISPN, which illustrates the trail alignment with its open space buffer and better reflects the archaeological, cultural, recreational and place making significance of restoration and preservation of this trail.*

Response: The Kohanaiki Trail will be preserved through the project site, as noted in the DEIS and the forthcoming Second DEIS.

The Kohanaiki Trail bisects the project site and is well defined for most of its alignment until the trail reaches the TMK 7-3-009:017. The Petitioner and their archaeological consultant, Cultural Surveys Hawaii, have been consulting with and Na Ala Hele to determine the location of the remaining alignment. The alignment shown in Figure 2-11 is the alignment determined based on consultation with Na Ala Hele.

Treatment of Kohanaiki Trail will follow the agreement established after extensive discussions with the interested community at Kaloko Heights. This translates to a 10' wide trail pathway (meandering mauka to makai on what is believed to be the historic alignment) and will be bordered by perpetual open space buffers of at least 10- feet wide on each side of the trail (30' wide in total). In places where cut and fill are necessary, the elevation of the trail may change, but the general alignment will not be disturbed.

Where the Trail intersects with Hina Lani Drive, Kaloko Makai will realign the remaining lower portion of the Trail from that point to run parallel with and adjoining the Hina Lani Street right-of-way down to Queen Ka'ahumanu Highway. Since the integrity of the historic trail is lost at that point, due to Hina Lani road construction, the adjoining industrial subdivision and the water tank, Kaloko Makai will realign the trail and have it run down the southern boundary of the property (fronting Hina Lani,) from the point of intersection with Hina Lani down to Queen Ka'ahumanu Highway. This alignment gives the users of the trail easy



access to cross Queen Ka'ahumanu or Hina Lani at the bottom, as there are crosswalks with crossing signals at that point.

Figure 2-11 has been revised to show 10-foot buffers on each side of the trail.

- h. *Page 2-30, Table 2-5, footnote for interchange - We recommend that "taking" be replaced with "land acquisition" or a more neutral term.*

Response: Your recommended change in terminology has been used in the forthcoming Second DEIS text.

- i. *Figures 2-12 to 2-14 and related phasing table/discussion on page 2-59 - It might be helpful if one or more of the phasing maps were revised to display the approximate location of the planned Queen Kaahumanu Highway interchange, and to identify if possible, in the phasing table the appropriate timeframe for interchange improvements. It would provide a clearer picture if the extent of the general neighborhoods described in Section 2.4 were delineated on the phasing maps.*

Response: The planned Queen Kaahumanu Highway interchange is being initiated by the Department of Transportation. They have not indicated a timeframe for interchange improvements. However, the Petitioner has accommodated the future interchange in its road system plan.

- j. *Page 3-1 - Climate - The FEIS should acknowledge that the project will help offset the loss of vegetation, but will result in significant change in land cover, replacing vegetation with heat absorbing materials and impervious surfaces.*

Response: The forthcoming Second DEIS includes discussion on the projects change in land cover, as noted in your comment above.

- k. *Page 3-2 NPDES Permit - The FEIS should replace "stormwater construction activities" with "stormwater discharges associated with construction activities"*

Response: The term "stormwater construction activities" has been replaced with "stormwater discharges associated with construction activities" in the forthcoming Second DEIS.

- l. *Page 3-4 Off Site Well Field - Soils of the potable well field include rKED soils.*



Response: The off-site well field alternative has been eliminated from consideration. The preferred alternative as described in the Second DEIS is on-site wells.

- m. *Figure 3-2 might read better if the rating class was symbolized using a color ramp with consistently lighter gradations from "A to E"*

Response: Figure 3-2 in the forthcoming Second DEIS has been revised, based on your comment above.

- n. *Page 3-8 Section 3.4 Hazards - The FEIS should reference any concerns and planned actions contained in the County Hazard Mitigation Plan that are relevant for development in the proposed project area and region.*

Response: The text in section 3.4 Hazards of the forthcoming Second DEIS has been revised based on your comment above.

- o. *Page 3-8 Sections 3.4 and 3.4.1 - The introduction states the project site is susceptible to hazards including flooding; the section goes on to state the project is not anticipated to result in flooding of the project site or land downslope of the project. The FEIS should clarify the flood risk posed by the proposed development. The FEIS should also clarify whether a stormwater management program and guidelines will be adopted for the proposed project, or whether the narrative in Section 3.4.1 is simply reporting the Kona CDP policy for urban stormwater management.*

Response: The text in sections 3.4 and 3.4.1 of the forthcoming Second DEIS has been revised based on your comments above.

- p. *Page 3-10, Section 3.4.3 - The FEIS should clarify whether the "Prescriptive Details for Hurricane-Resistant Construction" is part of the County's adopted Uniform Building Code or is a set of higher standards yet to be adopted.*

Response: The project will adhere to Section 5 Building of the Hawaii County Building Code. The text in section 3.4.3 of the forthcoming Second DEIS has been revised.

- q. *Figure 4-3 Archaeological Sites- It might be helpful to display the parcel boundaries and label with their TMK numbers, since the sites are discussed by parcel.*

Response: Figure 4-3 in the forthcoming Second DEIS has been revised to include parcel boundaries and TMK numbers.



- r. *Page 4-81 Aircraft Noise - The DEIS notes that there are occasional aircraft over flights of the project property. The FEIS should reflect the recommendations of the State DOT Airports Division regarding disclosure of aircraft noise.*

Response: The Kaloko Makai project is located approximately 3-miles south of the Kona International Airport at Keahole.

Because the project's planned noise sensitive land uses are clearly beyond the most conservative 55 DNL contours for Kona International Airport at Keahole, disclosure of aircraft noise over the project site should not be required under Chapter 508D, Hawaii Revised Statutes (Reference 5 of noise study report).

To date, the State DOT Airports Division has not made a recommendation regarding such disclosures.

- s. *Page 4-82, Table 4-16 - The notes for the table are missing*

Response: Notes for Table 4-16 are included in the forthcoming Second DEIS.

- t. *Page 4-87 Fire Protection - The text notes a 30-mile radius for fire protection service for the Kailua-Kona Fire Station. This seems rather large for an urban or urbanizing area.*

Response: A parcel within the Kaloko Makai project site will be made available for the development of a fire station, if the County sees the need for an additional station.

The Hawaii County Fire Department did not raise any issue with the 30-mile radius for fire protection service for the Kailua-Kona Fire Station in their DEIS comment letter.

- u. *Page 4-89 Schools - This section should note that the project is within the West Hawaii School Impact Fee District, and provide an update on consultations with the State DOE. The capacity of Kealakehe High School should be provided.*

Response: The Petitioner has been in regular communication with the DOE concerning school impacts. The referenced discussion on school impacts has been revised in the forthcoming Second DEIS to include an update on consultations with the State DOE as well as the capacity of Kealakehe High School.



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- v. *Pages 4-89 to 4-102 - There are some discrepancies in the numbers used in the text and those in Table 4-21 and 4-23, which should be resolved or explained.*

Response: Numerical discrepancies between the text and Tables 4-21 and 4-23 have been resolved in the forthcoming Second DEIS.

- w. *Page 4-9, Section 2.1.2 Fiscal Impacts - The FEIS should clarify whether the fiscal analysis assumed dedication of infrastructure to the County or not.*

Response: The fiscal analysis did not allocate any value for infrastructure to be dedicated to the County (public). The forthcoming Second DEIS has been clarified.

- x. *Page 4-105, Second paragraph - Your conclusions should be supported by findings and facts.*

Response: Kaloko Makai will contribute to ameliorating Kona's housing supply issues through (a) market-priced housing aimed primarily at working families rather than off-shore buyers, and (b) 700 "affordable" units with pricing to be determined in consultation with government agencies. These contributions cannot totally reverse the high land and development costs that have kept Hawai'i among the most expensive housing markets in the nation for the past 50 or 60 years. However, failure to provide housing supply in pace with increasing demand by local residents would worsen rather than help the overall housing affordability situation. The forthcoming Second DEIS incorporates this statement.

- y. *Table 4-24 - It would be helpful if the table showed water demand by potable vs. non-potable water. There are redundant school footnotes.*

Response: The forthcoming Second DEIS has been revised based on your suggested comments.

- z. *Page 4-123, Section 4.10.2 Wastewater system and Figure 4-20 - The colors in the legend and map shown in Figure 4-20 are confusing and make this map difficult to read with respect to the narrative. We recommend the map and text be reviewed to see how the figure and legend might be improved, for example, in distinguishing between the petition area the County's financing district, etc.*



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Response: Figure 4-20 is the Kona CDP's Official Public Facilities Map. This is the County's official map and it would be inappropriate for us to revise it.

However, the text associated with the map has been revised in the Second DEIS based your comment.

- aa. *Pages 4-126 Wastewater treatment alternatives - This section could be improved by stating at the outset that the preferred alternative for the project is to develop a private wastewater treatment plant.*

Response: The forthcoming Second DEIS has been revised to clearly state that the preferred alternative is to develop an on-site private WWTP.

- bb. *Pages 4-124 to 4-132 - The FEIS should be consistent in the numbers used for average wastewater flow, average dryweather flow, and design peak flow and the number of acres that can be irrigated with recycle water flow.*

Response: The forthcoming Second DEIS provides consistent numbers for wastewater flows and irrigation requirements for reclaimed water.

- cc. *Page 4-132, Section 4.10.3 Drainage - This section should include estimates of potential stormwater runoff at buildout and the volume of runoff at buildout that will be required to be retained onsite under County drainage standards.*

Response: The forthcoming Second DEIS includes estimates of stormwater runoff and requires retention/detention at build out.

- dd. *Page 5-8 Comment for Section 5.1.3 Chapter 205A Scenic and Open Space Resources - The comment should be revised to discuss the project's impact on open space resources as well as views mauka-makai in the coastal viewshed. The comment should also acknowledge that the project is not coastal dependent and is located inland.*

Response: The forthcoming Second DEIS acknowledges that the project is not coastal dependent and located inland and will address the project's impact on open space resources and mauka-makai views in the coastal viewshed.

- ee. *Page 5-9 Economic Uses - The policy emphasis here is on the appropriate siting of coastal dependent facilities and improvements. Since the project is not coastal dependent, no comment is really necessary here.*

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Letter to Mr. Jesse K. Souki

July 25, 2013

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Response: The forthcoming Second DEIS will state that the project is not coastal dependent and located inland.

*ff. Page 8-2, Section 8.2 Cumulative Impacts. With the exception of traffic, the impacts on the identified issue areas are not discussed in a cumulative context.*

Response: The forthcoming Second DEIS has been revised to include a discussion on cumulative impacts where anticipated.

*gg. Page 8-6, Section 8.4 - This section should include the irretrievable and irreversible commitment of State and County funds to operate and maintain induced public facility growth and services, such as schools, public libraries, highways and roads dedicated to the State or County, potential residential refuse collection, etc.*

Response: The forthcoming Second DEIS has been revised based on the above comments.

*hh. Page 8-7, Section 8.5 Environmental effects that cannot be avoided - This section should include the taking of endangered species and the potential threat to other protected plant species, potential threats and alteration to archaeological and cultural sites, and the contribution of vehicular emissions and emissions from power generation to air quality.*

Response: The forthcoming Second DEIS has been revised to include a discussion on environmental effects that cannot be avoided.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the environmental review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", written over a white background.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

NEIL ABERCROMBIE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF HUMAN SERVICES  
Benefit, Employment & Support Services Division  
820 Mililani Street, Suite 606  
Honolulu, Hawaii 96813

August 30, 2011

PATRICIA McMANAMAN  
DIRECTOR

PANKAJ BHANOT  
DEPUTY DIRECTOR

EM  
TF

Refer to: 11-0555



1967 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
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7469-01  
July 25, 2013

Ms. Patricia McManaman  
Department of Human Services  
State of Hawaii  
820 Mililani Street, Suite 606  
Honolulu, HI 96813

Attention: Benefit, Employment & Support Services Division

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. McManaman:

Thank you for your letter dated August 30, 2011 (Ref No. 11-0555). The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we acknowledge and thank DHS for their comments.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodnenker State Land Use Commission

Mr. Orlando Dan Davidson  
State Land Use Commission  
Dept. of Business, Economic Development & Tourism  
P.O. Box 2359  
Honolulu, Hawaii 96804

RECEIVED  
SEP 26 2011  
WILSON OKAMOTO CORPORATION

Dear Mr. Davidson:

SUBJECT: DEIS for Project - Kaloko Makai, Kaloko and Kohanaiki, North Kona, Island of Hawaii

The Department of Human Services (DHS) has received a request from Earl Matsukawa, Project Manager for Wilson Okamoto Corporation, to review and submit comments to you on the Draft Environmental Impact Statement (DEIS) for the above named project. The Director of the Department of Human Services (DHS) has forwarded Mr. Matsukawa's letter to me for a response.

After a review of the DEIS, we have no comments or recommendations as to approval of the project. However, we foresee a potential impact on the need for additional early education and care services for children under kindergarten-age, commensurate with the DEIS' projected increase in the number of school-aged students and potential need for additional public schools due to new residents moving into the project area. "Day care" is mentioned as a possible service but we believe there needs to be intentional planning to support families with children ages birth to five years old concurrent with planning for elementary schools.

If you have any questions or need further information, please contact Ms. Marja Leivo, Child Care Program Specialist, at (808) 586-7112.

Sincerely,

Scott Nakasone  
Acting Division Administrator

c: Patricia McManaman, Director  
Peter Phillips, SCD - TSA Kaloko Makai, LLC  
Earl Matsukawa, Wilson Okamoto Corporation

AN EQUAL OPPORTUNITY AGENCY

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

September 22, 2011

COPY

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

EM  
TF

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

August 23, 2011

MEMORANDUM

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

RECEIVED  
LAND DIVISION

2011 SEP 13 P 3:26

DEPT OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

State Land Use Commission  
Department of Business, Economic Development & Tourism  
Attention: Mr. Orlando Dan Davidson, Executive Officer  
P.O. Box 2359  
Honolulu, Hawaii 96804

RECEIVED  
SEP 26 2011

WILSON OKAMOTO CORPORATION

Dear Mr. Davidson:

SUBJECT: Draft Environmental Impact Statement – Kaloko Makai –  
Kaloko and Kohanaiki, N. Kona, Island of Hawaii  
TMKs: (3) 7-3-009:017, 019, por., 025, 026, 028, 062 (por.) and 063

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from (a) Engineering Division; (b) Division of State Parks; (c) Commission on Water Resource Management; and (d) Land Division – Hawaii District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at 587-0417. Thank you.

Sincerely

Russell Y. Tsuji  
Land Administrator

Enclosures

cc: SCD – TSA Kaloko Makai, LLC (w/copies)  
Attention: Mr. Peter Phillips  
Wilson Okamoto Corporation (w/copies)  
Attention: Mr. Earl Matsukawa, AICP

TO:

**DLNR Agencies:**

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Hawaii District
- Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Draft Environmental Impact Statement – Kaloko Makai

LOCATION:

Kaloko and Kohanaiki, N. Kona, Hawaii; TMK: (3) 7-3-009:017, 019, port., 025, 026, 028, 062 (port.) and 063

APPLICANT:

Wilson Okamoto Corporation on behalf of SCD – TSA Kaloko Makai, LLC

Transmitted for your review and comments on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 16, 2011.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed:

Date: 9/12/11

cc: Central Files

11/13/24 PM 01:31 ENGINEERING

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

DL/Darlene Nakamura  
RE: DEISKalokoMakai  
Hawaii.529

- ( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone \_\_\_\_.
- ( ) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone \_\_\_\_.
- ( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_.
- ( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- ( ) Mr. Robert Sumitomo (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
- ( ) Mr. Carter Romero at (808) 961-8943 of the County of Hawaii, Department of Public Works.
- ( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
- ( ) Ms. Wynne Ushigome at (808) 241-4890 of the County of Kauai, Department of Public Works.
- ( ) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.
- ( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.
- ( ) Additional Comments: \_\_\_\_\_
- (X) Other: Our previous comments dated September 29, 2010, which was reflected in the Draft Environmental Impact Statement, still apply.

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed:   
CARTY S. CHANG, CHIEF ENGINEER

Date: 9/12/11

NEIL ABERCHROMBIE  
GOVERNOR OF HAWAII



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

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

August 23, 2011

MEMORANDUM

TO:

DLNR Agencies:

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks - CD IN LAND DIVISION, Rm 220
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division - Hawaii District
- Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Draft Environmental Impact Statement - Kaloko Makai

LOCATION:

Kaloko and Kohanaiki, N. Kona, Hawaii; TMK: (3) 7-3-009:017, 019, port., 025, 026, 028, 062 (port.) and 063

APPLICANT:


Wilson Okamoto Corporation on behalf of SCD - TSA Kaloko Makai, LLC

Transmitted for your review and comments on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 16, 2011.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

- ( ) We have no objections.
- (X) We have no comments.
- ( ) Comments are attached.

Signed:   
Date: 9-8-11

cc: Central Files



NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

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

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
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NEAL S. FLUWARA  
DONNA FAY K. KIYOSAKI, P.E.  
LAWRENCE H. MIKE, M.D., J.D.

WILLIAM M. TAM  
DEPUTY DIRECTOR

September 21, 2011

REF: Kaloko & Kohanaiki DEIS

August 23, 2011

MEMORANDUM

TO: From: DLNR Agencies:  
\_\_\_ Div. of Aquatic Resources  
 Div. of Boating & Ocean Recreation  
 Engineering Division  
 Div. of Forestry & Wildlife  
 Div. of State Parks  
 Commission on Water Resource Management  
 Office of Conservation & Coastal Lands  
 Land Division – Hawaii District  
\_\_\_ Historic Preservation

FROM: *to:* Russell Y. Tsuji, Land Administrator  
SUBJECT: Draft Environmental Impact Statement – Kaloko Makai  
LOCATION: Kaloko and Kohanaiki, N. Kona, Hawaii; TMK: (3) 7-3-009:017, 019, port., 025, 026, 028, 062 (port.) and 063  
APPLICANT: Wilson Okamoto Corporation on behalf of SCD – TSA Kaloko Makai, LLC

2011 AUG 24 PM 3: 04  
COMMUNICATIONS SECTION

TO: Russell Tsuji, Administrator  
Land Division  
FROM: William M. Tam, Deputy Director  
Commission on Water Resource Management  
SUBJECT: Draft Environmental Impact Statement - Kaloko Makai, Kaloko and Kohanaiki, N. Kona, Hawaii  
FILE NO.:  
TMK NO.: (3) 7-3-009:017, 019, port., 025, 026, 028, 062 (port.) and 063

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at <http://www.hawaii.gov/dlnr/cwrn>.

Our comments related to water resources are checked off below.

- 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.
- 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.
- 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at <http://www.usgbc.org/leed>. A listing of fixtures certified by the EPA as having high water efficiency can be found at <http://www.epa.gov/watersense/pp/index.htm>.
- 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at <http://hawaii.gov/dbed/czm/initiative/lid.php>.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed: *William M. Tam*  
Date: September 21, 2011

cc: Central Files

DRF-IA 06/19/2008

6. We recommend the use of alternative water sources, wherever practicable.
7. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

Permits required by CWRM:

Additional information and forms are available at [http://hawaii.gov/dnr/cwm/resources\\_permits.htm](http://hawaii.gov/dnr/cwm/resources_permits.htm).

8. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water.
9. A Well Construction Permit(s) is (are) required any well construction work begins.
10. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.
11. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.
12. Ground water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
13. A Stream Channel Alteration Permit(s) is (are) required before any alteration(s) can be made to the bed and/or banks of a stream channel.
14. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is (are) constructed or altered.
15. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
16. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

OTHER:

The DEIS correctly notes the location of the project in the Keauhou Aquifer System Area (ASA), which is part of the Huataialai Aquifer Sector Area. The Keauhou ASA has an estimated sustainable yield of 38 million gallons per day (mgd). A 2011 study by the U.S. Geological Survey estimated, ground water recharge in the Keauhou ASA may be as much as 77% greater than recharge estimates used to compute the sustainable yield in the 2008 WRPP (85 mgd vs. 152 mgd). This translates to an increase in the sustainable yield estimate from the currently adopted 38 mgd to 67 mgd (using the Robust Analytical Model). In addition, the Commission used a conservative adjustment factor translating recharge to SY, which assumed the lower basal water levels, but high-level water also occurs in the aquifer.

USGS analyzed the effects of future urbanization on Keauhou ASA recharge using Hawaii County zoning maps and the Land Use and Pattern Allocation Guide. Because the areas of the urban parcels are very small compared to the overall areas of the aquifer systems, little change in recharge occurs as a result of simulated future urbanization on an aquifer-system basis. USGS also analyzed the effects of climate change on recharge using published rainfall information (Timm and Diaz, 2009). Recharge estimates for climate change scenarios ranged from 123 mgd to 241 mgd, all higher than the recharge estimate used to estimate the current 38 mgd sustainable yield.

Notwithstanding these aggregate figures, the local water flows in Keauhou are complex and not understood yet. The National Park Service's concern that upgradient wells will adversely impact fresh water flows to Kaloko-Honokohau Park remains an important issue.

The DEIS contains a very good summary of what is known about the hydrogeologic conditions in the ASA. However there is a great deal of uncertainty regarding the communication between the high-level water and the basal aquifers, strangely some fresh water has been found at depth below seawater. The USGS, in cooperation with the National Park Service, will be constructing another numerical ground water model for the Kona area. This will aid in our understanding of the hydrogeology in the region. The Commission staff is participating in a Water Professionals group, made up of hydrologists and water resource engineers from the USGS, National Park Service, County Department of Water Supply, and the private sector, to develop a more robust ground water monitoring network for the region.

The Commission requires well construction and pump installation permits for the proposed potable water source development. To date the Commission has only received one application for one exploratory well (Well No. 4160-03). The preferred alternative is to develop 3 to 4 wells tapping the fresh water under the seawater below the brackish lens. Should wells be developed in the basal or high-level portions of the Keauhou ASA the cumulative impacts of pumping on the nearshore environment must be addressed. CWRM may require monitor wells to be installed as a condition of any well construction and/or pump installation permits. Pump test results should provide an indication of the potential impacts on the resource and other existing legal uses.

DEIS Page 3-19 contains an old definition of sustainable yield. The new legal definition under HRS §174C-2 is "Sustainable yield" means the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the commission."

DEIS Page 4-106 estimates the potable water demand at buildout to be 3 mgd. General irrigation needs are proposed to be met with R-1 water from onsite wastewater treatment plant. However, Table 4-24 summarizes both the potable and non-potable needs for the project and shows total 3.177 mgd (average demand). Amend the table to breakdown the potable and non-potable needs for the project.

Some of the duties used to calculate water demand in Table 4-24 appear to be higher than the Domestic Consumption Guidelines in the County Water System Standards (e.g., parks, commercial). There appears to be an error in the calculation for Parks in Phase 1. The duties for Parks in Phase 1 and 3 are different. This should be clarified.

The Department of Health has jurisdiction over water quality issues associated with the disposal of stormwater through drywells and the disposal of brine through injection wells.

If there are any questions, please contact Lenore Ohye at 587-0216.

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STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

August 23, 2011

MEMORANDUM

TO: **DLNR Agencies:**  
\_\_\_ Div. of Aquatic Resources  
 Div. of Boating & Ocean Recreation  
 Engineering Division  
 Div. of Forestry & Wildlife  
 Div. of State Parks  
 Commission on Water Resource Management  
 Office of Conservation & Coastal Lands  
 Land Division – Hawaii District  
\_\_\_ Historic Preservation

FROM:  Russell Y. Tsuji, Land Administrator  
SUBJECT: Draft Environmental Impact Statement – Kaloko Makai  
LOCATION: Kaloko and Kohanaiki, N. Kona, Hawaii; TMK: (3) 7-3-009:017, 019, port., 025, 026, 028, 062 (port.) and 063  
APPLICANT: Wilson Okamoto Corporation on behalf of SCD – TSA Kaloko Makai, LLC

Transmitted for your review and comments on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 16, 2011.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed:   
Date: 9.6.11

cc: Central Files

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

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HILO, HAWAII

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LAND DIVISION  
2011 SEP - 8 A 11: 32



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7469-01  
July 25, 2013

Mr. Russell Y. Tsuji, Administrator  
Land Division  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, HI 96809

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Tsuji:

Thank you for your letter dated September 22, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the respective order of your comments:

Engineering Division

We acknowledge that your previous comments dated September 29, 2010 still apply which has been reflected in the DEIS.

Division of State Parks

We acknowledge the Division has no comments to offer at this time.

Commission on Water Resource Management (September 21, 2011; REF: Kaloko & Kohanaiki DEIS)

1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

Response: The Petitioner has had numerous discussions with the County Water Department and will continue these discussions as the project moves forward. Additionally, the Petitioner has obtained DWS's acceptance to ultimately tie into their system, provided that adequate water source requirements for the project can be met.



7469-01

Letter to Mr. Russell Y. Tsuji

July 25, 2013

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The DEIS was also distributed to the County Planning Department and Department of Water Supply.

- 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.*

Response: Although a portion of the property is within the Agricultural land use district, there is currently no agricultural use on the property. Thus, the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP) is not needed. A copy of the DEIS was also sent to HDOA.

- 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at <http://www.usgbc.org/leed>. A listing of fixtures certified by the EPA as having high water efficiency can be found at <http://www.epa.gov/watersense/pp/index.htm>.*

Response: A Sustainability Plan will be included in the forthcoming Second DEIS, which includes a discussion of priority guidelines and principles to promote sustainability within the project.

The Sustainability Plan identifies a number of measures that may be implemented to facilitate end-user conservation, including water restrictions during drier periods, public education and more efficient landscaping practices.

Efficient fixtures and appliances will reduce indoor water use. The water distribution system will be maintained to prevent water loss and homeowners and businesses will be encouraged to maintain fixtures to prevent leaks. Landscaping will emphasize climate-adapted native and other appropriate plants suitable for coastal locations. Best management practices will be designed and implemented to minimize infiltration and runoff from daily operations.

Water-efficient fixtures such as high efficiency toilets, flow limiters for faucets, flow control valves, and water efficient showerheads reduce water and sewer costs, reduce demand on water supplies and treatment facilities, and reduce heating energy consumption and associated greenhouse gas emissions.



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Letter to Mr. Russell Y. Tsuji

July 25, 2013

Page 3 of 6

- 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at <http://hawaii.gov/dbed/Uczm/initiative/lid.php>.*

Response: As stated in the DEIS and forthcoming Second DEIS, the Petitioner will comply with the County of Hawaii's grading ordinance requirements and will obtain a National Pollutant Discharge Elimination System (NPDES) permit from the State Department of Health (DOH) for storm water discharges related to construction activities, which will require (structural and non-structural) Best Management Practices (BMPs), such as minimizing soil exposure and erosion control measures such as silt fences and sediment basins, to minimize off-site impacts.

- 6. We recommend the use of alternative water sources, wherever practicable.*

Response: Alternative water sources, will be used wherever practicable.

The on-site WWTP facility will treat the wastewater to provide recycled (R-1) water for general irrigation within Kaloko Makai and thus lessen demand for potable water for irrigation needs. This reuse of treated wastewater is consistent with the Kona CDP which has an implementing "Action" designating the area below Ane Keohokālole as a reclaimed wastewater zone (Action TRAN-3.3a: Designates the reclaimed wastewater zone (Wastewater Re-use Area) on Figure 4-10c Official Public Facilities and Services Map.)

- 9. A Well Construction Permit(s) is (are) required any well construction work begins.*

Response: The Petitioner acknowledges that Well Construction Permits are required before any well construction work begins.

- 10. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.*

Response: The Petitioner acknowledges that Pump Installation Permits are required before ground water is developed as a source of supply for the project.

#### Other

The DEIS correctly notes the location of the project in the Keauhou Aquifer System Area (ASA), which is part of the Hualalai Aquifer Sector Area. The Keauhou ASA has an estimated sustainable yield of 38 million gallons per day (mgd). A 2011 study by the U.S. Geological Survey estimated, ground water recharge in the Keauhou ASA may be as much as 77% greater than recharge estimates used to compute the



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Letter to Mr. Russell Y. Tsuji  
July 25, 2013  
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*sustainable yield in the 2008 WRPP (86 mgd vs. 152 mgd). This translates to an increase in the sustainable yield estimate from the currently adopted 38 mgd to 67 mgd (using the Robust Analytical Model). In addition, the Commission used a conservative adjustment factor translating recharge to SY, which assumed the lower basal water levels, but high-level water also occurs in the aquifer.*

Response: The updated information on sustainable yield is acknowledged and appreciated. The substantially greater recharge than the amount on which the Commission's 38 million gallon per day (mgd) sustainable yield is based, coupled with the fact that virtually all of the greater recharge computed by the USGS occurs over high level rather than basal groundwater, are promising facts for the future water supply for the Kailua-Kona area.

*USGS analyzed the effects of future urbanization on Keauhou ASA recharge using Hawaii County zoning maps and the Land Use and Pattern Allocation Guide. Because the areas of the urban parcels are very small compared to the overall areas of the aquifer systems, little change in recharge occurs as a result of simulated future urbanization on an aquifer-system basis. USGS also analyzed the effects of climate change on recharge using published rainfall information (Timm and Diaz, 2009). Recharge estimates for climate change scenarios ranged from 123 mgd to 241 mgd, all higher than the recharge estimate used to estimate the current 38 mgd sustainable yield.*

*Notwithstanding these aggregate figures, the local water flows in Keauhou are complex and not understood yet. The National Park Service's concern that upgradient wells will adversely impact fresh water flows to Kaloko Honokohau Park remains an important issue.*

Response: The water supply alternatives being evaluated for the project have been specifically limited to those which can be affirmatively demonstrated to not impact the basal groundwater flowing through Kaloko-Honokohau National Historic Park. These include high level groundwater that flows far beneath the basal lens rather than through it and desalting of saline groundwater extracted from below the basal lens. A test well will be constructed and tested to determine if the first of these alternatives is feasible. This testing will include extensive monitoring to demonstrate the lack of an impact on the basal lens.

*The DEIS contains a very good summary of what is known about the hydrogeologic conditions in the ASA. However there is a great deal of uncertainty regarding the communication between the high-level water and the basal aquifers, strangely some fresh water has been found at depth below seawater. The USGS, in cooperation with the National Park Service, will be constructing another numerical ground water model for the Kona area. This will aid in our understanding of the hydrogeology in the region. The Commission staff is participating in a Water Professionals group, made up of hydrogeologists and water resource engineers from the USGS, National Park*



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Letter to Mr. Russell Y. Tsuji  
July 25, 2013  
Page 5 of 6

*Service, County Department of Water Supply, and the private sector, to develop a more robust ground water monitoring network for the region.*

Response: Our consultant on water supply development, Tom Nance, is an active participant in the Water Professionals group and has made several presentations at group meetings. We expect that the test well that will be drilled at the upper end of the project site under his direction will add to the knowledge of the relationship between high level and basal groundwater in the area.

*The Commission requires well construction and pump installation permits for the proposed potable water source development. To date the Commission has only received one application for one exploratory well (Well No. 416003). The preferred alternative is to develop 3 to 4 wells tapping the fresh water under the seawater below the brackish lens. Should wells be developed in the basal or high-level portions of the Keauhou ASA the cumulative impacts of pumping on the nearshore environment must be addressed. CWRM may require monitor wells to be installed as a condition of any well construction and/or pump installation permits. Pump test results should provide an indication of the potential impacts on the resource and other existing legal uses.*

Response: Monitoring of the on-site test well to be drilled (state no. 4160-03) will include effects on the basal lens as measured in a sounding tube isolated from the fresh water below and in existing well 4160-02 which is down gradient of the test well. These test results will be shared with the Water Professionals group as well as submitted to the Commission on Water Resource Management.

*DEIS Page 3-19 contains an old definition of sustainable yield. The new legal definition under HRS §174C-2 is "Sustainable yield" means the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the commission.",.*

Response: Section 3.5 Groundwater has been revised in forthcoming Second DEIS.

*DEIS Page 4-106 estimates the potable water demand at buildout to be 3 mgd. General irrigation needs are proposed to be met with R-1 water from onsite wastewater treatment plant. However, Table 4-24 summarizes both the potable and non-potable needs for the project and shows total 3.177 mgd (average demand). Amend the table to breakdown the potable and non-potable needs for the project.*

Response: Table 4-24 will be revised in the forthcoming Second DEIS

*Some of the duties used to calculate water demand in Table 4-24 appear to be higher than the Domestic Consumption Guidelines in the County Water System Standards*



7469-01

Letter to Mr. Russell Y. Tsuji

July 25, 2013

Page 6 of 6

*(e.g., parks, commercial). There appears to be an error in the calculation for Parks in Phase 1. The duties for Parks in Phase 1 and 3 are different. This should be clarified.*

Response: Computation revised to updated land use plan.

*The Department of Health has jurisdiction over water quality issues associated with the disposal of stormwater through drywells and the disposal of brine through injection wells.*

Response: The Petitioner acknowledges that the Department of Health has jurisdiction over water quality issues associated with the disposal of stormwater through drywells and the disposal of brine through injection wells. The Petitioner will continue to consult with them on these issues.

**Land Division, Hawaii District**

We acknowledge the Division has no comments to offer at this time.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", written over a white background.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF FORESTRY AND WILDLIFE  
1151 PUNCHBOWL STREET, ROOM 325  
HONOLULU, HAWAII 96813

WILLIAM J. AHL, JR.  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSIONER OF WATER RESOURCES MANAGEMENT  
GUY H. KAULUKUKUI  
FIRST DEPUTY  
WILLIAM AL TAM  
DEPUTY COM. FOR WATER  
ADRIAN BLANCHARD  
SEATING CHIEF AND RECEPTION  
BUREAU IN CHARGE/ANGUS  
COMMISSIONER OF WATER RESOURCES MANAGEMENT  
CONSULTATION AND RESEARCH/INFORMATION  
ENGINEERING  
FORESTRY AND WILDLIFE  
BIOLOGICAL PRESERVATION  
KAWAHAU ISLAND RESERVE COMMISSIONER  
LAND  
STATE PARKS

Mr. Earl Matsukawa  
Wilson Okamoto Corporation  
1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii 96826

Subject: Comments on the Kaloko Makai, Draft Environmental Impact Statement, Hawaii

Dear Mr. Matsukawa:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Kaloko Makai Development. The Department of Land and Natural Resources, Division of Forestry and Wildlife's (DOFAW) respectfully provide the following comments on the July 2011, DEIS for the Kaloko Makai Development.

General Comments:

1. With regard to impacts to T&E species, the DEIS seeks to support a FONSI based on the draft HCP provided. However, the draft HCP has not been approved, no ITL has been issued, and compliance with HRS 195D has not been met. Since there is no guarantee that the draft HCP will be approved or implemented it is not appropriate that it provide the basis of the FONSI with regard to impacts to T&E species.
2. We understand that Ho'okuleana intends to secure an ITL and approved HCP for this project and note that pursuant to HRS 195D, the board must provide notice of the draft HCP in the OEQC bulletin for public review. We note that that has not yet occurred and that in order to obtain an ITL the draft HCP would need to be noticed in the OEQC bulletin at a later date.
3. We note that in order to issue an ITL, the board must determine compliance with HRS 343. Since the draft HCP may be revised prior to approval we caution that the subject DEIS may be out of date and may not include review of actions that may be incorporated into the HCP as part of the review and development process prior to approval of the HCP.
4. The draft HCP will be posted at the Office of Environmental Quality Control (OEQC) for public review once the draft is approved by DOFAW. The DEIS and

the draft HCP are not on the same timeframe and therefore we suggest the applicant should wait before citing mitigation from the draft HCP. Because the draft HCP is not approved, it maybe subject to multiple changes and thus, a supplement to this DEIS may be needed.

#### Comments associated with the DEIS:

1. page 1-10: "The HCP has been initiated to reduce threats to the Kaloko Makai populations of these five species and maintain their ecosystem." The HCP has not yet been initiated to address the impacts to endangered plants. A draft HCP has been submitted to DOFAW, however, it has not been approved by BLNR.
2. The surveys are not adequate. We recommend that the applicant conduct botanical and wildlife surveys throughout the project area: (3) 7 - 3 - 009: 017, 025, 026, 028 and 063 Off - Site Potable Well Field: (3) 7 - 3 - 009: portion of 019 and portion of 062. The surveys provided in the appendices are out-dated, haven't covered the entire project area, or were conducted during the time of year least likely to detect the presence of endangered plants and wildlife.
  - The surveys should be conducted during the wet season in December 2011.
  - The invertebrate surveys conducted by Steve Montgomery in 2008 do not include the entire project area or off-site areas listed in the TMK above. The surveys are out dated and therefore new surveys are strongly recommended.
  - Botanical surveys conducted by Art Whistler in September of 2006 are out of date and were conducted during the dry season when the likelihood of detecting endangered plants and *Manduca blackburni* larval host plants and adult nectar plants is low. Furthermore, Art Whistler noted in his report that "during the present survey, only about 24 plants of *Pleomele hawaiiensis* were observed, but since counting individuals was not part of the project, this should not be judged to be indicative of a decline in the number of individuals currently there". All surveys should be designed to collect data of the number of individuals of endangered species found within the project site and right of way, including roadside. The objective of the surveys should be to identify and map the number of individual endangered plants that will be impacted by the project. Mr. Whistler's survey did not identify/specify where the endangered plants were on the project site.
  - Art Whistler's survey in 2006 does not substantiate the number of each endangered plant to be impacted by the project. It is not clear how the applicant has determined the number of species of *Nothocestrum breviflorum*, *Pleomele hawaiiensis*, and *Bidens micrantha* subsp. *ctenophylla* subject to take during project construction?
  - Each botanical and wildlife survey should provide maps of current distribution of endangered flora or fauna found in the project area. A map of the project area with clear markings of project area boundaries, a legend, GPS points of endangered species found, as well as survey tracks should be depicted on each map and presented to our agency.

- During botanical surveys, any populations of *Nicotiana glauca* (Tobacco tree, a food source for larva of the endangered *Manduca blackburni*) will be GPS and represented on a map to be presented to our agency.
  - Conduct bat surveys in forested areas where trees are taller than 15 feet and provide maps of these areas. If there are trees taller than 15 feet in the project area, please draft minimization and avoidance measures to avoid clearing vegetation 15 feet or taller during the bat pupping season from June 1 through September 15.
3. The HCP and DEIS include conservation measures (the outplanting of 5 species) that are the responsibility of FHWA. These measures were developed between the Service and FHWA during a Section 7 consultation for Ane Keohokalole Highway. We recommend the applicant not use management actions that will be implemented by FHWA to offset impacts to listed species due to their own (Kaloko Makai) development.
  4. Art Whistler's survey in 2006, identifies *Capparis sandwichiana* and *Ipomoea indica*, within the project area. These two species are nectar plants for the endangered *Manduca blackburni*. DOFAW recommends the applicant conduct new invertebrate surveys during the wet season in December 2011 to identify *Manduca* and its adult and larval hosts plants.
  5. The HCP and DEIS state "After construction, Kaloko Makai will develop a 25-ft buffer between the existing aiea tree and any structure." We recommend this be increased to 50-ft. No development would occur until successful outplanting of aiea has occurred.
  6. On page 3-52, the DEIS states "Kaloko Makai will use best efforts to collect genetic material, propagate and plant hala pepe so that 6-individuals survive in the Kaloko Makai Dryland Forest Preserve. The 6 new individuals represent a 3-for-1 replacement of the 2 hala pepe outside of the Dryland Forest Preserve which will be removed and transplanted..." The intent of the 3:1 ratio used by the ESRC is 3 populations created for any 1 destroyed, not 3 for every 1 individual. DOFAW recommends the applicant collect and grow propagules from the existing plants before construction impacts and outplant these propagules, to meet the State requirement for a net recovery benefit, as opposed to transplanting the existing plants. It is unlikely that these plants, if transplanted, will survive.
  7. On page 3-58, the DEIS states "Rana Biological Consulting Inc.'s 2011 study resulted in findings consistent with the location of the site, the habitat present on it, as well as the findings of the previous study summarized above." This 2011 survey only covers an off-site area of 3.5 acres to develop a potable water well and does not represent the entire 1,139 acres slated for development. DOFAW recommends the removal of this sentence or clarification of the survey area for the 2011 survey.
  8. The HCP and DEIS state "After construction, Kaloko Makai will develop a 25-ft buffer between the existing aiea tree and any structure." DOFAW recommend

this be increased to 50-ft. We also suggest collecting seeds from this species and propagating for further outplanting.

9. The HCP (not mentioned in the DEIS) proposes to transplant approximately 12-17 kookoolau (*Bidens micratha* ssp. *ctenophylla*) from within the area to be developed to the Kaloko Makai Dryland Forest Preserve. We recommend you collect and grow propagules from the existing plants before construction impacts and outplant these propagules, to meet the State requirement for a net recovery benefit, as opposed to transplanting the existing plants. It is unlikely that these plants, if transplanted, will survive.
10. Under Section 2.4 Conservation needs in the action area for *Bidens micratha* ssp. *ctenophylla*, *Nothoecstrum breviflorum*, and *Pleomele hawaiiensis*, DOFAW recommends these species remain in place until the applicant collects propagules for storage, propagation, outplanting purposes, in order to meet the HRS 195D requirement for net recovery benefit. A Threatened and Endangered Plant Collectors Permit from the State is required before any species mentioned above are collected for storage, propagation, and outplanting. Using plants already in the Preserve as a seed source for outplanting may not qualify to meet net benefit for the species impacted outside of the Preserve. Plants that are outside of the Preserve, that are likely to be impacted by the project are the plants that should be propagated and outplanted to achieve a net benefit, however, you may augment the site with other wild population sources only after there is genetic representation of the species subject to take.
11. The HCP and DEIS state " These 150 acres will be set aside and preserved as a dryland forest preserve thus ensuring the continuation of this dryland forest ecosystem." The DOFAW suggests the final HCP and EIS describe the process that will be used to set the area aside and conserve it in perpetuity.
12. In the HCP and DEIS, the developer commits to controlling weeds in a 15-foot buffer around extant and outplanted listed and candidate plants. DOFAW recommends that weeds be controlled in the entire dryland forest preserve and along all roadsides within the development. Per the HCP, DOFAW recommends long-term control of weeds in the preserve for the entire duration of your permit.

**Additional comments on the DHCP, Appendix F in the DEIS:**

1. The draft HCP in the DEIS does not reflect any of DOFAW's comments and recommendation sent to the applicant in their April 2011 draft HCP. The DHCP in Appendix F of the DEIS is inconsistent with the current draft DOFAW is working with in coordination with the Applicant.
2. Federal Highways (FHWA) project has their own take issues associated with the constructing of the Ane Keohokālole Highway and are addressing their take by creating a preserve. This was addressed through a Section 7 consultation with the USFWS. The take associated with the Kaloko Makai project is separate from the FHWA's take and therefore, the applicant is responsible for meeting the State's requirement for the net recovery benefit of the species to be impacted.



3. The applicant is required under the State's 195D to provide assurance of funding for all mitigation, avoidance, and monitoring activities associated with impacts from the project. FHWA is not responsible for the applicant's impacts from the Kaloko Makai development.
4. Page 8 of the draft HCP states "HCP will be considered a success if-The number of plants that are propagated, planted and survive in the Preserve exceed the number of plants taken (representing a net gain for the species), management measures make meaningful contributions toward addressing the major threats that habitat of the taken species face.." The State's endangered species law HRS 195D has a rigorous process for establishing and substantiating a net recovery benefit for endangered plants taken as a result of a projects activities. The applicant must demonstrate net benefit by creating, at a minimum, 3 wild populations of each species taken and achieve a population that is reproducing and self-sustaining. This biologically sound approach is supported by DOFAW, USFWS and the ESRC and recommended to the applicant to achieve a net benefit. In regards to making meaningful contributions, DOFAW needs the applicant to define these contributions in collaboration with DOFAW and USFWS to assess whether the measures are appropriate for the species involved.
5. Page 10-Proposed mitigation measure 1, 2, 3, and 4. DOFAW has not approved these mitigation measures and has informed the Applicant that these measures do not meet the HRS 195D requirements for net benefit. Furthermore, the applicant states that there will be take of ma'oloa and uhiuhi but does not identify how many of each species will be taken and also how their take will be mitigated for. Please identify mitigation measures for the two above mentioned species. Please provide the botanical surveys that document locations for individuals being taken from the project activities.
6. Page 12- Buffering Each Plant-We also recommend collecting seeds from all three species before construction/impacts and propagating for further outplanting to meet the State requirement for a net recovery benefit.
7. Page 57 Section3.3 states " two *Pleomele hawaiiensis* found outside of the Kaloko Makai dryland forest reserve will be removed and transplanted to Kaloko Makai dryland forest reserve before construction activities begin." DOFAW recommends the applicant collect seeds and/or cuttings from these two plants, store, and propagate healthy plants before construction activities begin. The same applies to the population of *Bidens micratha* ssp. *ctenophylla*. Note that DOFAW is recommending the applicant conduct new botanical surveys during the wet season in 2011 to identify and map the exact number of *Bidens micratha* ssp. *ctenophylla*, *Nothoecstrum breviflorum*, and *Pleomele hawaiiensis* subject to take.
8. Page 59-63. These management actions meet the Section 7 criteria but are not designed to meet the requirements of 195D, net recovery benefit for the species subject to take. Section 7 requires avoidance and minimization measures, a State HCP requires avoidance, minimization, and mitigation measures to achieve


net recovery benefit, long-term invasive species management, long-term monitoring of outplants, and assurance of funding to insure the HCP obligations are met. This section has not been approved by BLNR. DOFAW recommends a meeting with the applicant to discuss the requirements under this section.

9. Page 64-65 Monitoring Plan: This plan has not been reviewed by DOFAW. The monitoring plan should be designed to monitor the success of mitigation for the three species subject to take under the HCP. Appendix F in the DEIS states " all listed species populations within the Kaloko Makai Dryland Forest Preserve will be monitored by Kaloko Makai contractors." The populations that need to be monitored are outplants from seed source coming from individuals subject to take outside of the Preserve. These are the plants that the applicant is required to substantiate a net recovery benefit and not for the plants that are currently in the Preserve.
10. Page 67 Section 5.0 summary table- DOFAW recommend the applicant fund collection, storage, propagation, outplanting activities for those species impacted outside of the Preserve. Genetic material collected by FHWA comes from a seed source inside of the Preserve. FHWA collection does not include the genetic material for those individuals impacted by the Kaloko Makai Development. The goal of the HCP is to create populations that genetically represent those species taken by the development. HRS 195D-21 (b)2D states "Identify those measures or actions to be undertaken to protect, maintain, restore, or enhance the ecosystems, natural communities, or habitat types within the plan area; a schedule for implementation of the measures or actions; and an adequate funding source to ensure that the actions or measures, including monitoring, are undertaken in accordance with the schedule;" DOFAW recommends budgeting for the State do conduct compliance monitoring.
11. Please provide DOFAW with a current Fire Management Plan and a Weed Management Plan for the project area. DOFAW has not reviewed any of the above plans inserted into this DEIS.

In April 2011, DOFAW submitted additional comments and recommendations to the consultant, Ho'okuleana, LLC , that have not been addressed in the draft HCP submitted as Appendix F in this DEIS. The HCP is a separate action from the DEIS, needing approval of DOFAW, ESRC, and BLNR in order to be granted an incidental take license. The acceptance of this DEIS, in no way, indicates the acceptance of the HCP by DOFAW, ESRC, and BLNR. DOFAW recommends the DHCP not be analyzed under this DEIS.

DOFAW looks forward to meeting with you to develop a final DEIS that results in the appropriate actions in restoring and protecting the ecological and biological integrity of the Kaloko Makai Dryland Forest Preserve. Please feel free to contact Sandee Hufana, Habitat Conservation Plan Coordinator at 808-587-4148 or via email at [Sandee.K.Hufana@hawaii.gov](mailto:Sandee.K.Hufana@hawaii.gov), with any questions or concerns.

Sincerely,

  
for Paul J. Conry, Administrator



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7469-01  
July 25, 2013

Mr. Roger Imoto, Administrator  
Division of Forestry and Wildlife  
Department of Land and Natural Resources  
State of Hawaii  
1151 Punchbowl Street, Room 325  
Honolulu, Hawai'i 96813

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Imoto:

Thank you for your letter dated September 21, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

General Comments:

1. *With regard to impacts to T&E species, the DEIS seeks to support a FONSI based on the draft HCP provided. However, the draft HCP has not been approved, no ITL has been issued, and compliance with HRS 195D has not been met. Since there is no guarantee that the draft HCP will be approved or implemented it is not appropriate that it provide the basis of the FONSI with regard to impacts to T&E species.*

Response: Based on comments during the DEIS process and further evaluation of the project layout, under the development proposal described in the Second DEIS, none of the listed endangered plants situated outside of the dryland forest preserve will be "taken" in the development and construction of the Kaloko Makai project. Furthermore, it is anticipated that the project will be developed in such a manner as to avoid any "take" of *Bidens micrantha* ssp. *Ctenophylla*, which is currently proposed for listing as an endangered species. The Petitioner will incorporate avoidance measures to the extent possible. Because no incidental take license will be needed. Petitioner no longer



anticipates entering in a Habitat Conservation Plan (HCP) as previously suggested in the DEIS.

As suggested by the U.S. Fish and Wildlife Service (USFWS), the Petitioner is proposing to implement a 50-foot buffer between one 'aiea plant and any buildings at the project. In addition, the Petitioner proposes to utilize a similar buffer around the two hala pepe plants.

The Petitioner reaffirms its prior statements that, in connection with the development of the Kaloko Makai project, it would set aside 150-acres of dryland forest for preservation purposes. This set aside will offsite direct impacts to listed species as a result of the development of the Kaloko Makai project. Within this preserve, a variety of species will have continued protection and their habitats set aside in perpetuity, enhancing their prospects for survival.

2. *We understand that Hookuleana intends to secure an ITL and approved HCP for this project and note that pursuant to HRS 195D, the board must provide notice of the draft HCP in the OEQC bulletin for public review. We note that that has not yet occurred and that in order to obtain an ITL the draft HCP would need to be noticed in the OEQC bulletin at a later date.*

Response: See Response No. 1.

3. *We note that in order to issue an ITL, the board must determine compliance with HRS 343. Since the draft HCP may be revised prior to approval we caution that the subject DEIS may be out of date and may not include review of actions that may be incorporated into the HCP as part of the review and development process prior to approval of the HCP.*

Response: See Response No. 1. Furthermore, we note that the issuance of a incidental take license (ITL) is not a trigger requiring compliance with Chapter 343, Hawaii Revised Statutes.

4. *The draft HCP will be posted at the Office of Environmental Quality Control (OEQC) for public review once the draft is approved by DOFAW. The DEIS and the draft HCP are not on the same timeframe and therefore we suggest the applicant should wait before citing mitigation from the draft HCP. Because the draft HCP is not approved, it may be subject to multiple changes and thus, a supplement to this DEIS may be needed.*

Response: See Response No. 1.



Comments associated with the DEIS

1. *page 1-10: "The HCP has been initiated to reduce threats to the Kaloko Makai populations of these five species and maintain their ecosystem." The HCP has not yet been initiated to address the impacts to endangered plants. A draft HCP has been submitted to DOFAW, however, it has not been approved by BLNR.*

Response: See Response No. 1.

2. *The surveys are not adequate. We recommend that the applicant conduct botanical and wildlife surveys throughout the project area: (3) 7 - 3 - 009: 017, 025,026,028 and 063 Off - Site Potable Well Field: (3) 7 - 3 - 009: portion of 019 and portion of 062. The surveys provided in the appendices are out-dated, haven't covered the entire project area, or were conducted during the time of year least likely to detect the presence of endangered plants and wildlife.*

- *The surveys should be conducted during the wet season in December 2011.*
- *The invertebrate surveys conducted by Steve Montgomery in 2008 do not include the entire project area or off-site areas listed in the TMK above. The surveys are out dated and therefore new surveys are strongly recommended.*
- *Botanical surveys conducted by Art Whistler in September of 2006 are out of date and were conducted during the dry season when the likelihood of detecting endangered plants and Manduca blackburni larval host plants and adult nectar plants is low. Furthermore, Art Whistler noted in his report that "during the present survey, only about 24 plants of Pleomele hawaiiensis were observed, but since counting individuals was not part of the project, this should not be judged to be indicative of a decline in the number of individuals currently there". All surveys should be designed to collect data of the number of individuals of endangered species found within the project site and right of way, including roadside. The objective of the surveys should be to identify and map the number of individual endangered plants that will be impacted by the project. Mr. Whistler's survey did not identify/specify where the endangered plants were on the project site.*
- *Art Whistler's survey in 2006 does not substantiate the number of each endangered plant to be impacted by the project. It is not clear how the applicant has determined the number of species of Nothocestrum breviflorum, Pleomele hawaiiensis, and Bidens micrantha subsp. ctenophylla subject to take during project construction?*
- *Each botanical and wildlife survey should provide maps of current distribution of endangered flora or fauna found in the project area. A map of the project area with clear markings of project area boundaries, a legend, GPS points of endangered species found, as well as survey tracks should be depicted on each map and presented to our agency.*



- During botanical surveys, any populations of *Nicotiana glauca* (Tobacco tree, a food source for larva of the endangered *Manduca blackburni*) will be GPS and represented on a map to be presented to our agency.
- Conduct bat surveys in forested areas where trees are taller than 15 feet and provide maps of these areas. If there are trees taller than 15 feet in the project area, please draft minimization and avoidance measures to avoid clearing vegetation 15 feet or taller during the bat pupping season from June 1 through September 15.

Response: A botanical survey was prepared by Isle Botanical in 2006 of the Kaloko Makai project site. An avian and terrestrial mammalian survey was prepared by RANA Productions, Inc. in 2006 of the project site. Additionally, Steve Montgomery conducted an invertebrate study for Kaloko Makai project site in 2008.

Reggie David conducted a follow-up biological and botanical survey in December 2011/January 2012. This study is included in the forthcoming Second DEIS.

The off-site potable well site (7 - 3 - 009: portion of 019 and portion of 062) has been omitted from the forthcoming Second DEIS as an alternative for water; therefore, a botanical and wildlife survey of that site is not needed.

The combined area of the botanical surveys encompasses the entire project site addressed by the Second DEIS.

Since the occurrence of potential host plants in any particular location will likely change overtime, a survey of planned construction sites during the wet season preceding construction will be conducted. If any potential host plants are found, your office will be contacted to determine an appropriate course of action.

Hawaii Forest Industry Association (HFIA) contracted Kukui Planning Company (with guidance from USFWS) to do a rare plant survey of approximately 155 acres Kaloko Makai Dryland Forest Preserve. The survey was completed in January 2012 and a summary will be included in the forthcoming Second DEIS.

During the 2006 survey for the project, RANA observed one Hawaiian hoary bat flying down-slope. Hawaiian hoary bats are regularly seen mauka of the project site and also makai of the project site in the Kaloko-Honokōhau National Historic Park and above Honokōhau boat harbor on a seasonal basis.



The Petitioner will incorporate recommended protocols to address the Hawaiian hoary bat.

3. The HCP and DEIS include conservation measures (the outplanting of 5 species) that are the responsibility of FHWA. These measures were developed between the Service and FHWA during a Section 7 consultation for Ane Keohokalole Highway. We recommend the applicant not use management actions that will be implemented by FHWA to offset impacts to listed species due to their own (Kaloko Makai) development.

Response: See Response No. 1.

4. Art Whistler's survey in 2006, identifies *Capparis sandwichiana* and *Ipomoea indica*, within the project area. These two species are nectar plants for the endangered *Manduca blackburni*. DOFAW recommends the applicant conduct new invertebrate surveys during the wet season in December 2011 to identify *Manduca* and its adult and larval hosts plants.

Response: Since the occurrence of potential host plants in any particular location will likely change overtime, a survey of planned construction sites during the wet season preceding construction will be conducted. If any potential host plants are found, your office will be contacted to determine an appropriate course of action.

Steve Montgomery conducted an invertebrate study for Kaloko Makai project in November 2008 and the *Manduca blackburni* was not found.

5. The HCP and DEIS state "After construction, Kaloko Makai will develop a 25-ft buffer between the existing aiea tree and any structure." We recommend this be increased to 50-ft. No development would occur until successful outplanting of aiea has occurred.

Response: As stated above, the Petitioner will incorporate avoidance measures to the extent possible, thereby eliminating the need to obtain an incidental take license and enter into a HCP. Nevertheless, your comments regarding the proposed size of the buffer around of 'aiea tree have been taken under consideration, and Petitioner intends to incorporate a 50-foot buffer around the one 'aiea tree and any structure within the project. In addition, Petitioner intends to incorporate a similar buffer around the two hala pepe and any structure within the project. The plants will be incorporated into landscaping within the 50-foot buffer.



6. On page 3-52, the DEIS states "Kaloko Makai will use best efforts to collect genetic material, propagate and plant hala pepe so that 6-individuals survive in the Kaloko Makai Dryland Forest Preserve. The 6 new individuals represent a 3 for- 1 replacement of the 2 hala pepe outside of the Dryland Forest Preserve which will be removed and transplanted ... " The intent of the 3:1 ratio used by the ESRC is 3 populations created for any 1 destroyed, not 3 for every 1 individual. DOFAW recommends the applicant collect and grow propagules from the existing plants before construction impacts and outplant these propagules, to meet the State requirement for a net recovery benefit, as opposed to transplanting the existing plants. It is unlikely that these plants, if transplanted, will survive.

Response: See Response No. 1.

7. On page 3-58, the DEIS states "Rana Biological Consulting Inc.'s 2011 study resulted in findings consistent with the location of the site, the habitat present on it, as well as the findings of the previous study summarized above." This 2011 survey only covers an off-site area of 3.5 acres to develop a potable water well and does not represent the entire 1,139 acres slated for development. DOFAW recommends the removal of this sentence or clarification of the survey area for the 2011 survey.

Response: Rana Biological Consulting conducted field work for the 1,139 acres in 2006. This section will be revised in the Second DEIS to reference the 2006 study. Additionally, Rana conducted work for the potable off-site well field site in 2011. However, the potable off-site well field has since been omitted from the project.

8. The HCP and DEIS state "After construction, Kaloko Makai will develop a 25-ft buffer between the existing aiea tree and any structure." DOFAW recommend this be increased to 50-ft. We also suggest collecting seeds from this species and propagating for further outplanting.

Response: See Response No. 1 and 5.

9. The HCP (not mentioned in the DEIS) proposes to transplant approximately 12-17 kookoolau (*Bidens micratha* ssp. *ctenophylla*) from within the area to be developed to the Kaloko Makai Dryland Forest Preserve. We recommend you collect and grow propagules from the existing plants before construction impacts and outplant these propagules, to meet the State requirement for a net recovery benefit, as opposed to transplanting the existing plants. It is unlikely that these plants, if transplanted, will survive.



Response: See Response No. 1.

10. Under Section 2.4 Conservation needs in the action area for *Bidens micrantha* ssp. *ctenophylla*, *Nothoctrum breviflorum*, and *Pleomele hawaiiensis*, DOFAW recommends these species remain in place until the applicant collects propagules for storage, propagation, outplanting purposes, in order to meet the HRS 1950 requirement for net recovery benefit. A Threatened and Endangered Plant Collectors Permit from the State is required before any species mentioned above are collected for storage, propagation, and outplanting. Using plants already in the Preserve as a seed source for outplanting may not qualify to meet net benefit for the species impacted outside of the Preserve. Plants that are outside of the Preserve, that are likely to be impacted by the project are the plants that should be propagated and outplanted to achieve a net benefit, however, you may augment the site with other wild population sources only after there is genetic representation of the species subject to take.

Response: See Response No. 1.

The Petitioner is not proposing an establishment of any new populations.

11. The HCP and DEIS state "These 150 acres will be set aside and preserved as a dryland forest preserve thus ensuring the continuation of this dryland forest ecosystem." DOFAW suggests the final HCP and EIS describe the process that will be used to set the area aside and conserve it in perpetuity.

Response: The Petitioner proposes to preserve the 150-acre dryland forest in perpetuity.

If the Petitioner is successful before the LUC, it will seek to subdivide the preserve into a single tax map (TMK) parcel through the applicable County processes. Kaloko Makai is also considering incorporating a restrictive covenant or condition into the property deed which confirms that the eventual TMK parcel which will encompass the preserve shall remain undeveloped (except for associated management-related needs) and that appropriate access shall be provided in perpetuity.

12. In the HCP and DEIS, the developer commits to controlling weeds in a 15-foot buffer around extant and outplanted listed and candidate plants. DOFAW recommends that weeds be controlled in the entire dryland forest preserve and along all roadsides within the development. Per the HCP, DOFAW recommends long-term control of weeds in the preserve for the entire duration of your permit.

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Response: See Response No. 1.

*Additional comments on the DHCP, Appendix F in the DEIS:*

1. *The draft HCP in the DEIS does not reflect any of DOFAW's comments and recommendation sent to the applicant in their April 2011 draft HCP. The DHCP in Appendix F of the DEIS is inconsistent with the current draft DOFAW is working with in coordination with the Applicant.*

Response: See Response No. 1.

2. *Federal Highways (FHWA) project has their own take issues associated with the constructing of the Ane Keohokalole Highway and are addressing their take by creating a preserve. This was addressed through a Section 7 consultation with the USFWS. The take associated with the Kaloko Makai project is separate from the FHWA's take and therefore, the applicant is responsible for meeting the State's requirement for the net recovery benefit of the species to be impacted.*

Response: See Response No. 1.

3. *The applicant is required under the State's 195D to provide assurance of funding for all mitigation, avoidance, and monitoring activities associated with impacts from the project. FHWA is not responsible for the applicant's impacts from the Kaloko Makai development.*

Response: See Response No. 1.

4. *Page 8 of the draft HCP states "HCP will be considered a success if-The number of plants that are propagated, planted and survive in the Preserve exceed the number of plants taken (representing a net gain for the species), management measures make meaningful contributions toward addressing the major threats that habitat of the taken species face.." The State's endangered species law HRS 1950 has a rigorous process for establishing and substantiating a net recovery benefit for endangered plants taken as a result of a projects activities. The applicant must demonstrate net benefit by creating, at a minimum, 3 wild populations of each species taken and achieve a population that is reproducing and self-sustaining. This biologically sound approach is supported by DOFAW, USFWS and the ESRC and recommended to the applicant to achieve a net benefit. In regards to making meaningful contributions, DOFAW needs the applicant to define these contributions in collaboration with DOFAW and USFWS to assess whether the measures are appropriate for the species involved.*

Response: See Response No. 1.

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5. *Page 10-Proposed mitigation measure 1,2,3, and 4. DOFAW has not approved these mitigation measures and has informed the Applicant that these measures do not meet the HRS 195D requirements for net benefit. Furthermore, the applicant states that there will be take of maoloa and uhiuhi but does not identify how many of each species will be taken and also how their take will be mitigated for. Please identify mitigation measures for the two above mentioned species. Please provide the botanical surveys that document locations for individuals being taken from the project activities.*

Response: See Response No. 1.

6. *Page 12- Buffering Each Plant-We also recommend collecting seeds from all three species before construction/impacts and propagating for further outplanting to meet the State requirement for a net recovery benefit.*

Response: See Response No. 1.

7. *Page 57 Section 3.3 states "two Pleomele hawaiiensis found outside of the Kaloko Makai dryland forest reserve will be removed and transplanted to Kaloko Makai dryland forest reserve before construction activities begin." DOFAW recommends the applicant collect seeds and/or cuttings from these two plants, store, and propagate healthy plants before construction activities begin. The same applies to the population of Bidens micratha ssp. ctenophylla. Note that DOFAW is recommending the applicant conduct new botanical surveys during the wet season in 2011 to identify and map the exact number of Bidens micrantha ssp. ctenophylla, Nothoecstrum breviflorum, and Pleomele hawaiiensis subject to take.*

Response: See Response No. 1.

8. *Page 59-63. These management actions meet the Section 7 criteria but are not designed to meet the requirements of 195D, net recovery benefit for the species subject to take. Section 7 requires avoidance and minimization measures, a State HCP requires avoidance, minimization, and mitigation measures to achieve net recovery benefit, long-term invasive species management, long-term monitoring of outplants, and assurance of funding to insure the HCP obligations are met. This section has not been approved by BLNR. DOFAW recommends a meeting with the applicant to discuss the requirements under this section.*

Response: See Response No. 1.

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Letter to Mr. Roger Imoto

July 25, 2013

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9. *Page 64-65 Monitoring Plan: This plan has not been reviewed by DOFAW. The monitoring plan should be designed to monitor the success of mitigation for the three species subject to take under the HCP. Appendix F in the DEIS states "all listed species populations within the Kaloko Makai Dryland Forest Preserve will be monitored by Kaloko Makai contractors." The populations that need to be monitored are outplants from seed source coming from individuals subject to take outside of the Preserve. These are the plants that the applicant is required to substantiate a net recovery benefit and not for the plants that are currently in the Preserve.*

Response: See Response No. 1.

10. *Page 67 Section 5.0 summary table- DOFAW recommend the applicant fund collection, storage, propagation, outplanting activities for those species impacted outside of the Preserve. Genetic material collected by FHWA comes from a seed source inside of the Preserve. FHWA collection does not include the genetic material for those individuals impacted by the Kaloko Makai Development. The goal of the HCP is to create populations that genetically represent those species taken by the development. HRS 195D-21 (b)2D states "Identify those measures or actions to be undertaken to protect, maintain, restore, or enhance the ecosystems, natural communities, or habitat types within the plan area; a schedule for implementation of the measures or actions; and an adequate funding source to ensure that the actions or measures, including monitoring, are undertaken in accordance with the schedule;" DOFAW recommends budgeting for the State to conduct compliance monitoring.*

Response: See Response No. 1.

11. *Please provide DOFAW with a current Fire Management Plan and a Weed Management Plan for the project area. DOFAW has not reviewed any of the above plans inserted into this DEIS.*

Response: See Response No. 1.

*In April 2011, DOFAW submitted additional comments and recommendations to the consultant, Ho'okuleana, LLC, that have not been addressed in the draft HCP submitted as Appendix F in this DEIS. The HCP is a separate action from the DEIS, needing approval of DOFAW, ESRC, and BLNR in order to be granted an incidental take license. The acceptance of this DEIS, in no way, indicates the acceptance of the HCP by DOFAW, ESRC, and BLNR. DOFAW recommends the DHCP not be analyzed under this DEIS.*

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Letter to Mr. Roger Imoto

July 25, 2013

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Response: See Response No. 1.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodnenker, State Land Use Commission



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HI 96801-3378

September 30, 2011

LORETTA J. FUDDY, A.C.S.W., M.P.H.  
DIRECTOR OF HEALTH

In reply, please refer to:  
File:  
SDWB

RECEIVED  
OCT 04 2011  
HONOLULU OFFICE

Mr. Orlando Dan Davidson  
Executive Officer  
State Land Use Commission  
Department of Business,  
Economic Development & Tourism  
P.O. Box 2359  
Honolulu, Hawaii 96804

Dear Mr. Davidson:

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) REVIEW  
KALO KO MAKAI, NORTH KONA, ISLAND OF HAWAII

We would like to acknowledge receipt of the Draft Environmental Impact Statement (DEIS) dated July 2011, and express our appreciation for the opportunity to comment on the proposed project.

In the DEIS it is stated that for the alternative water sources considered for the project, facilities constructed for water supply and distribution may be dedicated to the Hawaii Department of Water Supply (DWS). We would like to emphasize that the determination as to whether the drinking water infrastructure is owned and operated as a private water system or as an extension to the existing County water system will have a profound impact on how the water system regulations will be applied to the project.

As a private water system, the new well sources and the associated infrastructure may qualify as a new public water system. Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, "Rules Relating to Potable Water Systems."

It is recommended that requirements contained in the HAR, Ch. 11-20-29 relating to the need for Department of Health (DOH) approval for any new drinking water sources; HAR, Ch. 11-20-29.5

Mr. Orlando Dan Davidson  
September 30, 2011  
Page 2

for capacity demonstration and evaluation; and HAR, Ch. 11-20-30 for modifications to a public water system (in the event that the water system is dedicated as a modification to a system owned by the Hawaii DWS be added to "Permits and Approvals" under section 1.1 Profile (page 1-3) and section 1.7.4 Required Permits and Approvals (page 1-15) in the DEIS (see table below).

Permit/Approval	Agency	Status
New water source approval - review and approval of new well sources by the DOH per HAR Ch. 11-20-29	DOH	Pending final selection of water source alternative. If new well sources are developed, plans and an engineering report are required to be submitted to the DOH for review and approval.
Capacity demonstration and evaluation - review and approval per HAR Ch. 11-20-29.5	DOH	Pending final selection of water source alternative. The need for capacity demonstration dependent on whether new well sources and associated infrastructure will be classified as a new public water system (PWS) or a modification to an existing privately owned PWS or PWS owned and operated by the Hawaii DWS.
Modifications to a public water system - review and approval of plans per HAR Ch. 11-20-30	DOH	Pending final selection of water source alternative. Applicable if water system is classified as a modification to a privately owned PWS.

Other Project Specific Water System Requirements:

- Systems that utilize technologies such as RO (Reverse Osmosis) may be subject to a pilot testing program at the discretion of the Safe Drinking Water Branch.



Other General Water System Requirements:

- All public water systems must be operated by certified distribution system and water treatment plant operators as defined by HAR Chapter 11-25 titled "Rules Pertaining to Certification of Public Water System Operators."
- All projects which propose the use of dual water systems or the use of a non-potable water system in proximity to an existing potable water system to meet irrigation or other needs must be carefully designed and operated to prevent the cross-connection of these systems and prevent the possibility of backflow of water from the non-potable system to the potable system. The two systems must be clearly labeled and physically separated by air gaps or reduced pressure principle backflow prevention devices to avoid contaminating the potable water supply. In addition backflow devices must be tested periodically (annually) to assure their proper operation. Further, all non-potable spigots and irrigated areas should be clearly labeled with warning signs to prevent the inadvertent consumption on non-potable water. Compliance with HAR Chapter 11-21 titled "Cross-Connection and Backflow Control" is also required.
- All projects which propose the establishment of a potentially contaminating activity (as identified in the Hawai'i Source Water Assessment Plan) within the source water protection area of an existing source of water for a public water supply should address this potential and activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source.

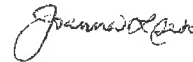
Underground Injection Control (UIC):

- Injection wells used for the subsurface disposal of wastewater, sewage effluent, or surface runoff are subject to environmental regulation and permitting under HAR Chapter 11-23, titled "Underground Injection Control." The DOH's approval must be first obtained before any injection well construction commences. A UIC permit must be issued before any injection well operation occurs.

- Authorization to use an injection well is granted when a UIC permit is issued to the injection well facility. The UIC permit contains discharge and operation limitations, monitoring and reporting requirements, and other facility management and operational conditions. A complete UIC permit application form is needed to apply for a UIC permit.
- A UIC permit can have a valid duration of up to five (5) years. Permit renewal is needed to keep an expiring permit valid for another term.

If there are any questions, please call Craig Watanabe at 586-4258.

Sincerely,



JOANNA L. SETO, P.E., CHIEF  
Safe Drinking Water Branch  
Environmental Management Division

CW:cb

c: SCD - TSA Kaloko Makai, LLC  
1100 Alakea Street, 27th Floor  
Honolulu, Hawaii 96813  
Attention: Mr. Peter Phillips

Wilson Okamoto Corporation ✓  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
Attention: Mr. Earl Matsukawa, AICP



7469-01  
July 25, 2013

Ms. Joanna L. Seto, P.E., Chief  
Safe Drinking Water Branch  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, HI 96801-3378

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Seto:

Thank you for your letter dated September 30, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the respective order of your comments:

*In the DEIS it is stated that for the alternative water sources considered for the project, facilities constructed for water supply and distribution may be dedicated to the Hawaii Department of Water Supply (DWS). We would like to emphasize that the determination as to whether the drinking water infrastructure is owned and operated as a private water system or as an extension to the existing County water system will have a profound impact on how the water system regulations will be applied to the project.*

Response: The Petitioner acknowledges that the determination as to whether the drinking water infrastructure is owned and operated as a private water system or as an extension to the existing County water system will have a profound impact on how the water system regulations will be applied to the project. The Petitioner will continue to work with the County Department of Water Supply effectuate a mutually acceptable solution

*As a private water system, the new well sources and the associated infrastructure may qualify as a new public water system. Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year*



7469-01  
Letter to Ms. Joanna L. Seto  
July 25, 2013  
Page 2 of 4

*or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, "Rules Relating to Potable Water Systems."*

Response: The Petitioner acknowledges and will comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, "Rules Relating to Potable Water Systems."

*It is recommended that requirements contained in the HAR, Ch. 11-20-29 relating to the need for Department of Health (DOH) approval for any new drinking water sources; HAR, Ch. 11-20-29.5 for capacity demonstration and evaluation; and HAR, Ch. 11-20-30 for modifications to a public water system (in the event that the water system is dedicated as a modification to a system owned by the Hawaii DWS be added to "Permits and Approvals" under section 1.1 Profile (page 1-3) and section 1.7.4 Required Permits and Approvals (page 1-15) in the DEIS*

Response: The Petitioner acknowledges and will comply with applicable requirements contained in the HAR, Ch. 11-20-29 relating to the need for Department of Health (DOH) approval of any new drinking water sources; HAR, Ch. 11-20-29.5 for capacity demonstration and evaluation; and, HAR, Ch. 11-20-30 for modifications to a public water system.

The Second DEIS has been updated to include these requirements to "Permits and Approvals" under section 1.1 Profile (page 1-3) and section 1.7.4 Required Permits and Approvals (page 1-15).

Other Project Specific Water System Requirements:

*Systems that utilize technologies such as RO (Reverse Osmosis) may be subject to a pilot testing program at the discretion of the Safe Drinking Water Branch.*

Response: The Petitioner acknowledges that systems utilizing technologies such as RO (Reverse Osmosis) may be subject to a pilot testing program at the discretion of the Safe Drinking Water Branch.

Other General Water System Requirements:

*All public water systems must be operated by certified distribution system and water treatment plant operators as defined by HAR Chapter 11-25 titled "Rules Pertaining to Certification of Public Water System Operators."*

Response: The Petitioner acknowledges that all public water systems must be operated by certified distribution system and water treatment plant operators as

7469-01  
Letter to Ms. Joanna L. Seto  
July 25, 2013  
Page 3 of 4



defined by HAR Chapter 11-25 titled "Rules Pertaining to Certification of Public Water System Operators."

*All projects which propose the use of dual water systems or the use of a non-potable water system in proximity to an existing potable water system to meet irrigation or other needs must be carefully designed and operated to prevent the cross-connection of these systems and prevent the possibility of backflow of water from the non-potable system to the potable system. The two systems must be clearly labeled and physically separated by air gaps or reduced pressure principle backflow prevention devices to avoid contaminating the potable water supply. In addition backflow devices must be tested periodically (annually) to assure their proper operation. Further, all non-potable spigots and irrigated areas should be clearly labeled with warning signs to prevent the inadvertent consumption on non-potable water. Compliance with HAR Chapter 11-21 titled "Cross-Connection and Backflow Control" is also required.*

Response: The Petitioner acknowledges that compliance with HAR Chapter 11-21 titled "Cross-Connection and Backflow Control" is required.

*All projects which propose the establishment of a potentially contaminating activity (as identified in the Hawai'i Source Water Assessment Plan) within the source water protection area of an existing source of water for a public water supply should address this potential and activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source.*

Response: The forthcoming Second DEIS has been updated to address activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source.

Underground Injection Control (UIC):

*Injection wells used for the subsurface disposal of wastewater, sewage effluent, or surface runoff are subject to environmental regulation and permitting under HAR Chapter 11-23, titled "Underground Injection Control." The DOH's approval must be first obtained before any injection well construction commences. A UIC permit must be issued before any injection well operation occurs.*

Response: The Petitioner acknowledges that injection wells used for the subsurface disposal of wastewater, sewage effluent, or surface runoff are subject to environmental regulation and permitting under HAR Chapter 11-23, titled "Underground Injection Control" and that the DOH's approval must be first obtained before any injection well construction commences and an UIC permit must be issued before any injection well operation occurs.

7469-01  
Letter to Ms. Joanna L. Seto  
July 25, 2013  
Page 4 of 4



*Authorization to use an injection well is granted when a UIC permit is issued to the injection well facility. The UIC permit contains discharge and operation limitations, monitoring and reporting requirements, and other facility management and operational conditions. A complete UIC permit application form is needed to apply for a UIC permit.*

Response: The Petitioner acknowledges that authorization to use an injection well is granted when a UIC permit is issued to the injection well facility and that a complete UIC permit application form is needed to apply for a UIC permit.

*A UIC permit can have a valid duration of up to five (5) years. Permit renewal is needed to keep an expiring permit valid for another term.*

Response: The Petitioner acknowledges that a UIC permit can have a valid duration of up to five (5) years and that permit renewal is needed to keep an expiring permit valid for another term.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HI 96801-3378

August 22, 2011

Mr. Earl Matsukawa, AICP  
Project Manager  
Wilson Okamoto Corporation  
1907 South Beretania Street  
Artesian Plaza Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Impact Statement (DEIS), Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Island of Hawaii 1,138.866 acres  
TMK (3) 7-3-009: 017, 019 (portion), 025, 026, 028. 062 (portion) and 063

Thank you for the opportunity to review the subject project which requests comments on the Draft Environmental Impact Statement for the Kaloko Makai Development Project. We have the following comments to offer.

Our recommendation is to have the subject development connect to the County sewer system. However, if it is determined that a County sewer system is not available, a wastewater treatment plant (WWTP) shall be provided for the project. The WWTP shall comply with applicable provisions of Hawaii Administrative Rules (HAR), chapter 11-62, "Wastewater Systems. Please be informed that if wastewater sludge is treated for land application purposes, the WWTP and composting facility will require an Individual Permit for operation.

All wastewater plans must conform to applicable provisions of HAR, chapter 11-62. We do reserve the right to review the detailed plans for conformance to the applicable rules. Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at 586-4294 or fax to 586-4300.

Sincerely,

MARSHALL LUM, P.E., ACTING CHIEF  
Wastewater Branch

LM:cle

c: DOH's Environmental Planning Office (EPO 11-153)  
Mr. Dane Hiromasa, DOH-WWVB Kona Staff  
Mr. Orlando Dan Davidson, DBEDT  
Mr. Peter Phillips, SCD-TSA Kaloko Makai, LLC

LORETTA J. FUDDY, A.C.S.W., M.P.H.  
DIRECTOR OF HEALTH

In reply, please refer to:  
File:

LUD-3 7 3 009 017-ID746  
Draft EIS Kaloko Makai



1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7469-01  
July 25, 2013

Ms. Sina Pruder, Chief  
Wastewater Branch  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, HI 96801-3378

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Pruder:

Thank you for your letter dated August 22, 2011 (LUD-3 7 3 009 017-ID746). The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the respective order of your comments:

*Our recommendation is to have the subject development connect to the County sewer system. However, if it is determined that a County sewer system is not available, a wastewater treatment plant (WWTP) shall be provided for the project. The WWTP shall comply with applicable provisions of Hawaii Administrative Rules (HAR), chapter 11-62, "Wastewater Systems. Please be informed that if wastewater sludge is treated for land application purposes, the WWTP and composting facility will require an Individual Permit for operation.*

Response: Based on discussions with the County of Hawaii Department of Environmental Management, the Kealakehe facility is not available to receive wastewater from Kaloko Makai. Therefore, the Petitioner proposes a private on-site wastewater treatment plant to process wastewater for the project.

*All wastewater plans must conform to applicable provisions of HAR, chapter 11-62. We do reserve the right to review the detailed plans for conformance to the applicable rules.*

Response: The proposed Kaloko Makai wastewater treatment facility will comply with applicable provisions of Hawaii Administrative Rules (HAR), Chapter 11-62, "Wastewater Systems".

7469-01

Letter to Ms. Sina Pruder

July 25, 2013

Page 2 of 2



Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", written over a horizontal line.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
HONOLULU, HAWAII 96801-3378

September 20, 2011

Mr. Orlando Dan Davidson  
Executive Officer  
State Land Use Commission  
Department of Business, Economic Development  
& Tourism  
P.O. Box 2359  
Honolulu, Hawaii 96804

Dear Mr. Davidson:

SUBJECT: Draft Environmental Impact Statement  
Kaloko Makai Project  
Kaloko and Kohanaiki, North Kona, Island of Hawaii  
Ref: 7469-01

All projects should address potential dust, emissions, and odor nuisance concerns. Activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. In addition, for cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential dust and odor nuisance problems.

We encourage the contractor to implement a dust control plan, which does not require approval by the Department of Health, to comply with the fugitive dust regulations.

Additional dust control measures that may complement those that are being proposed include, but are not limited to, the following:

- a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;
- b) Providing an adequate water source at the site prior to start-up of construction activities;
- c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d) Minimizing dust from shoulders and access roads;
- e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f) Controlling dust from debris being hauled away from the project site. Also, controlling dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.

If you have any questions, please contact Mr. Barry Ching of the Clean Air Branch at 586-4200.

Sincerely,

WILFRED K. NAGAMINE  
Manager, Clean Air Branch

BC:rg

c: Peter Phillips, SCD - TSA Kaloko Makai, LLC  
/ Earl Matsukawa, AICP, Wilson Okamoto Corporation

COPY

LORETTA J. FUDDY, A.C.S.W., M.P.H.  
DIRECTOR OF HEALTH

In reply, please refer to:  
File:  
11-634A CAB

RECEIVED  
SEP 26 2011  
EM  
TF  
WILSON OKAMOTO CORPORATION



1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7469-01  
July 25, 2013

Mr. Wilfred K. Nagamine, Manager  
Clean Air Branch  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, HI 96801-3378

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Nagamine:

Thank you for your letter dated September 20, 2011 (11-634A CAB). The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the respective order of your comments:

*All projects should address potential dust, emissions, and odor nuisance concerns. Activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. In addition, for cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential dust and odor nuisance problems.*

Response: The Petitioner will comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust.

*We encourage the contractor to implement a dust control plan, which does not require approval by the Department of Health, to comply with the fugitive dust regulations. Additional dust control measures that may complement those that are being proposed include, but are not limited to, the following:*

- a) *Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;*
- b) *Providing an adequate water source at the site prior to start-up of construction activities;*

7469-01

Letter to Mr. Wilfred K. Nagamine

July 25, 2013

Page 2 of 3



- c) *Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;*
- d) *Minimizing dust from shoulders and access roads;*
- e) *Providing adequate dust control measures during weekends, after hours, and prior to daily startup of construction activities; and*
- f) *Controlling dust from debris being hauled away from the project site. Also, controlling dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.*

Response: As discussed in the DEIS and in the forthcoming Second DEIS, the construction contractor(s) is responsible for complying with the State DOH regulations that prohibit visible dust emissions at property boundaries. Compliance with State regulations will require adequate measures to control airborne dust by methods such as water spraying and sprinkling of loose or exposed soil or ground surface areas and dust-generating equipment, and the use of wind screens in sensitive areas during construction. No significant impacts on air quality are anticipated with appropriate mitigation during the construction phase and no violations of federal and state air quality standards are anticipated in the long-term.

A dust/particulate matter control plan will be implemented throughout the entire construction phase. All construction and construction related activities will comply with the provision set forth in Chapter 11-60.1-33 of the HAR on fugitive dust. Measures to be utilized include:

- Planning construction in phases to minimize the amount of dust-generating materials and activities, refining on-site vehicular traffic routes, and situating potential dust-generating equipment in areas of minimal impact.
- Watering active work areas and any temporary unpaved work roads on a consistent, daily basis.
- Landscaping and accelerated covering of barren areas, including slopes, commencing from the outset of the grading phase.
- Controlling dust from debris and materials being hauled off-site.
- Using wind screens and/or minimizing the area of disturbance as possible at any given time.
- Preventing trucks from tracking dirt and sediment onto paved roadways by routine road washing and tire cleaning.
- Monitoring dust at the project site boundary throughout construction as a method of evaluating the efficiency of the dust/particulate matter control program, and subsequently modifying and updating the program as deemed necessary.

7469-01

Letter to Mr. Wilfred K. Nagamine

July 25, 2013

Page 3 of 3



1907 South Beretania Street  
Arlisian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-546-2277  
FAX: 808-546-2253  
www.wilsonokamoto.com

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

NEIL ABERCROMBIE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

KATHRYN S. MATAYOSHI  
SUPERINTENDENT

EM

RECEIVED  
SEP 12 2011

WILSON OKAMOTO CORPORATION



1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7469-01  
July 25, 2013

Ms. Kathryn Matayoshi, Superintendent  
Department of Education  
State of Hawaii  
P.O. Box 2360  
Honolulu, HI 96804

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

OFFICE OF THE SUPERINTENDENT

September 9, 2011

TO: Mr. Orlando Dan Davidson, Executive Officer  
State Land Use Commission  
Department of Business, Economic Development & Tourism

FROM: Kathryn S. Matayoshi, Superintendent  
Department of Education

SUBJECT: Draft Environmental Impact Statement for Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii,  
TMKs (3) 7-3-009:017, 019 (por.), 025, 026, 028, 062 (por.), and 063

The Department of Education (DOE) has reviewed the Draft Environmental Impact Statement (EIS) for the Kaloko Makai project proposed for North Kona, Hawaii.

The DOE anticipates an impact on its facilities as a result of the Kaloko Makai project. The DOE notes three school sites within the EIS: an elementary school in Phase I, a middle school in Phase II, and an elementary school in Phase III.

The Kaloko Makai project is within the present boundaries of the West Hawaii School Impact Fee District which was adopted by the Board of Education (BOE) on April 15, 2010. The project is expected to provide contributions based on the per-unit rate established for the district. The developer should enter into a written agreement with the DOE with the details of the proposed school sites.

Thank you for the opportunity to provide comments. If you have any questions, please call Jeremy Kwock of the Facilities Development Branch at 377-8301.

KSM:JK:jmb

c: Peter Phillips, SCD-TSA Kaloko Makai, LLC  
Earl Matsukawa, AICP, Wilson Okamoto Corporation  
Randolph G. Moore, Assistant Superintendent, OSFSS

Dear Ms. Matayoshi:

Thank you for your letter dated September 9, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the order of your comments:

*The DOE anticipates an impact on its facilities as a result of the Kaloko Makai project. The DOE notes three school sites within the EIS: an elementary school in Phase I, a middle school in Phase II, and an elementary school in Phase III.*

*The Kaloko Makai project is within the present boundaries of the West Hawaii School Impact Fee District which was adopted by the Board of Education (BOE) on April 15, 2010. The project is expected to provide contributions based on the per-unit rate established for the district. The developer should enter into a written agreement with the DOE with the details of the proposed school sites.*

Response: The Petitioner has had numerous discussions and meetings with DOE staff regarding the Kaloko Makai development and its impacts on DOE facilities in West Hawaii. Kaloko Makai will continue to work with the DOE on equitable contributions based on the per-unit rate established for the district, as well as a written agreement on the details of the proposed school sites.

Please note that the Middle School is now planned in Phase I rather than in Phase II, based on prior discussions with the DOE. This change is noted in the forthcoming Second DEIS.



7469-1

Letter to Ms. Kathryn Matayoshi

July 25, 2013

Page 2 of 2



Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", with a long horizontal line extending to the right.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

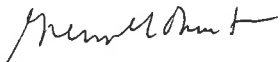
September 20, 2011

GLENN M. OKIMOTO  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
FORD N. FUCHIGAMI  
RANDY GRUNE  
JADINE URASAKI

IN REPLY REFER TO:  
DIR 1005  
STP 8.0545

TO: Orlando Dan Davidson, Executive Officer  
State Land Use Commission  
Department of Business, Economic Development & Tourism

FROM: Glenn M. Okimoto, Ph.D.   
Director of Transportation

SUBJECT: KALOKO MAKAI – DRAFT ENVIRONMENTAL IMPACT STATEMENT  
(DEIS)

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project. DOT previously commented during the environmental assessment/environmental impact statement preparation notice for the subject project in its letters STP 8.0302 dated December 8, 2010 and STP 8.0269 dated October 26, 2010 (see Appendix S of the DEIS).

DOT met with the petitioner on August 17, 2011, and was informed a supplemental DEIS is forthcoming that will include several changes to the development. Therefore, DOT is only providing a limited technical review until the supplemental DEIS is submitted for review.

DOT offers the following comments on the subject DEIS dated July 2011 and the traffic impact study (TIS) dated July 22, 2011, which supplement DOT's prior comments that are still valid and applicable.

1. The trip generation calculation is quite cumbersome to review. Table 3 of the TIS provides trip generation calculations of individual parcels for each Traffic Analysis Zone (TAZ) of each phase. It is requested that trip generation tables include a summary table that presents the project trip generation by the Institute of Transportation Engineers (ITE) land uses for each phase.
2. The trip distribution figures do not include any incoming trips to the project. It would be reasonable to assume that a development of this size would include a distribution for both incoming and outgoing trips.

Orlando Dan Davidson  
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3. The analysis for the existing traffic conditions states that the Queen Kaahumanu Highway will be widened to four lanes before year 2015, and is similarly restated in the future year conditions as well. However, it is unclear whether or not the widening was incorporated into the calculations.
4. Table 14 and 15 of the TIS which provides the 2025 and 2035 Level of Service (LOS) analysis respectively must be revised to include projected intersection LOS calculations for a "Without Project" scenario for comparative analysis purposes.
5. The figures in the TIS are of poor quality and difficult to read, and very hard to accurately tell where the lanes start and stop. Clarity, sharpness and color rendition are needed. Many of the proposed lane geometry for the intersections do not match the proposed "lane traffic" shown on Hina Lani Street. The transportation portion of the DEIS includes several of the same figures in color, which makes it clearer and easier to understand. The figures in the TIS should be revised accordingly.
6. The recommended improvements section within the TIS does not provide any description of the improvements needed, other than referring to Figures 27 to 29. There are more details of the recommended improvements in the DEIS that should be reflected in the TIS, because the TIS is the document which is suppose to provide all recommended mitigation to address project impacts in addition to an analysis supporting such recommendations.
7. The 2015 recommendation within the TIS for the grade-separated interchange at the intersection of Queen Kaahumanu Highway and Hina Lani Street should indicate that Hina Lani Street will be realigned as stated in the DEIS document for consistency between the two documents. In addition, Figure 28 in the TIS only shows a "Future Interchange" graphic symbol at the current Queen Kaahumanu Highway and Hina Lani Street intersection. The symbol needs to be clarified, as it may infer that the interchange will be located at the current intersection location, when in fact it is proposed to be constructed further to the north. Also, neither document, the DEIS or TIS, provides any information on the necessary improvements to the internal roadway network to allow for the construction and connection of the proposed grade-separated interchange.
8. The TIS shall be revised to respond to comments 1 through 7 above and all previous comments, and to include the supplemental changes, and shall be submitted with the Supplemental DEIS.

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9. Equipment and material storage and staging areas shall comply with the National Pollution Discharge and Elimination System (NPDES) permit requirements and Best Management Practices (BMP) measures shall be installed.
10. No stormwater runoff will be allowed onto State Highway facilities.
11. If the area under the future interchange at the Queen Kaahumanu Highway in the vicinity of Hina Lani Street is reclassified to Urban District, the petitioner should be required to dedicate the land necessary for the future interchange, including setback areas to DOT based on existing Conservation District prices.
12. Any agreement addressing the required traffic mitigation improvements, including fair share contribution for regional transportation improvements, on State highway facilities should be coordinated and prepared between the petitioner and the DOT Highways Division.
13. The petitioner's traffic consultant will need to continue discussions and coordination with DOT Highways Division to ensure that all traffic impacts are adequately addressed and properly mitigated.

DOT appreciates the opportunity to provide these limited technical comments and looks forward to receive the petitioner's supplemental DEIS for our further review and comments. If there are any questions, including the need to meet with DOT Highways Division staff, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning office at telephone number (808) 831-7976.

c: Peter Phillips, SCD-TSA Kaloko Makai, LLC  
Wilson Okamoto Corporation



1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7469-01  
July 25, 2013

Dr. Glenn T. Okimoto, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, HI 96813-5097

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Dr. Okimoto

Thank you for your letter dated September 20, 2011 (DIR 1005; STP 8.0545). The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the respective order of your comments:

*DOT met with the petitioner on August 17, 2011, and was informed a supplemental DEIS is forthcoming that will include several changes to the development. Therefore, DOT is only providing a limited technical review until the supplemental DEIS is submitted for review.*

Response: The Petitioner appreciates the opportunity to continue discussions with DOT and acknowledges DOT will be reviewing the forthcoming Second DEIS.

*DOT offers the following comments on the subject DEIS dated July 2011 and the traffic impact study (TIS) dated July 22, 2011, which supplement DOT's prior comments that are still valid and applicable.*

1. *The trip generation calculation is quite cumbersome to review. Table 3 of the TIS provides trip generation calculations of individual parcels for each Traffic Analysis Zone (TAZ) of each phase. It is requested that trip generation tables include a summary table that presents the project trip generation by the Institute of Transportation Engineers (ITE) land uses for each phase.*

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July 25, 2013

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Response: The TIS has been revised and will be included in the forthcoming Second DEIS. The trip generation rates will be summarized in a table by project land use categories.

- 2. The trip distribution figures do not include any incoming trips to the project. It would be reasonable to assume that a development of this size would include a distribution for both incoming and outgoing trips*

Response: The trip distribution shown on the figures is for entering and exiting trips. The figures in the Second DEIS will clarify this.

- 3. The analysis for the existing traffic conditions states that the Queen Kaahumanu Highway will be widened to four lanes before year 2015, and is similarly restated in the future year conditions as well. However, it is unclear whether or not the widening was incorporated into the calculations.*

Response: The widening of Queen Kaahumanu Highway and the construction of Ane Keohokalole Highway were taken into account as part of the analysis.

- 4. Table 14 and 15 of the TIS which provides the 2025 and 2035 Level of Service (LOS) analysis respectively must be revised to include projected intersection LOS calculations for a "Without Project" scenario for comparative analysis purposes.*

Response: Tables showing "With" and "Without Project" for each phase of the project will be included in the revised TIS, that will be appended to the forthcoming Second DEIS.

- 5. The figures in the TIS are of poor quality and difficult to read, and very hard to accurately tell where the lanes start and stop. Clarity, sharpness and color rendition are needed. Many of the proposed lane geometry for the intersections do not match the proposed "lane traffic" shown on Hina Lani Street. The transportation portion of the DEIS includes several of the same figures in color, which makes it clearer and easier to understand. The figures in the TIS should be revised accordingly.*

Response: All of the subconsultant studies in the DEIS have been half-sized and are reproduced in black and white to reduce the volume and cost of the printed document. A PDF of the revised TIS report, in color, will be provided to you. PDF version for OEQC publication will also be in color.

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July 25, 2013

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- 6. The recommended improvements section within the TIS does not provide any description of the improvements needed, other than referring to Figures 27 to 29. There are more details of the recommended improvements in the DEIS that should be reflected in the TIS, because the TIS is the document which is suppose to provide all recommended mitigation to address project impacts in addition to an analysis supporting such recommendations.*

Response: The TIS has been revised to describe the improvements needed and will be appended to the forthcoming Second DEIS.

- 7. The 2015 recommendation within the TIS for the grade-separated interchange at the intersection of Queen Kaahumanu Highway and Hina Lani Street should indicate that Hina Lani Street will be realigned as stated in the DEIS document for consistency between the two documents. In addition, Figure 28 in the TIS only shows a "Future Interchange" graphic symbol at the current Queen Kaahumanu Highway and Hina Lani Street intersection. The symbol needs to be clarified, as it may infer that the interchange will be located at the current intersection location, when in fact it is proposed to be constructed further to the north. Also, neither document, the DEIS or TIS, provides any information on the necessary improvements to the internal roadway network to allow for the construction and connection of the proposed grade-separated interchange.*

Response: The TIS has been revised to depict the grade-separated interchange north of the existing intersection of Queen Kaahumanu Highway and Hina Lani Street. The internal roadways have been conceptually laid out to accommodate the anticipated realignment of Hina Lani Street.

- 8. The TIS shall be revised to respond to comments 1 through 7 above and all previous comments, and to include the supplemental changes, and shall be submitted with the Supplemental DEIS.*

Response: Comments 1 through 7, if appropriate, have been incorporated in the revised TIS, which will be appended to the forthcoming Second DEIS.

- 9. Equipment and material storage and staging areas shall comply with the National Pollution Discharge and Elimination System (NPDES) permit requirements and Best Management Practices (BMP) measures shall be installed.*

Response: The Petitioner acknowledges that all equipment and material storage and staging areas shall comply with the National Pollution Discharge and Elimination System (NPDES) permit requirements and that Best Management Practices (BMP) measures shall be installed.



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10. *No stormwater runoff will be allowed onto State Highway facilities.*

Response: The Petitioner acknowledges that no stormwater runoff will be allowed onto State Highway facilities. The project will comply with the National Pollution Discharge and Elimination System (NPDES) permit requirements and as stated in the forthcoming Second DEIS, Best Management Practices (BMP) measures will be installed and implemented.

11. *If the area under the future interchange at the Queen Kaahumanu Highway in the vicinity of Hina Lani Street is reclassified to Urban District, the petitioner should be required to dedicate the land necessary for the future interchange, including setback areas to DOT based on existing Conservation District prices.*

Response: As stated in the forthcoming Second DEIS, if and when DOT requires the land for the interchange, arrangements can be made for the land at that time.

Please note that a discussion of the interchange will be included in the forthcoming Second DEIS. It states that the Kaloko Makai plan designates 75 acres of light industrial or business park land uses in the Special District located at its makai end fronting Queen Kaahumanu Highway. Of this total, approximately 25 acres have been identified by the State Department of Transportation (DOT) for a future highway interchange at the entrance to the Project. Thus, industrial/business activity on those lands will be interim uses and only 50 gross acres (approximately 40 net usable acres after allowing for circulation and infrastructure) are considered long-term light industrial land uses.

12. *Any agreement addressing the required traffic mitigation improvements, including fair share contribution for regional transportation improvements, on State highway facilities should be coordinated and prepared between the petitioner and the DOT Highways Division.*

Response: The Petitioner acknowledges that any agreement addressing the required traffic mitigation improvements, including fair share contribution for regional transportation improvements, on State highway facilities should be coordinated and prepared between the petitioner and the DOT Highways Division.



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13. *The petitioner's traffic consultant will need to continue discussions and coordination with DOT Highways Division to ensure that all traffic impacts are adequately addressed and properly mitigated.*

Response: The Petitioner will continue discussions and coordination with DOT Highways Division to ensure that all traffic impacts are adequately addressed and properly mitigated.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the environmental review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

EM

HRD11/3552F

COPY

October 5, 2011

Orlando Dan Davidson, Executive Officer  
State Land Use Commission  
c/o Department of Business, Economic Development & Tourism  
P.O. Box 2359  
Honolulu, Hawaii'i 96804

**RE: Draft Environmental Impact Statement  
Kaloko Makai Development Project  
Kaloko and Kohanaiki, North Kona, Hawaii'i Island**

Aloha e Executive Officer Davidson,

The Office of Hawaiian Affairs (OHA) is in receipt of an August 3, 2011 request for comments on a draft environmental impact statement (DEIS) prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS) to support the Kaloko Makai Project (the project) proposed by SCD-TSA Kaloko Makai, LLC (the applicant) in North Kona on the Island Of Hawaii'i.

We appreciate that in response to several requests,<sup>1</sup> the applicant graciously extended the DEIS comment period an additional fifteen (15) days. This allowed for additional review of the extensive technical documents which support the potential impacts and proposed mitigation measures in the DEIS. We offer the following comments:

#### Background

The final environmental impact statement (FEIS) for this project will be a primary support document for a petition to the State Land Use Commission (LUC) requesting a State Land Use District Boundary Amendment (DBA) for the reclassification of 224.430 acres from the Conservation District to the Urban District and 724.436 acres from the Agricultural District to the Urban District. The FEIS may also serve to support a broad range of additional State of Hawaii'i (State) and/or County of Hawaii'i (County) permits or approvals which are required to facilitate the project. The LUC is the accepting authority for the final environmental impact statement for this project.

<sup>1</sup> By letter dated August 26, 2011 OHA requested a thirty (30) day extension of the DEIS comment period. By letter dated August 5, 2011 the National Park Service requested a sixty (60) day extension of the DEIS comment period.

The total project area is 1,139 acres that are currently vacant and undeveloped. This total is inclusive of the 948.866 acre LUC petition area. An additional eighteen acres of land may be utilized for the development of up to four (4) off-site wells, and construction of a reservoir and transmission system to provide the potable water the project requires.

At full build out, the project is envisioned to consist of 5,000 single and multi-family units, up to 1.1 million square feet of commercial-lease area, seventy-five (75) acres of light industrial uses, a 120-room lodge and business center, parks and open spaces (including a 150 acre forest preserve), archaeological and cultural preserves, three school sites and associated infrastructure. The applicant will provide forty (40) acres of land for the possible development of a regional hospital and an additional ten (10) acres for a new Kona Judiciary Complex.

#### County of Hawaii'i General Plan and Kona Community Development Plan

OHA recognizes that the project is generally consistent with the broad land use policies of the County General Plan (GP) and the more specific elements and guiding principles of the Kona Community Development Plan (CDP)<sup>2</sup> which translates the GP into implementation actions relative to land use. The GP designates the project area for "urban expansion" and "conservation". The project area is within the "Urban Area" described in the CDP which directs future growth along proposed transit routes and the designation of ten "Neighborhood Village Transit Orientated Developments" (TOD).<sup>3</sup> This project is one of these designated TOD.

#### State Land Use Commission Decision Making Criteria and Standards

Chapter 205, HRS establishes the general responsibilities of the LUC in determining the appropriate uses of land in the State and the specific decision making criteria for DBA proceedings. The general standards for determining the boundaries of the Urban District established by Chapter §15-15-18, Hawaii Administrative Rules (HAR) will be applicable to the forthcoming DBA. We are confident the LUC will be mindful of your public trust responsibilities as you consider acceptance of the environmental impact statement and subsequently, the DBA petition. An obvious interest of OHA in this matter is to ensure the LUC and all other government agencies fulfill your additional constitutional and statutory responsibilities to the Hawaiian people and our families which have been confirmed by judicial opinion.

As we have already mentioned, OHA recognizes that the GP and CDP designate the project area for urban development and the regional development of the "Urban Area" described in the CDP is already well underway. With this in mind, OHA has no fundamental objections to seeing the petition requesting the DBA and reclassification moving forward through the applicable proceedings, but we do advocate that the LUC afford full consideration to applicable concerns that could be expressed during these proceedings. The issue that is clearly looming is whether our resources can not only withstand the direct affects of this specific project, but also the cumulative affects of full development of the Urban Area described in the Kona CDP.

<sup>2</sup> The Kona CDP was adopted as Ordinance 08 131 by the Council of the County of Hawaii'i on September 25, 2008, making it the first community development plan enacted on Hawaii'i Island.

<sup>3</sup> Kona CDP, pages 4-39 to 4-44 and Figure 4-7.

OHA views the core intent of the Chapter 343, HRS process as preparing a final document which will guide the informed decision making of government agencies who consider the approvals that facilitate the development of a given action. In this specific case, the LUC as the Chapter 343, HRS "accepting authority" will be the first of many agencies to consider an approval that is necessary to facilitate this project. The applicant and their consultants have the inherent responsibility to acknowledge and identify what the true direct, indirect, secondary and cumulative affects of this project on our environment and resources will be, so that efforts to develop appropriate mitigation can begin as early as possible.

We must also be mindful that full build-out of the project will occur in three phases and will not be completed until a generation from now, in the year 2040.<sup>4</sup> In April 2010, the Hawai'i Supreme Court issued a ruling that overturned two lower court decisions by requiring that the impacts and mitigation measures of an environmental impact statement accepted for a project in 1985 be updated by a supplemental environmental impact statement to ensure that as the project moved forward a generation later, the concerns of the surrounding community were adequately addressed.<sup>5</sup>

#### Water

As an opening comment on water, OHA offers the practical and profound wisdom of the traditional saying *ola i ka wai a ka 'ōpua*<sup>6</sup> - there is life in the water from the 'ōpua clouds of Kona. After our need for clean air to breathe, clean drinking water is a resource essential to the survival of life. The struggle over access to and the use of water, and the debate over how our actions result in direct, secondary and cumulative affects on this precious resource which extend across our State have already arrived in Kona. We are fast approaching a point where collaborative efforts between all stakeholders to develop a framework to comprehensively manage this resource will become necessary to ensure it is available for current and future generations.<sup>7</sup>

The project overlies the Keauhou Groundwater Aquifer System Area (ASYA), within the Hualalai Aquifer Sector Area (ASEA). The County of Hawai'i has already acknowledged that *"the development of the County General Plan land use maximum density within the Hualalai ASEA cannot be sustained by conventional water resources, even if agricultural demands are not included"*.<sup>8</sup> The discovery of "high-level groundwater" circa 1992 provides strong indications that the Keauhou ASYA sustainable yield may be substantially greater than the 1990 State Commission on Water Resource Management estimate.<sup>9</sup>

<sup>4</sup> DEIS, page 2-59.

<sup>5</sup> See *Unite Here! Local 5 v. City and County of Honolulu*, 123 Haw. 150, 231 P.3d 423 (2010).

<sup>6</sup> See Pukui, Mary Kawena. *Ōlelo No'eau Hawaii Proverbs & Poetical Sayings*. Bishop Museum Press. 1983. #2482. (Pukui).

<sup>7</sup> Pursuant to Chapter §174C-41, Hawaii Revised Statutes, a principle tool available to the State of Hawai'i Commission on Water Resource Management to implement a management framework to control groundwater use and withdrawals is to designate a Water Management Area (WMA). There are currently no designated WMA on the Island of Hawai'i.

<sup>8</sup> See Fukunaga & Associates, Inc. *Hawai'i County Water Use and Development Plan*. August 2010 Final Report (WUDP 2010). Page 809-43.

<sup>9</sup> See [http://hawaii.gov/dlnr/cwrm/mapsillustrations/gwhu\\_hawaii.pdf](http://hawaii.gov/dlnr/cwrm/mapsillustrations/gwhu_hawaii.pdf). The Commission on Water Resource Management sustainable yield estimate for the Keauhou ASYA is 38 mgd.

The factors which affect the availability, discharge and overall quality of groundwater in Kona are complex and extend beyond the basic application of hydrology. Our understanding of the nature and extent of the geological feature which confines high-level groundwater and its relationship to the traditional "basal lens" which defines the basic hydrologic cycle of groundwater is largely conjecture at that this time<sup>10</sup>. Since its initial discovery in North Kona circa 1990, high-level groundwater has been rapidly developed and advanced studies to accompany additional development of this resource have been recommended.<sup>11</sup>

As specific elements of the Kona CDP are implemented and the development of the designated Urban Area of North Kona continues, the direct, secondary and cumulative affects on the quality of groundwater must be considered. The management framework which will guide the use and withdrawal of groundwater must also require that best management practices (BMP) be implemented, employed and monitored to ensure the quality of this resource is protected.

OHA has historically advocated for the protection of Native Hawaiian water rights, because in addition to sustaining life, this resource is essential to the perpetuation of our traditional and customary practices. On September 14, 2011, the OHA-Board of Trustees extended the specific focus of our advocacy on water to North Kona and the Keauhou ASYA by unanimously supporting a resolution that:

*strongly encourages all stakeholders interested in the sustainability of the Keauhou Aquifer to actively work to protect the traditional and customary practices of Native Hawaiians in the area that are dependent on abundant clean groundwater*<sup>12</sup>

With this in mind, we respectfully offer the following comments on the potential this project has to impact groundwater resources and advocate that the LUC consider not only the direct impacts of this project, but also cumulative and secondary impacts within the broader context of full build-out of the land use elements described in the Kona CDP. To a certain extent, OHA views these comments on groundwater as being applicable to any forthcoming development action within the Urban Area designated by the Kona CDP.

#### Potable Water

The project's full build-out potable water demand is estimated to be between 3.2 mgd (average demand) and 4.8 mgd (maximum demand).<sup>13</sup> The applicant is considering six (6) alternatives to provide for this potable water demand:

1. Development of three (3) to four (4) mid-level (1,000 foot elevation) off-site wells (preferred alternative);
2. Utilization of four (4) to five (5) high-elevation (1,700 to 2,000 feet) off-site wells which would draw high-level groundwater;

<sup>10</sup> See Belt Collins Hawai'i, Ltd. *Keopu Well, Reservoir and Water Transmission Lines Final Environmental Assessment*. Prepared for the Hawai'i Housing Finance and Development Corporation. March 2010. Page 21

<sup>11</sup> WUDP 2010, pages 809-43 and -44.

<sup>12</sup> The full resolution is enclosed with this letter and was unanimously supported after consideration and discussion at a duly noticed meeting of the OHA-Board of Trustees on September 14, 2011.

<sup>13</sup> DEIS page 2-48 and Table 4-24

3. Development of three (3) to four (4) on-site wells (700 foot elevation);
4. Obtaining water commitments conferred into the Department of Water Supply system through existing water agreements;
5. Connection to the Department of Water Supply potable water system; and
6. A combination of all alternatives.<sup>14</sup>

In brief, all of these alternatives involve connecting to the County of Hawai'i-Department of Water Supply (DWS) North Kona Service Area System (SAS). The basic elements of these alternatives include: only the applicant completing necessary improvements<sup>15</sup> to the SAS (so that it has the capacity to support the project); the applicant working collaboratively or negotiating with other developers/landowners to complete improvements to the SAS; or the applicant negotiating to obtain existing water entitlements from the current SAS. The applicant believes that "none of the alternatives draw water from basal groundwater underlying the project site".<sup>16</sup>

Alternative 1 (the preferred alternative) seems to be the most viable in terms of the basic issue of accessing a groundwater source. Success in accessing this groundwater source will then lead into an extensive discussion on the impacts drawing the significant amount of water this project requires from the Keauhou ASYA would cause. The applicant attempts to avoid immediate discussion on this issue by suggesting that the wells developed under Alternative 1 will draw potable water from a "groundwater phenomenon...freshwater hundreds of feet below the brackish basal lens".<sup>17</sup>

It is our understanding that there is only limited information and data<sup>18</sup> relative to the availability, extent, characteristics and quality of this potential groundwater "phenomenon" available at this time and whether it is "disconnected" from the hydrologic cycle of the Keauhou ASYA as the applicant seems to suggest is unsubstantiated.

While the applicant "expects" that water drawn from the wells developed under the preferred alternative will meet DOH quality standards, it appears they have developed a contingency plan in the event it does not- desalination through reverse osmosis (RO).<sup>19</sup> What is alarming to OHA is that the construction of a desalination facility (facility) is not proposed until Phase 3 of the project<sup>20</sup> which is anticipated to begin in 2032 and completed by 2040.<sup>21</sup> If this is the case, should the preferred alternative be employed drawing groundwater that requires desalination, how will this be done to provide for potable water demands if construction of the facility is proposed in the last phase of the project?

<sup>14</sup> DEIS, pages 4-108 to -123.

<sup>15</sup> "Improvements" are generally defined as a source well, storage and/or supply reservoirs and transmission lines which constitute a system that is then dedicated to the DWS pursuant to an executed agreement.

<sup>16</sup> DEIS, page 3-26.

<sup>17</sup> DEIS, pages 3-15 and 4-109.

<sup>18</sup> DEIS, pages 3-15 to -16 and Figure 3-6 references an interpretive analysis of the drilling of the Ke'opu Monitor Well (State Well No. 3858-01) by the State of Hawai'i Commission on Water Resource Management in 2001 to monitor the basal lens as the evidence of this groundwater source.

<sup>19</sup> DEIS, pages 2-48 to -49 and 4-110.

<sup>20</sup> DEIS, Figure 2-14.

<sup>21</sup> DEIS, page 2-59.

If the requirement for desalination does become a reality, the instant DEIS is clearly deficient both in terms of supporting any State or County approvals necessary for the actual construction of the facility but also in identifying and mitigating the short and long term impacts the RO process will have on groundwater resources.

A product of RO is saline concentrate which will be disposed of by underground injection wells.<sup>22</sup> The applicant concludes that since this saline concentrate will be injected at depths of equal density, the RO process has no impacts on the basal lens and the saline concentrate is simply "discharged into the ocean offshore at a substantial depth and distance from the shoreline".<sup>23</sup> This is another assertion which is unsubstantiated.

The Department of Land and Natural Resources-Division of Aquatic Resources (DAR) has identified the near shore marine waters and coral reef ecosystems along the coastline approximately 1 mile for the project boundary as an area with substantial submarine groundwater discharge.<sup>24</sup> DAR views this project as a coastal development with "substantial potential to impact marine water quality and coastal ecosystems"<sup>25</sup> by increasing nutrient and contaminant concentrations in groundwater discharge. It is unclear whether DAR's analysis included consideration of the applicant's proposal to dispose of saline concentrate through underground injection wells.

A fundamental principle which must be acknowledged and addressed in the event the preferred alternative is employed is that there could be impacts to an already anomalous basal lens. The extent of these impacts is unknown at this time. In the event desalination is required, overall impacts to the quality of the Keauhou ASYA could be magnified through an additional increase in discharged groundwater salinity. It is possible that these magnified impacts will adversely affect the near shore marine resources necessary to perpetuate the traditional and customary practices of the Native Hawaiian people. While accessing groundwater is viable under this alternative, the uncertainties relative to the elements of this alternative must be addressed before it becomes a reality.<sup>26</sup>

Alternative 2 would utilize off-site wells drawing high-level groundwater. Only one of the well sites required for this alternative is identified at this time. Pursuant to an agreement with the DWS, TSG Kula Nei, L.P. and Springbrook Investments, L.P (TSG/SI) will be completing SAS improvements (anticipated to have a maximum daily production capacity of 1.0 mgd) in exchange for entitlements needed to support the 120,000 gpd potable water needs of the "Kula

<sup>22</sup> DEIS, page 4-110.

<sup>23</sup> Ibid.

<sup>24</sup> See DEIS, Appendix S. October 22, 2010 letter from Robert T. Nishimoto, DAR Program Manager to Earl Matsukawa, Wilson Okamoto Corporation. (DAR letter)

<sup>25</sup> Ibid.

<sup>26</sup> The WUDP 2010, page 809-45 offers a general recognition that desalination is a viable alternative to providing potable water but does not discuss how to address the impacts of full-scale development of this alternative. OHA is aware that the Shores at Kohalaiki Project and the proposed O'oma Beachside Village Project, situated to the immediate northwest of this project are may already be utilizing and are proposing a large-scale desalination facility respectively. Thus, the cumulative affects of multiple large-scale desalination facilities must be considered.



Nei Project<sup>27</sup>. The actual timeframe for TSG/SI to complete these SAS improvements is unclear.

Based on the average and maximum daily potable water demands this project will require, it is clear that even an agreement with the DWS which would confer all of the remaining water commitments from the TSG/SI system to the applicant, a significant amount of potable water will still be required.<sup>28</sup> The locations of the additional well sites and systems, and the timeframe for developing them are unknown. OHA views the viability of this alternative as an uncertainty at this time.<sup>29</sup>

Alternative 3 is a variation of Alternative 1 and proposes the same elements to access a groundwater source, including desalinization. The wells developed under this alternative would be situated on-site. The comments and concerns we have already expressed relative to Alternative 1 are applicable to this alternative. Other than a general description of the elevation at which the wells would be sited, the DEIS does not depict their exact location or distribution in project plans. This is an issue specific to this alternative which should be clarified.

Alternative 4 would involve the applicant negotiating for the "transfer" of existing water entitlements from the SAS. The only specific negotiations described in the DEIS are with Lanihau Properties, LLC who will convert Palani Well No.1 to a production well, construct a 1 mg reservoir and install a 12-inch water transmission line to connect to an existing 16-inch DWS water main.<sup>30</sup> This production well will draw high-level groundwater at maximum pumping capacity of 1.6 mgd.<sup>31</sup>

Completion of this specific system is anticipated sometime in 2011. Pursuant to a well development agreement (agreement) executed between the Board of Water Supply, Lanihau Properties, LLC, West Hawai'i Business Park, LLC and Palani Ranch, Inc this system would be dedicated to the DWS and support the SAS.<sup>32</sup> Lanihau Properties, LLC is entitled to eight-five (85) percent of the maximum pumping capacity of the well, which will be allocated for the development of their properties.

The applicant seeks to negotiate with the DWS and Lanihau Properties, LLC for the "transfer" of their water entitlements to support this project. The success of these negotiations however, seem to be dependent on Lanihau Properties, LLC scaling down or abandoning the planned developments of their lands. Based on the information available to us at this time, OHA sees the viability of this alternative as another uncertainty.

<sup>27</sup> See Belt Collins Hawai'i, Ltd. *Kula Nei Project Final Environmental Impact Statement Volumes 1-3*. Prepared for the Shopoff Group. September 2007. Page 2-13.

<sup>28</sup> DEIS, Table 4-24 estimates the average daily demand of Phase 1 of the project alone at 1.361 mgd.

<sup>29</sup> DEIS, page 2-59 anticipates Phase 1 of the project beginning in 2012.

<sup>30</sup> See County of Hawai'i-Department of Water Supply. *Palani Well No. 1 (State Well No. 4158-03) Final Environmental Assessment*. October 2009. Pages 1-1 to -8.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid, Appendix 4.

Alternative 5 would simply connect to the SAS to obtain the potable water the project requires. The DWS has already informed the applicant that the SAS cannot support this project.<sup>33</sup> Unless the DWS has changed their position, OHA does not view Alternative 5 as a realistic option.

Alternative 6 would employ a combination of all five alternatives under consideration. The applicant believes that this alternative will result in "*no additional environmental or ecological impacts*".<sup>34</sup> OHA agrees that if a combination of all alternatives were employed there would be no additional impacts, but the actual extent of the direct, cumulative and secondary impacts of each alternative currently under consideration have not been identified at this time.

#### Wastewater

The Kona CDP mandates the expansion of the Kealahou Wastewater Treatment Plant (KWTP) and the development of a new wastewater treatment plant that to the extent possible, will utilize a "natural treatment system" (new WTP) to accommodate projected wastewater volume from the Urban Area.<sup>35</sup> The applicant acknowledges that the timeframe for completing the KWTP expansion and the development of a new WTP are unknown.<sup>36</sup> Thus, the discussion that the applicant will collaborate with the County on the KWTP expansion or the development of a new WTP is moot when considering the project's timeframes. The County-Department of Environmental Management has already informed the applicant that the current capacity of the KWTP cannot accommodate this project.<sup>37</sup>

OHA views the development of an on-site private wastewater treatment plant (project WTP) to accommodate the average wastewater flow of 2.2 mgd and design peak wastewater flow of approximately 12.2 mgd that this project will generate<sup>38</sup> as a necessity. We do seek an explanation on what accounts for the difference between average and design peak wastewater flow, as the 10 mgd difference is a significant amount of wastewater.<sup>39</sup>

We applaud the applicant for proposing to utilize technologies at the project WTP that will provide recycled (R-1) water for general irrigation within the project in accordance with DOH requirements.<sup>40</sup> We are immediately alarmed however, at the applicants acknowledgment that in the first phase of the project "*there will likely not be enough R-1 water to irrigate the parks and schools that are slated for construction*".<sup>41</sup> We request clarification on how this issue will be addressed and question whether it means the project's potable water demands are actually

<sup>33</sup> DEIS, Appendix S. October 25, 2010 letter from Milton Pavao, DWS Manager to the Wilson Okamoto Corporation.

<sup>34</sup> DEIS, page 4-123.

<sup>35</sup> See Kona CDP, page 4-111 Policy PUB-4.5, 4.5a and 4.5b.

<sup>36</sup> DEIS, pages 2-50 and 4-124.

<sup>37</sup> DEIS, page 4-126.

<sup>38</sup> DEIS, page 4-124.

<sup>39</sup> See DEIS, Appendix R. Wilson Okamoto Corporation. *Draft Preliminary Engineering Report Kaloko Makai*. July 2011. Appendices, which provide the "design peak flow" 12.230 mgd estimate, but do not specify how this estimate is generated.

<sup>40</sup> See Chapter 11-62, Hawaii Administrative Rules.

<sup>41</sup> DEIS, page 4-132.

higher than current estimates.<sup>42</sup> Furthermore, the applicant is aware that the DOH restricts the use of R-1 water above the underground injection control (UIC) line and thus, R-1 water will only be used for irrigation in the portion of the project below the UIC line.<sup>43</sup> OHA requests clarification whether this is a second issue which may result in an increase in potable water demand estimates.

It is unclear whether the project WTP will be equipped with specific technologies to accommodate waste from the light industrial and commercial elements of the project and in the event the regional hospital facility is built, medical waste.<sup>44</sup> This is an issue that should be addressed.

At full build-out of the project, R-1 water availability may exceed irrigation demands during periods of extended wet weather and the project WTP will employ percolation basins to dispose of excess R-1 water. The applicant has concluded that this use of percolation basins will not adversely affect overall groundwater quality, or more specifically the resources of Kaloko-Honokohau National Historical Park.<sup>45</sup> We question this conclusion, as the geology (extremely porous 'a' a lava) of Kona which accommodates the disposal of significant volumes of water in relatively small percolation basins also implies that there is very little natural filtration of contaminants and nutrients before this water quickly reaches the basal lens and enters near shore marine waters.

The U.S. Environmental Protection Agency (EPA) and U.S. Department of Commerce-National Oceanic and Atmospheric Administration (NOAA) have jointly published guidance on the types of management measures designers of onsite disposal systems (OSDS), such as a WTP should consider.<sup>46</sup> One of the core objectives of this guidance is to ensure OSDS "are not installed in areas where soil absorption systems will not provide adequate treatment of effluents containing solids, phosphorus, pathogens, nitrogen, and nonconventional pollutants prior to entry into surface waters and ground water (e.g., highly permeable soils, areas with shallow water tables or confining layers, or poorly drained soils)".<sup>47</sup> This guidance also specifically recommends consideration of factors such as soil type, soil depth, rate of sea level rise, depth to water table and topography to ensure the discharge of pollutants into groundwater is reduced to the extent practicable.

DAR has already informed the applicant that they view this project as a coastal development with "substantial potential to impact marine water quality and coastal ecosystems".<sup>48</sup> The introduction of nutrients and contaminants into groundwater and near shore

<sup>42</sup> DEIS, page 4-129 proposes that "supplemental potable water will be added to the R-1 storage tank as needed to ensure that the irrigation demands of users can be met".

<sup>43</sup> DEIS, Figure 4-14.

<sup>44</sup> DEIS, page 2-39 describes that even without the regional hospital, the project WTP could receive medical waste from the physicians' clinic and urgent care facility proposed in Phase 1.

<sup>45</sup> DEIS, page 4-130.

<sup>46</sup> See *Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance*. Published jointly by the EPA and NOAA under the authority of Section 6217 of the Coastal Zone Act Reauthorization Amendments. Chapter 4, Section (V). (EPA and NOAA guidance).

<sup>47</sup> Ibid.

<sup>48</sup> DAR letter.

marine waters either through excess effluent disposal or percolation of R-1 water irrigation within the project must be thoroughly evaluated so that appropriate mitigation can be developed.

OHA advocates that in addition to designing project WTP elements pursuant to State DOH standards, EPA and NOAA guidance must be considered. Furthermore, the applicant should be required to proactively develop a groundwater monitoring plan in coordination with all stakeholders as the data obtained will directly contribute to short and long term efforts to protect overall groundwater quality in Kona.

### Drainage

Again, the same geology of Kona which allows for rainfall, and storm and irrigation waters to quickly percolate also implies that there is very little natural filtration of contaminants and nutrients before this water quickly reaches the basal lens and enters near shore marine waters.

A system of catch basins, drain lines and drywells will dispose of storm and irrigation waters which do not percolate naturally in natural or landscaped areas.<sup>49</sup> The project area will be particularly vulnerable to storm waters during initial mass grading, stockpiling and excavation prior to the development of drainage infrastructure. We will rely on assurances that the applicant will adhere to all DOH and County requirements during initial project development. The construction and post-construction best management practices which will be employed<sup>50</sup> are critical in contributing to the protection of overall groundwater quality and near shore marine resources.

The EPA and NOAA have also jointly published guidance on the three basic mechanisms employed to treat urban runoff- infiltration, filtration and detention. This guidance notes that standard infiltration systems may not be appropriate where groundwater requires protection and that certain restrictions may also apply to using infiltration systems located above "sole source drinking water aquifers".<sup>51</sup>

A pollution prevention plan (PPP) will be developed and we offer our general support that mitigation of "contaminated surface water can be achieved through the development of a PPP designed to address all pollutants associated with the development...to prevent any release into the environment, including the groundwater."<sup>52</sup> This is an important recognition and we appreciate the applicant's commitment that "no grading activity will take place" until the PPP has been prepared.<sup>53</sup> OHA advocates that this PPP be developed pursuant to DOH standards and in consultation with all stakeholders. Consideration should also be afforded to EPA and NOAA guidance that results in the development of infiltration, filtration and detention mechanisms that employ the best available science and technology to provide protection for groundwater and near shore marine resources.

<sup>49</sup> DEIS, page 4-133.

<sup>50</sup> DEIS, page 3-44.

<sup>51</sup> See EPA and NOAA guidance. Chapter 4, Section II (A and B).

<sup>52</sup> DEIS, pages 3-26 to -27.

<sup>53</sup> Ibid.

### Water Conservation

The applicant's consideration of incorporating State-Office of Environmental Quality Control and U.S. Green Building Council- Leadership in Energy and Environmental Design guidelines relative to water conservation into project design concepts and utilizing native plant species adapted to the project area in project landscaping design is appropriate and appreciated.<sup>54</sup>

Given the issues relative to the water demands of this project facing the applicant, their commitment to strategies "to reduce consumption, conserve resources and minimize water use" is also appropriate.<sup>55</sup> It is surprising that the applicant is only "considering" specific measures to facilitate end-user water conservation such as: water restrictions during extended dry weather periods, education and efficient landscaping practices.<sup>56</sup> OHA sees these types of specific measures as a necessity and we advocate the applicant commit to them.

### Conclusion on Water

The applicant has clearly exerted considerable effort to avoid drawing groundwater from the traditional basal lens of the Keauhou ASYA. To a certain extent, these efforts appear to be a laudable attempt to recognize the need for developing alternatives to provide potable water and reduce the pressure on our precious and limited groundwater resources. More specifically however, these efforts seem to be directed at the National Park Service (NPS) who has consistently expressed concerns relative to overall groundwater quality and discharge, and how the fishponds wetlands, anchialine ponds and approximately 627 acres of near shore marine waters within the Kaloko-Honokohau National Historical Park<sup>57</sup> are or will be affected by this project and the overall development of Kona CDP elements.<sup>58</sup>

Unfortunately, OHA views the end result of these efforts as ambiguity and uncertainty within the DEIS that contradicts the core intent of the Chapter 343, HRS process- informed decision making. We do not see how any reviewer of the DEIS, including the LUC or any other government agency can comprehensively assess the true impacts of the alternatives under consideration to develop potable water. OHA must establish the position that the applicant's ability to provide for the potable water needs of this project and adequately mitigate the impacts of the project on overall groundwater quality are both clearly unresolved issues at this time.<sup>59</sup>

OHA offers a second traditional saying as our closing comment on water for your consideration: *Kekaha wai'ole o na Kona*- waterless Kekaha of the Kona District.<sup>60</sup> While we will not offer any attempt to understand any hidden meanings of this saying, we can only hope

<sup>54</sup> DEIS, page 2-60.

<sup>55</sup> DEIS, page 4-106.

<sup>56</sup> Ibid.

<sup>57</sup> Kaloko-Honokohau National Historical Park is encompassed by Honokohau Settlement National Historical Landmark

<sup>58</sup> DEIS, pages 3-60 to -75.

<sup>59</sup> DEIS, page 4-108 provides the applicant's own acknowledgment that it must "undertake additional research to assess the potential impacts and appropriate mitigation measures of the selected systems" developed under the selected alternative.

<sup>60</sup> Pukui, #1716.

that its literal translation does not foreshadow the future of Kona.<sup>61</sup> It is the inherent responsibility of all interested parties and stakeholders to collaboratively work to see that it is not.

The immediate issue relative to water which is facing the LUC and all other government agencies is how you will fulfill your responsibilities to ensure the availability, and protect the quality of a public trust resource which is also essential to the perpetuation of a broad range of traditional and customary practices of the Native Hawaiian people.

### Native Dryland Forest Preserve

Approximately 265-acres, constituting one of the largest remaining native dryland forest (dryland forest) areas in the Hawaiian Islands have been identified in Kaloko Ahupua'a. Of this total, approximately 150-acres are situated within the project area and the applicant is proposing to establish the Kaloko Makai Dryland Forest Preserve (preserve). OHA offers our support for the general concept of establishing the preserve and we applaud the applicant for this proposal.

A variety of "common" native tree species (trees) are situated within the project area, outside of the boundaries of the preserve. These trees may be impacted during land clearing to facilitate the project and the applicant proposes to coordinate as appropriate to harvest them prior to the initiation of project activities so their wood can be used to perpetuate certain traditional and customary practices.<sup>62</sup> OHA also applauds the applicant for this proposal.

### Habitat Conservation Plan

The U.S. Fish and Wildlife Service (FWS) has identified four (4) native plant species listed as "endangered" (listed species) as defined by the Endangered Species Act (ESA)<sup>63</sup> and a single native plant species identified as a "candidate" for listing as endangered<sup>64</sup> (candidate) within the project area. Any species listed under the ESA is automatically afforded protections pursuant to State law.<sup>65</sup>

Two of the listed species and the candidate occur outside of the boundaries of the preserve and preparation of a habitat conservation plan (HCP) is required to support the issuance of a license by the State Board of Land and Natural Resources to allow for the "take"<sup>66</sup> of the listed species resulting from project development. The applicant has prepared a draft HCP.<sup>67</sup> OHA has no objections to the immediate and short term management actions relative to the listed and candidate species which area described in the HCP.

<sup>61</sup> Kekaha is a geographic region of Kona inclusive of the project area which is generally described as extending along the coast from Honokohau north to Kapalaa.

<sup>62</sup> DEIS, page 4-56.

<sup>63</sup> See 16 U.S.C 1522(6). The four ESA listed species are: 'aiea, hala pepe, ma'oleloa and uhiuhi.

<sup>64</sup> See 50 CFR §424.02(b). The ESA candidate is ko'oko'olau.

<sup>65</sup> See Chapter §195D-4, Hawaii Revised Statutes.

<sup>66</sup> Ibid at (g).

<sup>67</sup> See DEIS, Appendix F. Hoookuleana, LLC. *Kaloko Makai Dryland Forest Preserve Draft Habitat Conservation Plan*. July 2011. (HCP)

### Nexus between the HCP and the Ane Keohokalole Mid-Level Highway Project

The HCP repeatedly mentions the Ane Keohokalole Mid-Level Highway Project (mid-level road)<sup>68</sup> and specifically references on-going ESA-Section 7 consultation between the FWS, the U.S. Department of Transportation-Federal Highways Administration (FHWA) and the County due to the affects of the mid-level road on listed or candidate species. In the final environment assessment (FEA) for the mid-level road the FHWA concluded that construction will “not likely adversely affect any listed species known from the Island of Hawai’i”.<sup>69</sup> The FWS concurred with the FHWA’s conclusion.<sup>70</sup>

The applicant emphasizes that no FHWA funding will support the project and suggests that the preserve will be “best served by Kaloko Makai and FHWA working cooperatively to complement each other’s management actions rather than to duplicate activities”.<sup>71</sup> While this may be true, a review of the management actions described in the HCP make it clear that the FHWA has a significant responsibility in the initial implementation and short term (three-year) management before the applicant’s management responsibilities significantly increase.<sup>72</sup> The ability of a reviewer of the DEIS to clearly understand the nexus between the HCP and the mid-level road (nexus) is critical in determining whether the overall goals of the HCP are feasible. OHA feels that the instant DEIS does not adequately describe the origin of this nexus and the FHWA’s conclusion in the mid-level road FEA causes additional uncertainty. We request clarification on this issue.

### Traditional and Customary Practices relative to Native Species within the Project Area

A participant in the interviews conducted to support the project’s cultural impact assessment (CIA)<sup>73</sup> specifically referenced the practical use of the ESA candidate, ko’oko’olau within the preserve:

*...the ko’oko’olau plant is in the project area. The only place you’ll find the plant. If they develop it, please get the seeds, and use it as part of landscaping when doing it. The plant is used for tea, better than Lipton and Earl Grey. You have to watch for this plant, because this is the only area that has it and collect the seeds...<sup>74</sup>*

<sup>68</sup> The Ane Keohokalole Mid-Level Highway Project (project) has been completed by the County of Hawai’i with funding support from the U.S. Department of Transportation-Federal Highways Administration and provides a regional roadway and utility corridor extending three miles from Palani Road in the south to Hina Lani Street in the north.

<sup>69</sup> See *Final Environmental Assessment for the Ane Keohokalole Mid-Level Highway Project*. September 2009. Page 5-17.

<sup>70</sup> *Ibid*, Appendix I. August 24, 2009 letter from Loyal Mehroff, FWS Field Supervisor to Pat Phung, FHWA.

<sup>71</sup> HCP, page 5.

<sup>72</sup> *Ibid*, pages 35-47 and 57-73.

<sup>73</sup> DEIS, Appendix L. Monahan, Magat, Groza and Hammatt. *Cultural Impact Assessment for a 1,150-Acre Parcel within portions of Kohanaiki and Kaloko Ahupua’a, North Kona District, Hawai’i Island*. Cultural Surveys Hawai’i, Inc. Prepared for Stanford Carr Development, LLC. May 2008. (CIA)

<sup>74</sup> *Ibid*, pages 60-61.

This statement may indicate that Native Hawaiians are actively accessing the project area to exercise traditional and customary gathering rights. The ko’oko’olau<sup>75</sup> within the project area are found outside of the preserve and “will be removed”.<sup>76</sup> The HCP proposes actions within the preserve to mitigate the loss of this native plant due to development of the project, but it does not address the specific issue of it being actively gathered.<sup>77</sup>

The limited distribution of ko’oko’olau outside of the project combined with the possibility that access to the lands they are situated on is restricted,<sup>78</sup> means this project may directly affect the traditional and customary practices of the Native Hawaiian people, as we will no longer be able to gather this specific resource.

### General Comments on Dryland Forests

In traditional and early-historic times, a dryland forest was a source of valuable resources ranging from food and medicine to raw material for a variety of uses.<sup>79</sup> Sadly, published reports describe that approximately 90% of the dryland forests in the State of Hawai’i have been lost due to the impacts of modern development, wildfire, and introduced animal and plant species.<sup>80</sup>

On the Island of Hawai’i, on-going restoration efforts at two specific locations outside of this project provide strong indications that our dryland forests can get on the road to recovery. In Ka’upulehu, the members of the North Kona Dry Forest Working Group (DFWG) are patiently developing techniques which have been proven successful in an initial 6-acre pilot project and are now being applied in a larger 70-acre project.<sup>81</sup> In Kealahou, the State Department of Hawaiian Home Lands (DHHL) has implemented a plan to establish and manage dryland forest preserves at the “Villages at La’i’Opua” that contain both listed and candidate species.<sup>82</sup>

The Kaloko dryland forest has been long recognized as being in good condition due to certain natural factors (rugged lava) which have acted as a deterrent to usual threats such as fire and introduced animal and plant species.<sup>83</sup> In addition to ESA listed and candidate native plant species, botanical surveys identified at least twenty-four additional native tree, shrub and plant species (native species) within the project area.<sup>84</sup> With the exception of pili, all of these additional native species are present within the dryland forest and the boundaries of the preserve.<sup>85</sup>

<sup>75</sup> See Abbott, Isabella Aiona. *La’au Hawai’i Traditional Hawaiian Uses of Plants*. Bishop Museum Press. 1992. (Abbott). Table 3 and page 102. Ko’oko’olau is identified as a plant commonly used in traditional Hawaiian medicine as a general tonic and specific remedies for throat and stomach troubles and for severe asthma.

<sup>76</sup> HCP, page 47.

<sup>77</sup> *Ibid*.

<sup>78</sup> *Ibid*, page 45.

<sup>79</sup> See Abbott and Krauss, Beatrice H. *Plants in the Hawaiian Culture*. University of Hawai’i Press. 1993.

<sup>80</sup> See <http://www.hawaiiforest.org/reports/dryland.html>.

<sup>81</sup> *Ibid*.

<sup>82</sup> See Leonard Bisel Associates, LLC and Geometrician Associates. *La’i’Opua Plant Mitigation and Preserve Restoration Plan*. Prepared for the State of Hawai’i Department of Hawaiian Home Lands. January 2008.

<sup>83</sup> HCP, page 32.

<sup>84</sup> DEIS, Appendix E. Isle Botanica. Botanical Survey of Kaloko Properties. Prepared for the Wilson Okamoto Corporation. December 2006. Table 1

<sup>85</sup> *Ibid*, page 6.

### Comprehensive Management of the Preserve

The preserve is identified as an unresolved issue in the relatively narrow sense of the HCP being dependent upon the applicant receiving all necessary entitlements, permits and funding.<sup>86</sup> OHA views the importance of the preserve in a context which extends beyond the HCP and sees the comprehensive management of the preserve as a resource for current and future generations as an unresolved issue. We do not want to see the preserve only recognized for its botanical value and become inaccessible to our community. The variety of native species within the preserve may not be immediately available for use in the perpetuation of traditional and customary practices, but a management objective of the preserve should be that they all eventually one day will be.

When considering that at full build-out, two elementary and a middle school (schools) may be developed within the project area, there is a possibility that the preserve could be incorporated into the educational curriculum of the schools as a "living classroom". The educational potential of the preserve extends to all generations as project residents and those from neighboring communities could have the opportunity to actually see native species within a natural ecosystem and understand their uses in perpetuating traditional and customary practices. Programs that collaborate with the on-going efforts at Ka'upulehu and Kealakehe could be considered.

Archaeological studies have identified at least two trail segments (trails) which extend through the preserve.<sup>87</sup> We encourage the applicant to fully explore the possibility of whether these trails can be used for community access through the preserve. This could promote both educational and recreational opportunities within the preserve, and also foster pedestrian connectivity to other areas within the project and surrounding areas to which the project area is traditionally and culturally connected to.

If the applicant's petition to the LUC is successful and the DBA granted, the applicant will seek to subdivide the preserve into a single tax map key (TMK) parcel through the applicable County processes.<sup>88</sup> OHA requests that the applicant consider incorporating a restrictive covenant or condition into the property deed which confirms that the eventual TMK parcel which will encompass the preserve shall remain undeveloped and that appropriate access shall be provided in perpetuity.

### Conclusion on the Dryland Forest

Overall, OHA reaffirms our support and appreciation for the applicant's proposal to establish the preserve and we look forward to seeing it achieve its full potential as it will day stand as a priceless kīpuka once the urban development elements of the Kona CDP are completed. We encourage the applicant to work with all appropriate parties to develop a comprehensive plan to guide the management of and appropriate access to the preserve into the future.

<sup>86</sup> DEIS, page 8-9.

<sup>87</sup> DEIS, Figure 4-3.

<sup>88</sup> HCP, page 55.

The immediate unresolved issue that must be addressed is the affect this project will have on traditional and customary gathering rights with the removal of the ko'oko'olau. It is unknown at this time whether other native plant species within the project area or preserve are actively being gathered and utilized.<sup>89</sup>

### Chapter 6E, Hawaii Revised Statutes

The applicant has prepared an archaeological inventory survey (AIS) and submitted it to the State Department of Land and Natural Resources-State Historic Preservation (SHPD) for review. At this juncture, the SHPD has provided no comments on the AIS. The applicant views this as an unresolved issue.<sup>90</sup> OHA agrees that this is definitely an unresolved issue, but in a much broader sense that extends beyond the submission of the AIS to the SHPD for review and comment.

Pursuant to Chapter §6E-42(a)<sup>91</sup>, HRS, prior to an approval any agency or officer of the State must provide the SHPD an opportunity for review and comment on the effect a project will have on historic properties.<sup>92</sup> This is a critical point, as we view the first "approval" relative to this project as the LUC's acceptance of the environmental impact statement. If the LUC is depending on the SHPD to determine an adequate level of effort to identify historic properties within the project area, appropriate significance assessments for identified historic properties and warranted mitigation measures via the Chapter 6E, HRS process (process), then this process should be completed before the LUC accepts the environmental impact statement.

The vast majority of the historic properties identified and documented in the AIS are resources of potential cultural and religious significance to the Native Hawaiian people. This emphasizes that an assessment of the potential impacts this project will have on these resources, and the relative traditional and customary practices or religious beliefs of the Native Hawaiian people is dependant on the LUC reviewing documents which are the product of the completed process. Consideration must also be afforded to a myriad of existing archaeological and ethnographic studies related to the project area to place it within a larger traditional and cultural landscape.

OHA is concerned that issues relative to the project AIS and overall compliance with Chapter 6E, HRS and implementing Hawaii Administrative Rules (HAR) will remain unresolved as the Chapter 343, HRS moves forward towards completion. If this concern becomes a reality, OHA does not see how the LUC, or any government agency can fulfill your constitutional or

<sup>89</sup> See CIA, page 57. A second CIA participant references the medicinal uses of native species found within the project area, but it is unclear whether these uses are active.

<sup>90</sup> DEIS, page 8-9.

<sup>91</sup> Chapter §6E-42(a) requires that: *before any agency or officer of the State or its political subdivisions approves any project involving a permit, license, certificate, land use change, subdivision, or other entitlement for use, which may affect historic property, aviation artifacts, or a burial site, the agency or office shall advise the department and prior to any approval allow the department an opportunity for review and comment on the effect of the proposed project on historic properties, aviation artifacts, or burial sites, consistent with Section 6E-43, including those listed in the Hawai'i register of historic places.*

<sup>92</sup> Chapter §6E-2 defines a "historic property" as: *any building, structure, object, district, area, or site, including heiau and underwater site, which is over fifty years old.*

statutory responsibilities to the Native Hawaiian people, as simply relying on the submittal of the AIS to the SHPD for review and comment fails to do so.

#### Request for Clarification on the Seven Volumes which Comprise the AIS

The project AIS is comprised of seven volumes.<sup>93</sup> Five volumes constitute the archaeological inventory surveys (surveys) of the tax map key (TMK) parcels which encompass the project area.<sup>94</sup> A sixth volume has been prepared to summarize the findings of the surveys.<sup>95</sup> The seventh volume is an archaeological assessment (assessment) of a portion of the eighteen (18) acre site which may be utilized for the development of off-site wells to provide for the project's potable water needs.<sup>96</sup>

Five (5) TMK parcels encompass the project area, but only four (4) surveys have been prepared. It appears the survey which was prepared for TMK parcel (3) 7-3-009:028 includes the immediately adjacent 46.869-acre TMK parcel (3) 7-3-009:063. Please clarify whether our understanding of this issue is correct, as it will account for all 5 TMK parcels listed in the DEIS.

The assessment identified no historic properties within an approximately 3.44 acre area south of Hina Lani Street.<sup>97</sup> It appears that the remaining acreage north of Hina Lani Street which may be utilized for the development of off-site wells was subject to an archaeological survey separate (separate survey) from the project AIS. This separate survey identified 89 sites distributed on multiple tax map key parcels. Seven of these sites were subject to a preservation plan approved by the SHPD. Four of these preserve sites are on the tax map key parcel north of Hina Lani Street where the off-site wells will be developed, but their locations are not depicted or described in the DEIS. OHA also requests clarification on this issue.

#### Significance Criteria

State law defines the five criteria (criteria) used in assessing the significance of historic properties.<sup>98</sup> The first four criteria mirror those used at the federal level in assessing National Register of Historic Places:

Criterion "A" - *associated with events that have made an important contribution to the broad patterns of our history;*

Criterion "B" - *associated with the lives of persons important in our past;*

Criterion "C" - *embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic value;*

<sup>93</sup> DEIS, page 4-1.

<sup>94</sup> DEIS, Figure 2-2.

<sup>95</sup> DEIS, Appendix J. *Summary Report of Archaeological Inventory Survey for Kaloko Makai*. Cultural Surveys Hawai'i, Inc. May 2008. (Summary Report).

<sup>96</sup> DEIS, Appendix K. Wilkinson, Mitchell and Hammatt. *Draft Archaeological Assessment Report For The Proposed Kaloko Heights Well Site Project, Kaloko Ahupua'a, North Kona District, Hawai'i Island*. Cultural Surveys Hawai'i, Inc. July 2011. Prepared for Stanford Carr Development.

<sup>97</sup> Ibid, page 6 and Figure 1.

<sup>98</sup> See Chapter §13-284-6, H.A.R.

Criterion "D" - *has yielded, or is likely to yield, information important for research on prehistory or history.*

The fifth criterion is the key exception found in State law:

Criteria "E" - *has an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to traditional beliefs, events or oral accounts- these associations being important to the group's history and cultural identity.*

This definition is extremely broad. When considering the dominant role religious beliefs had in shaping traditional Hawaiian society and guiding the daily activities of all classes of people,<sup>99</sup> in a very general sense, any historic property associated with the native Hawaiian people has religious or cultural significance.

The pattern and practice of archaeology in Hawai'i which OHA sees today is that contracted consultants are determining what significance an identified site has to the Native Hawaiian people from an archaeological perspective. The project AIS identified a total of 341 historic properties (sites) comprised of 658 features.<sup>100</sup> The vast majority of these sites are assigned a "pre-contact age"<sup>101</sup> and associated with the native Hawaiian people. We are disappointed to see that the applicant's archaeological contractor has assessed so many of these sites as significant only under criteria "D".

OHA's position is that any site identified in an AIS that is associated with the native Hawaiian people is automatically "significant" under Criterion "E". While this position will not result in OHA advocating for the preservation of every site assigned cultural or religious significance to the Hawaiian people, it is the foundation of our advocacy that it is the Native Hawaiian people who have the responsibility to determine the significance of the tangible reminders of ka 'ike o ka po'e kahiko (the knowledge of the ancestors).<sup>102</sup>

#### Proposed Mitigation

Of the 341 total sites identified in the project area, the applicant is proposing that seventy-two (72) be preserved, eighty (80) be subject to data recovery and "no further work" for one hundred eight-nine (189).<sup>103</sup> At this time, OHA has been unable to comprehensively review the descriptions or contextual information to provide specific comments on the proposed mitigation for every identified site at this time. We do offer general comments on the proposed mitigation to emphasize our position that the unresolved status of the Chapter 6E, HRS process inhibits the ability to assess the impacts of this project on the resources, and the traditional and customary practices of the Native Hawaiian people.

<sup>99</sup> See Kamakau, Samuel Manaiakalani. *Ka Po'e Kahiko The People of Old*. Bishop Museum Press. Honolulu. 1991. Page 11. *There were two kinds of kanawai observed by the Hawaiian people from the very ancient days: the kanawai akua, or gods' laws; and the kanawai kapu ali'i, or sacred chiefly laws.*

<sup>100</sup> Summary Report, page 50.

<sup>101</sup> Ibid, Tables 3-7.

<sup>102</sup> Chapter §13-284-6(c) requires consultation with Native Hawaiian Organizations and/or individuals for criterion "E" sites prior to the submission of an AIS to the SHPD.

<sup>103</sup> Summary Report, Table 11.

Thirty (30) of the sites proposed for preservation are burials.<sup>104</sup> Pursuant to State law, the Hawai'i Island Burial Council (HIBC) has the statutory authority to render a determination of preservation in place or relocation for these burials and make recommendations to the SHPD on short and long-term mitigation measures.<sup>105</sup> The HIBC considers the views of recognized lineal and cultural descendants in determining burial treatment.<sup>106</sup> The DEIS and project AIS contains no discussion on the status of consultation with lineal and/or cultural descendants and the impact this project will have on traditional and customary practices and beliefs associated with these specific burials is completely unknown at this time.

The data recovery of eighty (80) sites will be conducted pursuant to a plan developed in accordance with State law.<sup>107</sup> This plan will identify a research objective which will be addressed through the data recovery effort. The applicant has proposed six (6) possible data recovery research objectives (objectives).<sup>108</sup> OHA views all of these proposed objectives as having a possible impact on the traditional beliefs of the Native Hawaiian people, but OHA and other parties will not be able to provide substantive comments until an objective is selected, a plan developed and the results of data recovery published in a report.

OHA appreciates the applicant's acknowledgement of community concerns relative to an extensive network of traditional and historic trails which extend throughout the project area.<sup>109</sup> The mauka-makai Kohanaiki Trail, which historically extended continuously from the Kohanaiki Homesteads (mauka of the project) to the coastal lands now managed by the NPS is of specific concern. It is important to note, that the significance and practical use of these trails are not from the distant past, as there members of our community with us today who utilized these trails in their lifetimes.<sup>110</sup> The NPS and Department of Land and Natural Resources- Na Ala Hele Program have expressed a specific interest in ensuring that mauka-makai trails extending through the project area maintain connectivity to surrounding areas which have a traditional or cultural connection. While certain mitigation measures relative to trails have been proposed,<sup>111</sup> it is unknown whether they are adequate in addressing community concerns or will be approved by regulatory agencies.

#### Request for Additional Information Relative to Site 20720

It is our understanding that a 1996 archaeological study, which included the project area identified eight possible burial sites.<sup>112</sup> The project AIS conducted testing of these possible burial sites. This testing resulted in five sites being confirmed as "non-burial" and two sites as "probable burial". The eighth site (Site 20720) was "determined to have been destroyed".<sup>113</sup>

<sup>104</sup> Ibid, page 56.

<sup>105</sup> See Chapter §6E-43 and 43.5, HRS and Chapter §13-300-33, -36 and -38, HAR.

<sup>106</sup> See Chapter §13-300-33(b)(2), HAR.

<sup>107</sup> See Chapter 13-278, HAR.

<sup>108</sup> Summary Report, pages 70-71.

<sup>109</sup> DEIS, pages 4-51-57.

<sup>110</sup> See Maly, Kepa and Onaona Maly. *He Wahi Mo'olelo 'Ohana No Kaloko Me Honokōhau Ma Kekaha O Nā Kona- A Collection Of Family Traditions Describing Customs, Practices and Beliefs of the Families and Lands of Kaloko and Honokōhau, North Kona, Island of Hawai'i.* Kumu Pono Associates. 2002. Prepared for the National Park Service.

<sup>111</sup> DEIS, page 4-56 and -57

<sup>112</sup> DEIS, page 4-35.

<sup>113</sup> Ibid.

OHA requests additional information on the circumstances which led to the destruction of Site 20720, as this is a matter which may require an investigation into possible violations of Chapter 6E, HRS.

#### Site 26452

Site 26452 is described as a lava tube which is accessed through an opening within the project area, but extends outside of the project area where at least eight (8) confirmed burials have been identified.<sup>114</sup> OHA recognizes that the applicant cannot propose mitigation for portion of the lava tube outside of the project area. We do hope that the applicant and neighboring landowner will collaborate to propose mitigation measures for the site that are consistent. OHA will also be seeking assurances from the SHPD that the owner of the parcel under which the lava tube extends and the burials are situated has been formally notified of their presence.

#### Conclusion on Chapter 6E, Hawaii Revised Statutes

OHA views the unresolved issues relative to the Chapter 6E, HRS as inhibiting LUC's and all other government agencies ability to adequately assess the impacts this project will have on the resources, and traditional and customary practices and beliefs of the Native Hawaiian people. The submittal of the project AIS to the SHPD for review does little to resolve this issue. OHA advocates that the Chapter 6E, HRS process be completed before the LUC takes any action on the environmental impact statement so that the consultation effort which leads to final mitigation measures being approved can be considered by decision makers.

#### Cultural Impact Assessment

In 2000, the Hawai'i State Legislature found that:

[T]he 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 exercise thereof is necessary to ensure the continued existence, development, and exercise of native Hawaiian culture.<sup>115</sup>

The result of this finding was an amendment to the definitions of "environmental impact statement" and "significant effect" contained within §343-2, HRS to now include the terms "welfare" and "cultural practices". The preparation of a cultural impact assessment (CIA), as a technical report to support the findings and conclusions in a Chapter 343, HRS document is how an assessment of the affects of an action on the resources and exercise of the "native Hawaiian culture", along with proposed mitigation to address these affects is usually attempted to fulfill the requirements of this amendment.

<sup>114</sup> Summary Report, page 37.

<sup>115</sup> Act 50, H.B. NO. 2895, H.D. 1, 20<sup>th</sup> Leg. (2000).

With our substantial concerns relative to groundwater, dryland forest and archaeological resources (resources) which are directly related to the perpetuation of traditional and customary practices (practices) and beliefs of the Native Hawaiian people in mind, OHA respectfully concludes that the project CIA is woefully inadequate. The mitigation measures proposed as a result of the CIA,<sup>116</sup> while appreciated are elementary when considering the substantial and long term impacts this project could have.

Outside of the amendments to Chapter 343, HRS and a CIA, the Hawai'i Supreme Court established a specific analytical framework in order for the LUC to complete a proper analysis of the impacts of a given action on Native Hawaiian resources, beliefs and traditional and customary practices. This judicial guidance applies to all State and county agencies and requires an agency to:

- (1) Identify and scope of "valued cultural, historical, or natural resources" in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area; (2) Extent to which those resources- including traditional and customary native Hawaiian rights- will be affected or impaired by the proposed action; and (3) Feasible action, if any, to be taken by the [agency] to reasonably protect native Hawaiian rights if they are found to exist.<sup>117</sup>

As we have already mentioned, the unresolved issues related to resources inhibits all agencies', including the LUC's, ability to apply this framework and complete a sufficient analysis. Considering the clear threat to resources which are essential to the perpetuation of Native Hawaiian traditional and customary practices, OHA hopes that the LUC will agree with our position and require the applicant to provide additional information in order to fulfill your affirmative duty to protect the reasonable exercise of traditional and customary rights.

#### Public Services and Facilities

The applicant's proposals and commitments relative to public facilities and services are all appreciated as they have the potential to positively impact the North Kona Community in general. When considering that the full build-out of the Department of Hawaiian Home Lands (DHHL) La'i 'Opua residential development in Kealahou will concentrate a significant Native Hawaiian population in the region, these facilities and services are of elevated importance to OHA and DHHL beneficiaries.

#### Regional Hospital

OHA looks forward to seeing the development of a new regional hospital moving forward on the 40 acres of land within the project area the applicant has committed to provide. The need for a new regional hospital is clearly recognized as it will increase accessibility and decrease travel times for the North Kona Community. The Kona Community Hospital in Kealahou (15 miles south) and North Hawai'i Community Hospital (35 miles north) currently

service the emergency and trauma needs of this area.<sup>118</sup> We applaud all involved in the effort to develop this much need facility.

#### Kona Judiciary Complex

We also applaud the applicant for committing 10 acres of land within the project area for the possible development of the new Kona Judiciary Complex (complex). It is our understanding that the State Department of Accounting and General Services (DAGS) has commissioned a selection study to determine the most viable alternative locations (locations) for the complex. These locations will be comprehensively assessed in a forthcoming draft environmental impact statement prepared by the DAGS.

#### Schools

The State Department of Education (DOE) has informed the applicant that this project will have a "significant impact" on DOE facilities in West Hawai'i.<sup>119</sup> The project is within the West Hawai'i School Impact Fee District and thus, the applicant is subject to impact land and cash payment fee components (impact fees).<sup>120</sup> The applicant references a July 21, 2011 meeting with the DOE to discuss impact fees,<sup>121</sup> but it is unclear whether the results of this meeting ensure compliance with applicable State laws. This information should be provided in the DEIS.

#### Housing

We appreciate that the applicant is committed to providing 700 "affordable" units with pricing to be determined in consultation with government agencies.<sup>122</sup>

A "Social Impact Assessment" (SIA) was prepared as a technical report to support the DEIS.<sup>123</sup> Twenty-four (24) interviewees, or "stakeholders" representing a "wide spectrum of beliefs and interests" were deliberately selected to share their thoughts on: issues independent of the project affecting West Hawai'i, overall issues specific to the project and specific issues related to project elements.<sup>124</sup> Interestingly, the "affordable housing" criteria established by the U.S. Department of Housing and Urban Development (HUD) and how this criteria affects the community in general, and specifically Native Hawaiians was a prevailing theme during these interviews.<sup>125</sup> The SIA then attempted to determine the extent of "actual inequities" in HUD and County of Hawai'i affordable housing guidelines and criteria.

<sup>118</sup> DEIS, Page 4-88.

<sup>119</sup> See DEIS, Appendix S. October 15, 2010 letter from Kathryn Matayoshi, DOE Superintendent to Earl Matsukawa, Wilson Okamoto Corporation.

<sup>120</sup> See Chapter §302A-1601 to 1610, HRS

<sup>121</sup> See DEIS, Appendix S. July 25, 2011 letter from Earl Matsukawa, Wilson Okamoto Corporation to Kathryn Matayoshi, DOE Superintendent.

<sup>122</sup> DEIS, page 2-20 and Table 2-2

<sup>123</sup> John M. Knox & Associates, Inc. *Kaloko Makai Social Impact Assessment Volumes 1-3*. May 3, 2011. DEIS, Appendix Q. (Knox, 2011).

<sup>124</sup> *Ibid*, Volume 1, pages 3-1 and 3-2.

<sup>125</sup> *Ibid*, pages 3-13 and 3-14.

<sup>116</sup> DEIS, pages 4-55 to -57.

<sup>117</sup> See *Ka Pa'akai O Ka 'Aina v. Land Use Commission*, 94 Haw. 1, 7 P.3d 1068 (2000).



The SIA analysis of the potential "inequities" in affordable housing guidelines and criteria concludes that "all groups...face serious affordability issues in regard to housing in West Hawai'i (especially North Kona)" and that "Native Hawaiians (and perhaps Filipinos) are particularly challenged in West Hawai'i due to lower overall incomes that reflect differences in overall education, age, and family structure".<sup>126</sup>

This conclusion seems to be ambiguously dismissed by a closing comment on this issue that:

*the social challenges facing West Hawai'i will probably have less to do with the fairness of "affordable housing" guidelines than with the soaring prices of market housing. The social impact of the Kaloko Makai project will be positive to the extent that it succeeds in the goal of providing more affordable market housing to working families- a goal that would likely be achieved by greater densities consistent with the Kona Community Development Plan<sup>127</sup>*

OHA sees the conclusion and closing comment in the SIA as doing very little to address the concerns of interviewees, or comprehensively assessing any actual inequities in HUD or County of Hawai'i affordable housing criteria and guidelines that adversely affect Native Hawaiians. OHA sees the DEIS preparer's outright dismissal of concerns relative to affordable housing expressed by SIA interviewees as a "fleeting fantasy"<sup>128</sup> as extremely alarming. We urge caution in the approach the applicant utilized to discuss this important issue.

#### Conclusion

The aspects of this project ranging from housing to employment and economic benefits that are offered as "beneficial impacts"<sup>129</sup> must be carefully balanced against the long term vision of the Kona Community and impacts to resources that we must ensure are available for future generations.

As we have already recognized, this project area is consistent with uses described in the County general Plan and is within the Urban Area designated within the Kona Community Development Plan (CDP). Thus the years of planning which went into the CDP, seems to confirm the community's long term vision that this project would one day become a reality.

What the elements of the CDP do not specifically provide for or address however, is how the direct, secondary and cumulative affects of each project will impact our resources and this is the source of our opposition to seeing this project move forward at this time. OHA believes that our review of this DEIS provides adequate evidence that the project will result in adverse impacts to three resources (groundwater, native dryland forest species, and archaeological and burial sites) of importance to the Native Hawaiian people and to a certain extent all of Hawai'i. These adverse impacts are both extreme and unresolved and thus, the LUC and other decision

<sup>126</sup> Ibid, Volume 2, page 2-8.

<sup>127</sup> Ibid, page 2-12.

<sup>128</sup> DEIS, page 4-105.


<sup>129</sup> DEIS, page S-1.

makers are unable to fulfill their responsibilities to conduct informed decision making in accordance with constitutional and statutory mandates and judicial opinion.

We believe that these impacts and unresolved issues can be addressed, but it will take a comprehensive and collaborative effort (effort) that involves all stakeholders. We look forward to participating, as appropriate or needed to advocate for the interests of our beneficiaries in this effort. As we await a response, we will caution the applicant that unless the recommended effort is reflected and the concerns of all DEIS reviewers addressed, rather than simply responded to, we will continue to be opposed to this project.

Thank you for the opportunity to provide comments. Should you have any questions, please feel free to contact me, or have you staff contact Keola Lindsey at [keolal@oha.org](mailto:keolal@oha.org) or 594-0244.

'O wau iho nō me ka 'oia'i'o,



Clyde W. Nāmu'o  
Chief Executive Officer

CWN:kl

Enclosures (1): September 14, 2011 OHA-BOT Resolution

C: OHA-BOT  
OHA West Hawai'i Community Outreach Coordinator  
Kathy Billings, Kaloko-Honokohau National Historical Park Superintendent  
Peter Phillips, SCD-TSA Kaloko Makai, LLC  
Earl Matsukawa, Wilson Okamoto Corporation  
William Aila, Department of Land and Natural Resources and Commission on Water Resource Management, Chairman

A Resolution of the Office of Hawaiian Affairs

*A resolution to encourage all stakeholders interested in the sustainability of the Keauhou Aquifer to actively work to protect the traditional and customary practices of Native Hawaiians that are dependent on abundant clean groundwater*

WHEREAS, there is a special spirit in the Kona area that encompasses the life that flows in the land and the water that washes upon its shores, where Native Hawaiians found a clean underground water source to sustain their settlement of the area; and

WHEREAS, the cultural and historic importance of this area to Native Hawaiians is more significant given that the area is one of the driest in the archipelago, and only through intelligent and careful adaptation were Native Hawaiians able to make it into one of the most productive and important areas for our society; and

WHEREAS, when one of the most sacred and naturally significant parts of this area, the makai portions of the Kohalaiki, Kaloko, Honokohau, and Kealahou ahupua'a were threatened with development in the early 1970s, Native Hawaiians in the area organized and successfully lobbied Congress to take action to protect this area; and

WHEREAS, U.S. Representative Patsy Mink succeeded in the establishment of a Commission to study the area for inclusion as a National Park, and the Commission members and staff preparing the study included such noted Native Hawaiians as 'Iolani Luahine, George Na'ope, Herb Kawainui Kane and John D. Waihe'e III; and

WHEREAS, that study, known as the Spirit of Kaloko Honokohau, was accepted and endorsed by Congress when it established Kaloko Honokohau National Historical Park in 1978 for the express purpose of preserving, interpreting, and perpetuating Native Hawaiian activities and culture; and

WHEREAS, the ability of Native Hawaiians to continue traditional and customary practices throughout coastal Kona is dependent on the continued flow of fresh, clean groundwater to the sea; and

WHEREAS, since 1978, the amount of groundwater withdrawn in the Kona area has approximately doubled and is projected to increase by at least another fifty percent (50%) in the near-term, which the best available science indicates will impact the Park's resources; and

WHEREAS, development in the Kona area continues to grow with the potential for increasing sources of pollution and threats to abundant clean groundwater; and

WHEREAS, the National Park Service, as stewards of this wahi pana, have endeavored over the last ten years to protect water resources in the area through a collaborative, cooperative approach with stakeholders; and

WHEREAS, despite these efforts, the significance of abundant clean groundwater to the cultural practices, history, and interests of Native Hawaiians in the area is still not widely recognized, as evidenced by the Hawai'i County Water Use and Development Plan, which does not consider the effects of groundwater withdrawal on the traditional and customary practices of Native Hawaiians; and

WHEREAS, OHA has historically played a critical leadership role in protecting Native Hawaiian water rights through its advocacy, including through litigation in the Wai'ahole, Nā Wai 'Ehā, and Waiola O Moloka'i cases, and commenting on the effects of development on Native Hawaiian water rights in this area and across the archipelago; and

- Continued -

A Resolution of the Office of Hawaiian Affairs

*A resolution to encourage all stakeholders interested in the sustainability of the Keauhou Aquifer to actively work to protect the traditional and customary practices of Native Hawaiians that are dependent on abundant clean groundwater*

WHEREAS, the protection and preservation of clean groundwater is essential to the perpetuation of traditional and customary practices of Native Hawaiians, and hence the perpetuation of a unique Native Hawaiian presence and culture in this significant area; and

NOW, THEREFORE, BE IT RESOLVED by the Office of Hawaiian Affairs Board of Trustees, on this 14th day of September, 2011, that it strongly encourages all stakeholders interested in the sustainability of the Keauhou Aquifer to actively work to protect the traditional and customary practices of Native Hawaiians in the area that are dependent on abundant clean groundwater; and

BE IT FURTHER RESOLVED, that a certified copy of this Resolution be transmitted to the Commission on Water Resource Management, the Hawai'i State Department of Land and Natural Resources, the Hawai'i County Department of Water Supply, the Hawai'i County Water Board, the Hawai'i County Council, and the Mayor of Hawai'i County.

Colette Y. Machado  
Chairperson, Trustee, Moloka'i and Lina'i

Boyd P. Mossman  
Vice Chair, Trustee, Maui

Rowena Akana  
Trustee, At-large

Robert K. Lindsey Jr.  
Trustee, Hawai'i

Peter Apo  
Trustee, O'ahu

Oswald K. Stender  
Trustee, At-large

S. Haunani Apoliona, MSW  
Trustee, At-large

John D. Waihe'e IV  
Trustee, At-large

Donald B. Catalina  
Trustee, Kaula'i and Ni'ihau

Date: September 14, 2011



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July 25, 2013

Mr. Kamanaopono Crabbe, Chief Executive Officer  
Office of Hawaiian Affairs  
State of Hawai'i  
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Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Crabbe:

Thank you for your letter dated October 5, 2011 (HRD11/3552F). The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

**County of Hawaii General Plan and Kona Community Development Plan**

*OHA recognizes that the project is generally consistent with the broad land use policies of the County General Plan (GP) and the more specific elements and guiding principles of the Kona Community Development Plan (CDP) which translates the GP into implementation actions relative to land use. The GP designates the project area for "urban expansion" and "conservation". The project area is within the "Urban Area" described in the CDP which directs future growth along proposed transit routes and the designation of ten "Neighborhood Village Transit Orientated Developments" (TOD). This project is one of these designated TOD.*

Response: The Petition acknowledges that OHA recognition that the proposed project is generally consistent with the land use policies of the County General Plan (GP) and the guiding principles of the Kona Community Development Plan (CDP).

**State Land Use Commission Decision Making Criteria and Standards**

*Chapter 205, HRS establishes the general responsibilities of the LUC in determining the appropriate uses of the land in the State and the specific decision making criteria*



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*for DBA proceedings. The general standards for determining the boundaries of the Urban District established by Chapter 15-15-18, Hawaii Administrative Rules (HAR) will be applicable to the forthcoming DBA. We are confident that the LUC will be mindful of your public trust responsibilities as you consider acceptance of the environmental impact statement and subsequently, the DBA petition. An obvious interest of OHA in this matter is to ensure the LUC and all other government agencies fulfill your additional constitutional and statutory responsibilities to the Hawaiian people and our families which have been confirmed by judicial opinion.*

Response: The Petitioner acknowledges that the general standards for determining the boundaries of the Urban District established by Chapter 15-15-18, Hawaii Administrative Rules (HAR) will be applicable to the forthcoming District Boundary Amendment (DBA). OHA's interests with regard to the proposed project's constitutional and statutory responsibilities to the Hawaiian people are of paramount importance.

*As we have already mentioned, OHA recognizes that the GP and CDP designate the project area for urban development and the regional development of the "Urban Area" described in the CDP is already well underway. With this in mind, OHA has no fundamental objections to seeing the petition requesting the DBA and reclassification moving forward through the applicable proceedings, but we do advocate that the LUC afford full consideration to applicable concerns that could be expressed during these proceedings. The issue that is clearly looming is whether our resources cannot only withstand the direct affects of this specific project, but also the cumulative affects of full development of the Urban Area described in the Kona CDP.*

Response: The Petitioner acknowledges that OHA has no fundamental objections to requesting the DBA.

The purpose of the EIS is to evaluate direct, secondary and cumulative affects and to provide mitigation measures to minimize impacts. The Petitioner believes the forthcoming Second DEIS provides a comprehensive assessment of the true direct, indirect, secondary and cumulative effects of the proposed project on Hawaii's resources and environment in order to ensure proper mitigation.

*OHA views the core intent of the Chapter 343, HRS process as preparing a final document which will guide the informed decision making of government agencies who consider the approvals that facilitate the development of a given action. In this specific case, the LUC as the Chapter 343, HRS "accepting authority" will be the first of many agencies to consider an approval that is necessary to facilitate this project. The applicant and their consultants have the inherent responsibility to acknowledge*

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*and identify what the true direct, indirect, secondary, and cumulative affects of this project on our environment and resources will be, so that efforts to develop appropriate mitigation can begin as early as possible.*

Response: The Petitioner acknowledges that Chapter 343 requires evaluation of direct, indirect, secondary and cumulative affects. The Petitioner believes the forthcoming Second DEIS provides a comprehensive assessment of the true direct, indirect, secondary and cumulative effects of the proposed project on Hawaii's resources and environment in order to ensure proper mitigation.

*We must also be mindful that full-build-out of the project will occur in three phases and will not be completed until a generation from now, in the year 2040. In April 2010, the Hawaii Supreme court issued a ruling that overturned two lower court decisions by requiring that the impacts and mitigation measures of an environmental impact statement accepted for a project in 1985 be updated by a supplemental environmental impact statement to ensure that as the project moved forward a generation later, the concerns of the surrounding community were adequately addressed.*

Response: As referenced, the proposed project's final phase is projected to be completed in the year 2045; effectively a generation from now. The Petitioner acknowledges that the concerns of the surrounding community may change over this time-span, and will take measures to ensure that the proposed project will address those interests, in compliance with the ruling of the Hawaii Supreme court and any applicable amendment of Chapter 343, HRS or its implanting rules under Title 11, Chapter 200 HAR.

#### Water

*As an opening comment on water, OHA offers the practical and profound wisdom of the traditional saying *ola i ka wai a ka 'opua* - there is life in the water from the 'opua clouds of Kona. After our need for clean air to breath, clean drinking water is a resource essential to the survival of life. The struggle over access to and the use of water, and the debate over how our actions result in direct, secondary and cumulative affects on this precious resource which extend across our State have already arrived in Kona. We are fast approaching a point where collaborative efforts between all stakeholders to develop a framework to comprehensively manage this resource will become necessary to ensure it is available for current and future generations.*

*The project overlies the Keauhou Groundwater Aquifer System Area (ASYA), within the Hualalai Aquifer Sector Area (ASEA). The County of Hawai'i has already acknowledged that "the development of the County General Plan land use maximum density within the Hualalai ASEA cannot be sustained by conventional water*

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*resources, even if agricultural demands are not included. The discovery of "high-level groundwater" circa 1992 provides strong indications that the Keauhou ASYA sustainable yield may be substantially greater than the 1990 State Commission on Water Resource Management estimate.*

*The factors which affect the availability, discharge and overall quality of groundwater in Kona are complex and extend beyond the basic application of hydrology. Our understanding of the nature and extent of the geological feature which confines high-level groundwater and its relationship to the traditional "basal lens" which defines the basic hydrologic cycle of groundwater is largely conjecture at that this time. Since its initial discovery in North Kona circa 1990, high-level groundwater has been rapidly developed and advanced studies to accompany additional development of this resource have been recommended.*

*As specific elements of the Kona CDP are implemented and the development of the designated Urban Area of North Kona continues, the direct, secondary and cumulative affects on the quality of groundwater must be considered. The management framework which will guide the use and withdrawal of groundwater must also require that best management practices (BMP) be implemented, employed and monitored to ensure the quality of this resource is protected.*

*OHA has historically advocated for the protection of Native Hawaiian water rights, because in addition to sustaining life, this resource is essential to the perpetuation of our traditional and customary practices. On September 14, 2011, the OHA Board of Trustees extended the specific focus of our advocacy on water to North Kona and the Keauhou ASYA by unanimously supporting a resolution that: strongly encourages all stakeholders interested in the sustainability of the Keauhou Aquifer to actively work to protect the traditional and customary practices of Native Hawaiians in the area that are dependent on abundant clean groundwater.*

*With this in mind, we respectfully offer the following comments on the potential this project has to impact groundwater resources and advocate that the LUC consider not only the direct impacts of this project, but also cumulative and secondary impacts within the broader context of full build-out of the land use elements described in the Kona CDP. To a certain extent, OHA views these comments on groundwater as being applicable to any forthcoming development action within the Urban Area designated by the Kona CDP.*

#### Potable Water

*The project's full build-out potable water demand is estimated to be between 3.2 mgd (average demand) and 4.8 mgd (maximum demand). The applicant is considering six (6) alternatives to provide for this potable water demand:*

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1. *Development of three (3) to four (4) mid-level (1,000 foot elevation) off-site wells (preferred alternative);*
2. *Utilization of four (4) to five (5) high-elevation (1,700 to 2,000 feet) off-site wells which would draw high-level groundwater;*
3. *Development of three (3) to four (4) on-site wells (700 foot elevation);*
4. *Obtaining water commitments conferred into the Department of Water Supply system through existing water agreements;*
5. *Connection to the Department of Water Supply potable water system; and*
6. *A combination of all alternatives.*

*In brief, all of these alternatives involve connecting to the County of Hawai'i-Department of Water Supply (DWS) North Kona Service Area System (SAS). The basic elements of these alternatives include: only the applicant completing necessary improvements to the SAS (so that it has the capacity to support the project); the applicant working collaboratively or negotiating with other developers/landowners to complete improvements to the SAS; or the applicant negotiating to obtain existing water entitlements from the current SAS. The applicant believes that "none of the alternatives draw water from basal groundwater underlying the project site".*

Response: The alternatives now being considered for the project's drinking water supply have been narrowed down to those that can be affirmatively demonstrated as having no impact on the basal lens. These are limited to use of the high level groundwater drawn from strata far below the basal groundwater so as not to impact it and desalinating saline groundwater, also drawn from below the basal lens.

An *Assessment of the Potential Impact of the Proposed Kaloko Makai Project on Water Resources* was prepared by Tom Nance Water Resource Engineering and will be included in the forthcoming Second DEIS.

*Alternative 1 (the preferred alternative) seems to be the most viable in terms of the basic issue of accessing a groundwater source. Success in accessing this groundwater source will then lead into an extensive discussion on the impacts drawing the significant amount of water this project requires from the Keauhou ASYA would cause. The applicant attempts to avoid immediate discussion on this issue by suggesting that the wells developed under Alternative 1 will draw potable water from a "groundwater phenomenon...freshwater hundreds of feet below the brackish basal lens".*

Response: The water supply alternative that will be implemented will be determined by results of the test well (state no. 4160-03) to be drilled at the upper end of the project site. If this alternative is implemented, there would

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still be a 1:1 reduction in the amount of fresh groundwater ultimately discharged into the Makai environment. The recent USGS recharge study suggests this discharge into the Makai environment is 152 MGD less the amount of pumpage from wells. Current pumpage is about 14 MGD, a resulting decrease of 9.2% of this discharge. At full build out, the project would utilize about 2.15 MGD, a decrease of another 1.4% of the discharge into the Makai environment.

*It is our understanding that there is only limited information and data relative to the availability, extent, characteristics and quality of this potential groundwater "phenomenon" available at this time and whether it is "disconnected" from the hydrologic cycle of the Keauhou ASYA as the applicant seems to suggest is unsubstantiated.*

Response: The possible movement of high level groundwater far beneath the basal lens rather than moving though it was indicated by the results of two deep monitor wells (state nos. 3858-01 and 3959-01) and, at least indirectly, by the anomalously saline and cold basal groundwater in the coastal area that would otherwise be less saline, warmer, and in sufficient quantities to successfully develop irrigation quality brackish wells. The planned test well will contribute significantly to groundwater knowledge as well as provide direction on the supply alternative to pursue.

*While the applicant "expects" that water drawn from the wells developed under the preferred alternative will meet DOH quality standards, it appears they have developed a contingency plan in the event it does not - desalinization through reverse osmosis (RO). What is alarming to OHA is that the construction of a desalinization facility is not proposed until Phase 3 of the project which is anticipated to be in 2032 and completed by 2040. If this is the case, should the preferred alternative be employed drawing groundwater that requires desalinization, how will this be done to provide for potable water demands if construction of the facility is proposed in the last phase of the project?*

Response: If desalinization is the water supply alternative that will be pursued, it will be developed at the outset of the project and supply all of its development phases.

*If the requirement for desalinization does become a reality, the instant DEIS is clearly deficient both in terms of supporting any State or County approvals necessary for the actual construction of the facility but also in identifying and mitigating the short and long term impacts the RO process will have on groundwater resources.*



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Response: If desalination is the option to be pursued, it will only be known after the planned deep test well (state no. 4160-03) is completed. At that time, approvals for the required wells would be sought from the Commission on Water Resource Management and approval of the desalination for use as a drinking water supply would be sought from the Department of Health. There is no reason to believe that the approvals would be denied. However, it would be premature to pursue these approvals now.

*A product of RO is saline concentrate which will be disposed of by underground injection wells. The applicant concludes that since this saline concentrate will be injected at depths of equal density, the RO process has no impacts on the basal lens and the saline concentrate is simply "discharged into the ocean offshore at a substantial depth and distance from the shoreline". This is another assertion which is unsubstantiated.*

Response: By injecting the concentrate into a groundwater zone of equivalent or lesser salinity, the greater density of the concentrate will prevent its rise into the basal lens above. As such it will move toward the shoreline and ultimately discharge further offshore than the discharge of basal groundwater. It should also be pointed out that the concentrate itself, which is natural groundwater with the addition of naturally occurring salts removed from the desalting process, will not be a harmful addition to the Makai environment as it will quickly be mixed to background salinity levels.

*The Department of Land and Natural Resources-Division of Aquatic Resources (DAR) has identified the near shore marine waters and coral reef ecosystems along the coastline approximately 1 mile for the project boundary as an area with substantial submarine groundwater discharge. DAR views this project as a coastal development with "substantial potential to impact marine water quality and coastal ecosystems" by increasing nutrient and contaminant concentrations in groundwater discharge. It is unclear whether DAR's analysis included consideration of the applicant's proposal to dispose of saline concentrate through underground injection wells.*

Response: An Assessment of the Potential Impact of the Proposed Kaloko Makai Project on Water Resources and An Assessment of Marine and Pond Environments were prepared by Tom Nance Water Resource Engineering and Marine Research Consultants, respectively. Both reports will be included in the forthcoming Second DEIS.

The impact on groundwater prepared by Tom Nance Water Resource Engineering (2012) identified and quantified changes in the quantity of



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groundwater discharge, the expected change in salinity, and the expected addition of nutrients.

This comment is addressed fully in Marine Research Consultants (2012). In brief, the projected increase in nutrient loading from groundwater is small relative to the natural nutrient fluxes reaching the ocean. In many areas of West Hawaii the overall nutrient flux is substantially greater than the projected loading at KAHO. In addition, the physical structure of the nearshore marine habitat consists of a shallow bench that is impacted by consistent wave forces which mix groundwater nutrients to background levels resulting in little or no effective increases in nutrient concentrations that could affect coral reef structure or function. This is discussed further in Marine Research Consultants report prepared for the project.

*A fundamental principle which must be acknowledged and addressed in the event the preferred alternative is employed is that there could be impacts to an already anomalous basal lens. The extent of these impacts is unknown at this time. In the event desalination is required, overall impacts to the quality of the Keauhou AYSA could be magnified through an additional increase in discharged groundwater salinity. It is possible that these magnified impacts will adversely affect the near shore marine resources necessary to perpetuate the traditional and customary practices of the Native Hawaiian people. While accessing groundwater is viable under this alternative, the uncertainties relative to the elements of this alternative must be addressed before it becomes a reality.*

Response: The assessment by Tom Nance Water Resource Engineering (2012) identifies and quantifies the potential impacts to groundwater of each of the supply alternatives that are being considered. Each of the supply alternatives has been formulated to avoid impacting the basal lens. Admittedly and despite the results of the two deep monitor wells (state nos. 3858-01 and 3959-01), there is still some uncertainty regarding the relationship of high level groundwater and the basal lens in the mauka-makai corridor of the project site. The proposed test well (state no. 4160-03) is intended to eliminate that uncertainty. In the absence of those results, the TNWRE study included an assessment of the possible outcomes.

*Alternative 2 would utilize off-site wells drawing high-level groundwater. Only one of the well sites required for this alternative is identified at this time. Pursuant to an agreement with the DWS, TSG Kula Nei, L.P. and Spring-brook Investments, L.P. (TSG/SI) will be completing SAS improvements (anticipated to have a maximum daily production capacity of 1.0 mgd) in exchange for entitlements needed to support the*



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*120,000 gpd potable water needs of the "Kula Nei Project". The actual timeframe for TSG/SI to complete these SAS improvements is unclear.*

*Based on the average and maximum daily potable water demands this project will require, it is clear that even an agreement with the DWS which would confer all of the remaining water commitments from the TSG/SI system to the applicant, a significant amount of potable water will still be required. The locations of the additional well sites and systems, and the timeframe for developing them are unknown. OHA views the viability of this alternative as an uncertainty at this time.*

Response: The off-site potable well site alternative mauka of Kaloko Makai has been dropped.

*Alternative 3 is a variation of Alternative 1 and proposes the same elements to access a groundwater source, including desalinization. The wells developed under this alternative would be situated on-site. The comments and concerns we have already expressed relative to Alternative 1 are applicable to this alternative. Other than a general description of the elevation at which the wells would be sited, the DEIS does not depict their exact location or distribution in project plans. This is an issue specific to this alternative which should be clarified.*

Response: See previous response.

*Alternative 4 would involve the applicant negotiating for the "transfer" of existing water entitlements from the SAS. The only specific negotiations described in the DEIS are with Lanihau Properties, LLC who will convert Palani Well No.1 to a production well, construct a 1 mg reservoir and install a 12-inch water transmission line to connect to an existing 16-inch DWS water main. This production well will draw high-level groundwater at maximum pumping capacity of 1.6 mgd.*

*Completion of this specific system is anticipated sometime in 2011. Pursuant to a well development agreement (agreement) executed between the Board of Water Supply, Lanihau Properties, LLC, West Hawai'i Business Park, LLC and Palani Ranch, Inc this system would be dedicated to the DWS and support the SAS. Lanihau Properties, LLC is entitled to eight-five (85) percent of the maximum pumping capacity of the well, which will be allocated for the development of their properties.*

*The applicant seeks to negotiate with the DWS and Lanihau Properties, LLC for the "transfer" of their water entitlements to support this project. The success of these negotiations however, seem to be dependent on Lanihau Properties, LLC scaling down or abandoning the planned developments of their lands. Based on the*



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*information available to us at this time, OHA sees the viability of this alternative as another uncertainty.*

Response: This alternative has been dropped.

*Alternative 5 would simply connect to the SAS to obtain the potable water the project requires. The DWS has already informed the applicant that the SAS cannot support this project. Unless the DWS has changed their position, OHA does not view Alternative 5 as a realistic option.*

Response: This alternative has been dropped.

*Alternative 6 would employ a combination of all five alternatives under consideration. The applicant believes that this alternative will result in "no additional environmental or ecological impacts". OHA agrees that if a combination of all alternatives were employed there would be no additional impacts, but the actual extent of the direct, cumulative and secondary impacts of each alternative currently under consideration have not been identified at this time.*

Response: This alternative has been dropped.

#### Wastewater

*The Kona CDP mandates the expansion of the Kealakehe Wastewater Treatment Plant (KWTP) and the development of a new wastewater treatment plant that to the extent possible, will utilize a "natural treatment system" (new WTP) to accommodate projected wastewater volume from the Urban Area. The applicant acknowledges that the timeframe for completing the KWTP expansion and the development of a new WTP are unknown. Thus, the discussion that the applicant will collaborate with the County of KWTP expansion or the development of a new WTP is moot when considering the project's timeframes. The County-Department of Environmental Management has already informed the applicant that the current capacity of the KWTP cannot accommodate this project.*

Response: The County Department of Environmental Management (DEM) has indicated that the Kealakehe facility is not available for Kaloko Makai, therefore an on-site WWTP is the preferred alternative. The Petitioner will continue to consult with DEM and if other alternatives arise in the process.

*OHA views the development of an on-site private wastewater treatment plant (project WTP) to accommodate the average wastewater flow of 2.2 mgd and design peak wastewater flow of approximately 12.2 mgd that this project will generate as a necessity. We do seek an explanation on what accounts for the difference between*

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*average and design peak wastewater flow, as the 10 mgd difference is a significant amount of wastewater.*

Response: The design average and design peak flow is based upon local wastewater standards and common practice.

*We applaud the applicant for proposing to utilize technologies at the project WTP that will provide recycled (R-1) water for general irrigation within the project in accordance with DOH requirements. We are immediately alarmed however, at the applicants acknowledgement that in the first phase of the project "there will likely not be enough R-1 water to irrigate the parks and schools that are slated for construction". We request clarification on how this issue will be addressed and question whether it means the project's potable water demands are actually higher than current estimates. Furthermore, the applicant is aware that the DOH restricts the use of R-1 water above the underground injection control (UIC) line and thus, R-1 water will only be used for irrigation in the portion of the project below the UIC line. OHA requests clarification whether this is a second issue which may result in an increase in potable water demand estimates.*

Response: Initially, Phase 1 will not likely generate enough R-1 water to irrigate the parks and schools, however when the project is completed R-1 waste may exceed demand. SCD will work with other nearby landowners on the use of the possible excess R-1 water. The Petitioner confirms that, currently, R-1 water can only be applied to lands located makai of the UIC line. Most of the project site lies makai of the UIC line.

*It is unclear whether the project WTP will be equipped with specific technologies to accommodate waste from the light industrial and commercial elements of the project and in the event the regional hospital facility is built, medical waste. This is an issue that should be addressed.*

Response: If and when a hospital is constructed, the hospital developer and operator will work to mitigate wastes produced by development and operation of the hospital.

*At full build-out of the project, R-1 water availability may exceed irrigation demands during periods of extended wet weather and the project WTP will employ percolation basis to dispose of excess R-1 water. The applicant has concluded that this use of percolation will not adversely affect overall groundwater quality, or more specifically the resources of Kaloko Honokahau National Historic Park. We question this conclusion, as the geology (extremely porous aa lava) of Kona which accommodates the disposal of significant volumes of water in relatively small percolation basis also*

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*implies that there is very little natural filtration of contaminants and nutrients before this water quickly reaches the basal lens and enters near shore marine waters.*

Response: The 2012 report by Tom Nance Water Resource Engineering specifically addresses this comment. Its resulting analysis, summarized in Table 4 of the report, quantifies the following changes to basal groundwater flowing into Kaloko-Honokohau National Historic Park: a 6.2% increase in the flowrate; a -5.1% decrease in salinity; a 5.2% increase in nitrogen; and a 2.1% increase in phosphorus.

*The U.S. Environmental Protection Agency (EPA) and U.S. Department of Commerce-National Oceanic and Atmospheric Administration (NOAA) have jointly published guidance on the types of management measures designers of onsite disposal systems (OSDS), such as a WTP should consider. One of the core objectives of this guidance is to ensure OSDS "are not installed in areas where soil absorption systems will not provide adequate treatment of effluents containing solids, phosphorus, pathogens, nitrogen, and nonconventional pollutants prior to entry into surface waters and ground water (e.g., highly permeable soils, areas with shallow water tables or confining layers, or poorly drained soils)". This guidance also specifically recommends consideration of factors such as soil type, soil depth, rate of sea level rise, depth to water table and topography to ensure the discharge of pollutants into groundwater is reduced to the extent practicable.*

Response: The portion of R-1 treated wastewater that will be reused for irrigation will take advantage of the natural consumption of nutrients by plant uptake and the natural nutrient removal in the unsaturated lavas for the portion of the applied R-1 effluent that moves below the plant root zone. For the fraction of the R-1 effluent that cannot be reused for irrigation on the project site, the preferred alternative is to provide that supply for other irrigation uses nearby. If and when necessary, the amount that cannot be reused for irrigation would be disposed of in onsite injection wells.

*DAR has already informed the applicant that they view this project as a coastal development with "substantial potential to impact marine water quality and coastal ecosystems". The introduction of nutrients and contaminants into groundwater and near shore marine waters through excess effluent disposal or percolation of R-1 water irrigation within the project must be thoroughly evaluated so that appropriate mitigation can be developed.*

Response: The impact assessment in the 2012 report by Tom Nance Water Resource Engineering, which was not available for the initial published EIS, does contain a detailed analysis of the use and disposal of R-1 effluent.





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*OHA advocates that in addition to designing project WTP elements pursuant to State DOH standards, EPA and NOAA guidance must be considered. Furthermore, the applicant should be required to proactively develop a groundwater monitoring plan in coordination with all stakeholders as the data obtained will directly contribute to short and long term efforts to protect overall groundwater quality in Kona.*

Response: The project will develop and implement a groundwater monitoring program to detect possible changes in groundwater quality so that mitigation measures, if appropriate, can be implemented.

#### Drainage

*Again, the same geology of Kona which allows for rainfall, and storm and irrigation waters to quickly percolate also implies that there is very little natural filtration of contaminants and nutrients before this water quickly reaches the basal lens and enters near shore marine waters.*

*A system of catch basins, drain lines and drywells will dispose of storm and irrigation waters which do not percolate naturally in natural or landscaped areas. The project area will be particularly vulnerable to storm waters during initial mass grading, stockpiling and excavation prior to the development of drainage infrastructure. We will rely on assurances that the applicant will adhere to all DOH and County requirements during initial project development. The construction and post-construction best management practices which will be employed are critical in contributing to the protection of overall groundwater quality and near shore marine resources.*

Response: The Petitioner will adhere to all State DOH and County requirements during construction and post-construction and will implement best management practices to minimize impacts to groundwater and near shore marine resources.

*The EPA and NOAA have also jointly published guidance on the three basic mechanisms employed to treat urban runoff- infiltration, filtration and detention. This guidance notes that standard infiltration systems may not be appropriate where groundwater requires protection and that certain restrictions may also apply to using infiltration systems located above "sole source drinking water aquifers".*

Response: The underlying groundwater is not a sole source aquifer. Rather, it is a brackish basal aquifer that is far too salty for irrigation use. Its primary value is for the biota in the Kaloko-Honokohau National Historic Park's anchialine ponds and in the nearshore makai environment. The project's



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potential impact on these uses of the groundwater is assessed in the 2012 report by Tom Nance Water Resource Engineering.

*A pollution prevention plan (PPP) will be developed and we offer our general support that mitigation of "contaminated surface water can be achieved through the development of a PPP designed to address all pollutants associated with the development.... To prevent any release into the environment, including the groundwater." This is an important recognition and we appreciate the applicant's commitment that "no grading activity will take place" until the PPP has been prepared. OHA advocates that this PPP be developed pursuant to DOH standards and in consultation with all stakeholders. Consideration should also be afforded to EPA and NOAA guidance that results in the development of infiltration, filtration and detention mechanisms that employ the best available science and technology to provide protection for groundwater and near shore marine resources.*

Response: The Petitioner is committed to preparing a PPP prior to construction. The PPP will be prepared in consultation with appropriate State and County agencies.

#### Water Conservation

*The applicant's consideration of incorporating State-Office of Environmental Quality Control and U.S. Green Building Council-Leadership in Energy and Environmental Design guidelines relative to water conservation into project design concepts and utilizing native plant species adapted to the project area in project landscaping design is appropriate and appreciated.*

*Given the issues relative to the water demands of this project facing the applicant, their commitment to strategies "to reduce consumption, conserve resources and minimize water use" is also appropriate. It is surprising that the applicant is only "considering" specific measures to facilitate end-user water conservation such as: water restrictions during extended dry weather periods, education and efficient landscaping practices. OHA sees these types of specific measures as a necessity and we advocate the applicant commit to them.*

Response: In the design and construction of Kaloko Makai, SCD – TSA Kaloko Makai, LLC will implement feasible measures to promote energy conservation and environmental stewardship, such as the standards and guidelines promulgated by the US Green Building Council, the United States Environmental Protection Agency (EPA) ENERGY STAR Program or other similar programs. Additionally, the forthcoming Second DEIS includes a Sustainability Plan.



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#### Conclusion on Water

*The applicant has clearly exerted considerable effort to avoid drawing groundwater from the traditional basal lens of the Keauhou ASYA. To a certain extent, these efforts appear to be a laudable attempt to recognize the need for developing alternatives to provide potable water and reduce the pressure on our precious and limited groundwater resources. More specifically however, these efforts seem to be directed at the National Park Service (NPS) who has consistently expressed concerns relative to overall groundwater quality and discharge, and how the fishponds wetlands, anchialine ponds and approximately 627 acres of near shore marine waters within the Kaloko-Honokohau National Historic Park are or will be affected by this project and the overall development of Kona CDP elements.*

*Unfortunately, OHA views the end result of these efforts as ambiguity and uncertainty within the DEIS that contradicts the core intent of the Chapter 343, HRS process-informed decision making. We do not see how any reviewer of the DEIS, including the LUC or any other government agency can comprehensively assess the true impacts of the alternatives under consideration to develop potable water. OHA must establish the position that the applicant's ability to provide for the potable water needs of the project and adequately mitigate the impacts of the project on the overall groundwater quality are both clearly unresolved issues at this time.*

Response: The 2012 assessment by Tom Nance Water Resource Engineering has been added to the EIS to address the concerns you raised in this comment.

*OHA offers a second traditional saying as our closing comment on water for your consideration: Kekaha wai ole o na Kona - waterless kekaha of the Kona District. While we will not offer any attempt to understand any hidden meanings of this saying, we can only hope that its literal translation does not foreshadow the future of Kona. It is the inherent responsibility of all interested parties and stakeholders to collaboratively work to see that it is not.*

*The immediate issue relative to water which is facing the LUC and all other government agencies is how you will fulfill your responsibilities to ensure the availability, and protect the quality of a public trust resource which is also essential to the perpetuation of a broad range of traditional and customary practices of the Native Hawaiian people.*

Response: The Petitioner acknowledges you closing comment.

#### Native Dryland Forest Preserve

*Approximately 265-acres, constituting one of the largest remaining native dryland forest (dryland forest) areas in the Hawaiian Islands have been identified in Kaloko*



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*Ahupua'a . Of this total, approximately 150-acres are situated within the project area and the applicant is proposing to establish the Kaloko Makai Dryland Forest Preserve (preserve). OHA offers our support for the general concept of establishing the preserve and we applaud the applicant for this proposal.*

*A variety of "common" native tree species (trees) are situated within the project area, outside of the boundaries of the preserve. These trees may be impacted during land clearing to facilitate the project and the applicant proposes to coordinate as appropriate to harvest them prior to the initiation of project activities so their wood can be used to perpetuate certain traditional and customary practices. OHA also applauds the applicant for this proposal.*

Response: The Petitioner appreciates OHA's support.

#### Habitat Conservation Plan

*The U.S. Fish and Wildlife Service (FWS) has identified four (4) native plant species listed as "endangered" (listed species) as defined by the Endangered Species Act (ESA)63 and a single native plant species identified as a "candidate" for listing as endangered (candidate) within the project area. Any species listed under the ESA is automatically afforded protections pursuant to State law.*

*Two of the listed species and the candidate occur outside of the boundaries of the preserve and preparation of a habitat conservation plan (HCP) is required to support the issuance of a license by the State Board of Land and Natural Resources to allow for the "take" of the listed species resulting from project development. The applicant has prepared a draft HCP. OHA has no objections to the immediate and short term management actions relative to the listed and candidate species which area described in the HCP.*

Response: The endangered species hala pepe and 'aiea that are located outside of the dryland forest will be left in place and a 50-foot buffer will be provided, therefore a HCP will not be required.

#### Nexus Between the HCP and the Ane Keohokalole Mid-Level Highway Project

*The HCP repeatedly mentions the Ane Keohokalole Mid-Level Highway Project (midlevel road) 68 and specifically references on-going ESA-Section 7 consultation between the FWS, the U.S. Department of Transportation-Federal Highways Administration (FHWA) and the County due to the affects of the mid-level road on listed or candidate species. In the final environment assessment (FEA) for the mid-level road the FHWA concluded that construction will "not likely adversely affect any listed species known from the Island of Hawaii". The FWS concurred with the FHWA's conclusion.*



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*The applicant emphasizes that no FHWA funding will support the project and suggests that the preserve will be "best served by Kaloko Makai and FHWA working cooperatively to complement each other's management actions rather than to duplicate activities". While this may be true, a review of the management actions described in the HCP make it clear that the FHWA has a significant responsibility in the initial implementation and short term (three-year) management before the applicant's management responsibilities significantly increase. The ability of a reviewer of the DEIS to clearly understand the nexus between the HCP and the mid-level road (nexus) is critical in determining whether the overall goals of the HCP are feasible. OHA feels that the instant DEIS does not adequately describe the origin of this nexus and the FHWA's conclusion in the mid-level road FEA causes additional uncertainty. We request clarification on this issue.*

Response: The FHWA does not own the land nor are they creating a preserve. The Petitioner is owner of the land and, subject to receiving appropriate land use entitlements, will create the Preserve and the preferred alternative notes various management measures.

The Petitioner will preserve 150-acres of the Kaloko Makai Dryland Forest. A variety of endangered and candidate species will have continued protection and their habitats set aside in perpetuity, which will enhance their prospects for survival. Management of the preserve includes weed control and fire management.

The reason the Petitioner is not conducting management actions at the same time as FHWA is that, essentially, the Petitioner would be duplicating efforts for the same plants, in the same location, at the same time. This would be unnecessary and a wasteful expenditure of conservation management funds.

The reason the Petitioner is following FHWA's management actions (after their approximate three years of management of the site,) is that FHWA is required to expend their funds (set aside for the Ane Keohokālole Highway project) by 2015 and are not able to spend any funds after that deadline. The species and habitat of the Kaloko Makai Dryland Forest Preserve will be best served by the Petitioner and FHWA working cooperatively to complement each other's management actions rather than to duplicate activities.

**Traditional and Customary Practices relative to Native Species within the Project Area**

*A participant in the interviews conducted to support the project's cultural impact assessment (CIA) specifically referenced the practical use of the ESA candidate,*



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*ko'oko'olau within the preserve: ... the ko'oko'olau plant is in the project area. The only place you'll find the plant. If they develop it, please get the seeds, and use it as part of landscaping when doing it. The plant is used for tea, better than Lipton and Earl Grey. You have to watch for this plant, because this is the only area that has it and collect the seeds...*

*This statement may indicate that Native Hawaiians are actively accessing the project area to exercise traditional and customary gathering rights. The kookoolau within the project area are found outside of the preserve and "will be removed". The HCP proposes actions within the preserve to mitigate the loss of this native plant due to the development of the project, but it does not address the specific issue of it being actively gathered.*

*The limited distribution of kookoolau outside of the project combined with the possibility that access to the lands they are situated on is restricted, means this project may directly affect the traditional and customary practices of the Native Hawaiian people, as we will no longer be able to gather this specific resource.*

Response: The Cultural Impact Assessment for this project makes reference to the medicinal use of ko'oko'olau (*Bidens* spp.) on pages v, vi, 60, 61, 72, 76 & 78 and recommends preservation of remaining areas of lowland forest in the project area containing several endangered and threatened native species, including ko'oko'olau.

Existing ko'oko'olau within the Preserve will be managed through creation of the 150-acre Kaloko Makai Dryland Forest Preserve. Ko'oko'olau, as well as a variety of endangered and candidate species within the Preserve, will have continued protection and their habitats set aside in perpetuity, which will enhance their prospects for survival. Management of the 150-acre Kaloko Makai Dryland Forest Preserve, includes weed control and fire management.

The Petitioner looks forward to working with OHA on the appropriate harvesting of the ko'oko'olau for traditional and customary practices of the Native Hawaiian people within the Kaloko Makai Dryland Forest Preserve.

**General Comment on Dryland Forest**

*In traditional and early-historic times, a dryland forest was a source of valuable resources ranging from food and medicine to raw material for a variety of uses. Sadly, published reports describe that approximately 90% of the dryland forests in the State of Hawai'i have been lost due to the impacts of modern development, wildfire, and introduced animal and plant species. On the Island of Hawai'i, on-going restoration efforts at two specific locations outside of this project provide strong indications that*

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*our dryland forests can get on the road to recovery. In Ka'upulehu, the members of the North Kona Dry Forest Working Group (DFWG) are patiently developing techniques which have been proven successful in an initial 6-acre pilot project and are now being applied in a larger 70-acre project. In Kealakehe, the State Department of Hawaiian Home Lands (DHHL) has implemented a plan to establish and manage dryland forest preserves at the "Villages at La'i'Opua" that contain both listed and candidate species.*

*The Kaloko dryland forest has been long recognized as being in good condition due to certain natural factors (rugged lava) which have acted as a deterrent to usual threats such as fire and introduced animal and plant species. In addition to ESA listed and candidate native plant species, botanical surveys identified at least 24 additionally native trees, shrub and plant species (native species) within the project area. With the exception of pili, all of these additional native species are present within the dryland forest and the boundaries of the preserve.*

Response: Native trees, shrub and plant species (native species) within the Preserve will have continued protection and their habitats set aside in perpetuity, which will enhance their prospects for survival. Creation and management of the 150-acre Kaloko Makai Dryland Forest Preserve, includes weed control and fire management.

#### Comprehensive Management of the Preserve

*The preserve is identified as an unresolved issue in the relatively narrow sense of the HCP being dependent upon the applicant receiving all necessary entitlements, permits and funding. OHA views the importance of the preserve in a context which extends beyond the HCP and sees the comprehensive management of the preserve as a resource for current and future generations as an unresolved issue. We do not want to see the preserve only recognized for its botanical value and become inaccessible to our community. The variety of native species within the preserve may not be immediately available for use in the perpetuation of traditional and customary practices, but a management objective of the preserve should be that they all eventually one day will be.*

Response: As stated above, The Petitioner looks forward to working with OHA on the appropriate harvesting of the ko'oko'olau for traditional and customary practices of the Native Hawaiian people within the Kaloko Makai Dryland Forest Preserve.

*When considering that at full build-out, two elementary and a middle school (schools) may be developed within the project area, there is a possibility that the preserve could be incorporated into the educational curriculum of the schools as a "living classroom". The educational potential of the preserve extends to all generations as*

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*project residents and those from neighboring communities could have the opportunity to actually see native species within a natural ecosystem and understand their uses in perpetuating traditional and customary practices. Programs that collaborate with the on-going efforts at Ka'upulehu and Kealakehe could be considered.*

Response: The Petitioner acknowledges and concurs with the educational potential of the preserve. The trail system within the Kaloko Makai Dryland Forest Preserve will allow it to be accessed by residents and visitors and afford opportunities to educational programs as well. Appropriate signage will also be developed to encourage public cooperation and discourage trespassing, vandalism or arson within the Kaloko Makai Dryland Forest Preserve

*Archaeological studies have identified at least two trail segments (trails) which extend through the preserve. We encourage the applicant to fully explore the possibility of whether these trails can be used for community access through the preserve. This could promote both educational and recreational opportunities within the preserve, and also foster pedestrian connectivity to other areas within the project and surrounding areas to which the project area is traditionally and culturally connected to.*

Response: There are two trails that start near the same point on Hina Lani; one is an old stepping stone trail that leads mauka and the other runs across the Kaloko Makai Dryland Forest.

These trails are intended to be open for public use.

In addition, the land use plan for Kaloko Makai includes a school and park at the end of one of the trails so residents within the project will be able to walk to and from school via the trail. The other trail will connect to a public street and will allow people easy access to the trail.

The nature of the Kaloko Makai Dryland Forest and the reason it appears to be in the good shape is because it is rough and inhospitable a'ā flow. Over the years, even animals such as cattle and goats did not go in this area because it is so rough.

The trail system within the Kaloko Makai Dryland Forest will allow it to be accessed by residents and visitors and afford the ability for educational programs as well. Appropriate signage will also be developed to encourage public cooperation and discourage trespassing, vandalism or arson within the Kaloko Makai Dryland Forest Preserve.

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*If the applicant's petition to the LUC is successful and the DBA granted, the applicant will seek to subdivide the preserve into a single tax map key (TMK) parcel through the applicable County processes. OHA requests that the applicant consider incorporating a restrictive covenant or condition into the property deed which confirms that the eventual TMK parcel which will encompass the preserve shall remain undeveloped and that appropriate access shall be provided in perpetuity.*

Response: OHA's request for the incorporation of a restrictive covenant or condition into the property deed will be forwarded to the Petitioner for consideration.

**Conclusion on Dryland Forest**

*Overall, OHA reaffirms our support and appreciation for the applicant's proposal to establish the preserve and we look forward to seeing it achieve its full potential as it will one day stand as a priceless kipuka once the urban development elements of the Kona CDP are completed. We encourage the applicant to work with all appropriate parties to develop a comprehensive plan to guide the management of and appropriate access to the preserve into the future.*

*The immediate unresolved issue that must be addressed is the affect this project will have on traditional and customary gathering rights with the removal of the ko'oko'olau. It is unknown at this time whether other native plant species within the project area or preserve are actively being gathered and utilized.*

Response: As stated above native trees, shrub and plant species (native species) including ko'oko'olau within the Preserve will be managed through creation of the 150-acre Kaloko Makai Dryland Forest Preserve. These species will have continued protection and their habitats set aside in perpetuity which will enhance their prospects for survival. Creation and management of the 150-acre Kaloko Makai Dryland Forest Preserve, includes weed control and fire management.

Additionally, the two trail systems within the Kaloko Makai Dryland Forest will allow it to be accessed by those practicing traditional and customary gathering rights within the Kaloko Makai Dryland Forest Preserve.

Although the Cultural Impact Assessment for this project makes reference to the medicinal use of ko'oko'olau (*Bidens* spp.) on pages v, vi, 60, 61, 72, 76 & 78, it does not identify any other native plant species within the project area or preserve that are actively being gathered and utilized.

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**Chapter 6E, Hawaii Revised Statutes**

*The applicant has prepared an archaeological inventory survey (AIS) and submitted it to the State Department of Land and Natural Resources-State Historic Preservation (SHPD) for review. At this juncture, SHPD has provided no comments on the AIS. The applicant views this as an unresolved issue. OHA agrees that this is definitely an unresolved issue, but in a much broader sense that extends beyond the submission of the AIS to the SHPD for review and comment.*

*Pursuant to Chapter 6E-42(a), HRS, prior to an approval any agency or officer of the State must provide the SHPD an opportunity for review and comment on the effect a project will have on historic properties. This is a critical point, as we view the first "approval" relative to this project as the LUC's acceptance of the environmental impact statement. If the LUC is depending on the SHPD to determine an adequate level of effort to identify historic properties within the project area, appropriate significance assessments for identified historic properties and warranted mitigation measures via the Chapter 6E, HRS process (process), then this process should be completed before the LUC accepts the environmental impact statement.*

Response: SHPD is a critical party in reviewing and commenting on the reports as part of the overall compliance with Chapter 6E, HRS. The Petitioner will continue to follow up with SHPD regarding their review.

*The vast majority of the historic properties identified and documented in the AIS are resources of potential cultural and religious significance to the Native Hawaiian people. This emphasizes that an assessment of the potential impacts this project will have on these resources, and the relative traditional and customary practices or religious beliefs of the Native Hawaiian people is dependent on the LUC reviewing documents which are the product of the completed process. Consideration must also be afforded to a myriad of existing archaeological and ethnographic studies related to the project area to place it within a larger traditional and cultural landscape.*

*OHA is concerned that issues relative to the project AIS and overall compliance with Chapter 6E, HRS and implementing Hawaii Administrative Rules (HAR) will remain unresolved as the Chapter 343, HRS moves forwards towards completion. If this concern becomes a reality, OHA does not see how the LUC, or any government agency can fulfill your constitutional or statutory responsibilities to the Native Hawaiian people, as simply relying on the submittal of the AIS to the SHPD for review and comment fails to do so.*

*The project AIS is comprised of seven volumes. Five volumes constitute the archaeological inventory surveys (surveys) of the tax map key (TMK) parcels which encompass the project area. A sixth volume has been prepared to summarize the*



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*findings of the surveys. The seventh volume is an archaeological assessment (assessment) of a portion of the eighteen (18) acre site which may be utilized for the development of off-site wells to provide for the project's potable water needs.*

*Five (5) TMK parcels encompass the project area, but only four (4) surveys have been prepared. It appears the survey which was prepared for TMK Parcel (3) 7-3-009:028 includes the immediately adjacent 46.869-acre TMK Parcel (3) 7-3-009:063. Please clarify whether our understanding of this issue is correct, as it will account for all 5 TMK parcels listed in the DEIS.*

Response: All TMK parcels are included in the AIS reports. The archaeological inventory survey for the Kaloko Makai project area consists of 7 bound hard copies. AIS for 7-3-009: 017 consists of 1 volume 7-3-009: 025 consists of 2 volumes; 7-3-009: 026 consists of 3 volumes; and 7-3-009: 28 consists of 1 volume. A portion of parcel 28 was later subdivided and became parcel 63. The AIS for parcel 28 covers parcel 63. CSH also prepared an archaeological assessment for the off-site potable well field in 2011. There are a total of 8 volumes for the overall Kaloko Makai project.

*The assessment identified no historic properties within an approximately 3.44 acre area south of Hina Lani Street. It appears that the remaining acreage north of Hina Lani Street which may be utilized for the development of off-site wells was subject to an archaeological survey separate (separate survey) from the project AIS. This separate survey identified 89 sites distributed on multiple tax map key parcels. Seven of these sites were subject to a preservation plan approved by SHPD. Four of these preserve sites are on the tax map key parcel north of Hina Lani Street where the off-site wells will be developed, but their locations are not depicted or described in the DEIS. OHA also requests clarification on this issue.*

Response: The preferred alternative is for an on-site well site.

#### Significance Criteria

*State Law defines the five criteria (criteria) used in assessing the significance of historic properties. The first four criteria mirror those used at the federal level in assessing National Register of Historic Places:*

*Criterion "A"- associated with events that have made an important contribution to the broad patterns of our history;*

*Criterion "B"- associated with the lives of persons important in our past;*

*Criterion "C"- embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic value;*

*Criterion "D"- has yielded, or is likely to yield, information important for research on prehistory or history.*



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*The fifth criterion is the key exception found in State law:*

*Criteria "E"- has an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to traditional beliefs, events or oral accounts- these associations being important to the group's history and cultural identity.*

*This definition is extremely broad. When considering the dominant role religious beliefs had in shaping traditional Hawaiian society and guiding the daily activities of all classes of people, in a very general sense, any historic property associated with the native Hawaiian peoples has religious or cultural significance.*

Response: The Petitioner agrees that the "fifth criterion" "E" "associations being important to the [ethnic] group's history and cultural identity" (HAR 13-275-6(b) (5) can be interpreted as extremely broad. There has been some general agreement that burials and religious historic properties are more appropriate for significance nomination under "Criterion E" than, say, agricultural sites. Criterion E has been assigned commensurate with prevailing norms. The concurrence of the SHPD is required before significance is finalized. The SHPD is the final arbiter of significance.

*The pattern and practice of archaeology in Hawaii which OHA sees today is that contracted consultants are determining what significance an identified site has to the Native Hawaiian people from an archaeological perspective. The project AIS identified a total of 341 historic properties (sites) comprised of 658 features. The vast majority of these sites are assigned a "pre-contact age" and associated with the Native Hawaiian people. We are disappointed to see that the applicant's archaeological contractor has assessed so many of these sites as significant only under criteria "D".*

Response: Significance criteria (HAR 13-275-6 (b) are very specific. Assessment of significance was carried out with care (67 sites were designated as significant under multiple criteria). The project area was indeed rich in archaeological resources. However, because the project area is well back from the coast, was always somewhat "rural", and is relatively poorly watered there were few sites that could be associated with events or broad patterns of history (Criterion A), that could be associated with specific persons (Criterion B), or that showed distinctive characteristics or represented the work of a master (Criterion C).

*OHA's position is that any site identified in an AIS that is associated with the Native Hawaiian people is automatically "significant" under Criterion "E". While this position will not result in OHA advocating for the preservation of every site assigned*



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*cultural or religious significance to the Hawaiian people, it is the foundation of our advocacy that it is the Native Hawaiian people who have the responsibility to determine the significance of the tangible reminders of ka ike o ka poe kahiko (the knowledge of the ancestors).*

Response: The Petitioner understands OHA's position that "Criterion E" should be applied to all pre-Contact, Native Hawaiian historic properties. The SHPD's acceptance of the AIS is required before significance is finalized. The SHPD is the final arbiter of significance. In the past, the SHPD has not taken the position that all pre-Contact, Native Hawaiian historic properties are significant under Criterion E.

Proposed Mitigation

*Of the 341 total sites identified in the project area, the applicant is proposing that seventy-two (72) be preserved, eighty (80) be subject to data recovery and "no further work" for one hundred eight-nine (189). At this time, OHA has been unable to comprehensively review the descriptions or contextual information to provide specific comments on the proposed mitigation for every identified site at this time. We do offer general comments on the proposed mitigation for every identified site at this time. We do offer general comments on the proposed mitigation to emphasize our position that the unresolved status of the Chapter 6E, HRS process inhibits the ability to assess the impacts of this project on the resources, and the traditional and customary practices of the Native Hawaiian people.*

Response: The Petitioner acknowledges that OHA was unable to provide specific comments on the proposed mitigation for each identified site and general comments were provided.

SHPD is a critical party in reviewing and commenting on the reports as part of the overall compliance with Chapter 6E, HRS. The Petitioner will continue to follow up with SHPD regarding their review.

*Thirty (30) of the sites proposed for preservation are burials. Pursuant to State law, the Hawaii Island Burial Council (HIBC) has the statutory authority to render a determination of preservation in place or relocation for these burials and make recommendations to the SHPD on short and long-term mitigation measures. The HIBC considers the views of recognized lineal and cultural descendants in determining burial treatment. The DEIS and project AIS contains no discussion on the status of consultation with lineal and/or cultural descendants and the impact this project will have on traditional and customary practices and beliefs associated with these specific burials is completely unknown at this time.*



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Response: The Kaloko Makai project team is fully committed to addressing the previously identified Native Hawaiian burial sites as per HAR 13-300-33 in consultation with the Hawaii Island Burial Council, the State Historic Preservation Division and any recognized cultural and/or lineal descendants. The Kaloko Makai project team looks forward to moving forward with consultation following SHPD acceptance of the archaeological inventory survey report(s).

*The data recovery of eighty (80) sites will be conducted pursuant to a plan developed in accordance with State law. This plan will identify a research objective which will be addressed through the data recovery effort. The applicant has proposed six (6) possible data recovery research objectives (objectives). OHA views all of these proposed objectives as having a possible impact on the traditional beliefs of the Native Hawaiian people, but OHA and other parties will not be able to provide substantive comments until an objective is selected, a plan developed and the results of data recovery published in a report.*

Response: It is understood that OHA will not be able to provide substantive comments regarding data recovery until data recovery objectives are selected and a data recovery plan developed. The Kaloko Makai project team looks forward to consultation with OHA on the data recovery plan. The development of data recovery plan(s) will have to await SHPD acceptance of the archaeological inventory survey report(s).

*OHA appreciates the applicant's acknowledgement of community concerns relative to an extensive network of traditional and historic trails which extend throughout the project area. The mauka-makai Kohanaiki Trail, which historically extended continuously from the Kohanaiki Homesteads (mauka of the project) to the coastal lands now managed by the NPS is of specific concern. It is important to note, that the significance and practical use of these trails are not from the distant past, as there are members of our community with us today who utilized these trails in their lifetimes. The NPS and DLNR-Na Ala Hele Program have expressed a specific interest in ensuring that mauka-makai trails extending through the project area maintain connectivity to surrounding areas which have a traditional or cultural connection. While certain mitigation measures relative to trails have been proposed, it is unknown whether they are adequate in addressing community concerns or will be approved by regulatory agencies.*

Response: The project team shares OHA's concerns for the mauka-makai Kohanaiki Trail and has been working with the NPS towards the preservation of this trail alignment. We look forward to continuing consultation with OHA as plans progress.



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Request for Additional Information relative to Site 20720

*It is our understanding that a 1996 archaeological study, which included the project area identified eight possible burial sites. The project AIS conducted testing of these possible burial sites. This testing resulting in five sites being confirmed as "non-burial" and two sites as "probable burial". The eighth site (Site 20720) was "determined to have been destroyed". OHA requests additional information on the circumstances which led to the destruction of Site 20720, as this matter may require an investigation into possible violations of Chapter 6E, HRS.*

Response: Historic Property SIHP 50-10-27-20720 was identified in Collin et al. (1996:84 & 88) draft study in TMK 7-3-009:017 just north of Hinalani Road as a terrace and possible burial. Cultural Surveys Hawaii's Bell et al. (2008:147) study details our repeated effort to relocate this site and concluded: "All that remains in this likely location of site -20720 is a pile of boulders and a remnant tumulus bedrock. As a result of these observations, all lines of evidence indicate this site has been destroyed. The outcrop appears to have been almost entirely destroyed by heavy machinery and is located near the end of a fan-shaped bulldozed area originating at Hina Lani and approximately 30 m (98.4 ft.) in diameter. This bulldozing is believed to have occurred between 1996 and 2008 but by whom and why is unclear.

Site 26452

*Site 26452 is described as a lava tube which is accessed through an opening within the project area, but extends outside of the project area where at least eight (8) confirmed burials have been identified. OHA recognizes that the applicant cannot propose mitigation for portion of the lava tube outside of the project area. We do hope that the applicant and neighboring landowner will collaborate to propose mitigation measures for the site that are consistent. OHA will also be seeking assurances from the SHPD that the owner of the parcel under which the lava tube extends and the burials are situated has been formally notified of their presence.*

Response: As part of the burial treatment plan addressing SIHP # 50-10-28-26452 in TMK parcel 7-3-009:028 documentation will be provided regarding consultation with the owner of the parcel under which the lava tube extends and the burials are situated, documenting that they have been formally notified of their presence and efforts to coordinate burial protection.

Conclusion on Chapter 6E, Hawaii Revised Statutes

*OHA views the unresolved issues relative to the Chapter 6E, HRS as inhibiting LUC's and all other government agencies ability to adequately assess the impacts this project will have on the resources, and traditional and customary practices and beliefs of the*



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*Native Hawaiian people. The submittal of the project AIS to the SHPD for review does little to resolve this issue. OHA advocates that the Chapter 6E, HRS process be completed before the LUC takes any action on the environmental impact statement so that the consultation effort which leads to final mitigation measures being approved can be considered by decision makers.*

Response: SHPD is a critical party in reviewing and commenting on the reports as part of the overall compliance with Chapter 6E, HRS. The Petitioner will continue to follow up with SHPD regarding their review.

Cultural Impact Assessment

*In 2000, the Hawai'i State Legislature found that: [T]he 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 exercise thereof is necessary to ensure the continued existence, development, and exercise of native Hawaiian culture. The result of this finding was an amendment to the definitions of "environmental impact statement" and "significant effect" contained within §343-2, HRS to now include the terms "welfare" and "cultural practices". The preparation of a cultural impact assessment (CIA), as a technical report to support the findings and conclusions in a Chapter 343, HRS document is how an assessment of the affects of an action on the resources and exercise of the "native Hawaiian culture", along with proposed mitigation to address these affects is usually attempted to fulfill the requirements of this amendment.*

*With our substantial concerns relative to groundwater, dryland forest and archaeological resources (resources) which are directly related to the perpetuation of traditional and customary practices (practices) and beliefs of the Native Hawaiian people in mind, OHA respectfully concludes that the project CIA is woefully inadequate. The mitigation measures proposed as a result of the CIA, while appreciated are elementary when considering the substantial and long term impacts this project could have.*

*Outside of the amendments to Chapter 343, HRS and a CIA, the Hawai'i Supreme Court established a specific analytical framework in order for the LUC to complete a proper analysis of the impacts of a given action on Native Hawaiian resources, beliefs and traditional and customary practices. This judicial guidance applies to all State and county agencies and requires an agency to:*

*(1) Identify and scope of "valued cultural, historical, or natural resources" in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area; (2) Extent to which those resources-*





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*including traditional and customary native Hawaiian rights- will be affected or impaired by the proposed action; and (3) Feasible action, if any, to be taken by the [agency] to reasonably protect native Hawaiian rights if they are found to exist.*

*As we have already mentioned, the unresolved issues related to resources inhibits all agencies', including the LUC's, ability to apply this framework and complete a sufficient analysis. Considering the clear threat to resources which are essential to the perpetuation of Native Hawaiian traditional and customary practices, OHA hopes that the LUC will agree with our position and require the applicant to provide additional information in order to fulfill your affirmative duty to protect the reasonable exercise of traditional and customary rights.*

Response: A good faith effort was made to identify and reach out to kūpuna and kama'āina potentially knowledgeable about the project area. A total of twenty-five people were contacted for the purposes of this CIA; 18 people responded; and 12 kūpuna and/or kama'āina were interviewed for more in-depth contributions. Reported kama'āina interviews are from Mr. Herman Kunewa, Uncle Karin Haleamau, Uncle Arthur Mahi, Mr. Peter Keka, Mrs. Cynthia Nazara, Mr. Duane Keanaaina, Uncle Valentine K. Ako, Kahu Norman Keanaaina and Mr. George Van Gieson. Cultural Surveys Hawaii tried to faithfully summarize the concerns of these kūpuna and safeguard the reasonable exercise of traditional and customary rights.

#### Public Services and Facilities

*The applicant's proposals and commitments relative to public facilities and services are all appreciated as they have the potential to positively impact the North Kona Community in general. When considering that the full build-out of the Department of Hawaiian Homelands (DHHL) Lai Opuā residential development in Kealahou will concentrate a significant Native Hawaiian Population in the region, these facilities and services are of elevated importance to OHA and DHHL beneficiaries.*

Response: The above comments have been noted.

#### Regional Hospital

*OHA looks forward to seeing the development of a new regional hospital moving forward on 40 acres of land within the project area the applicant has committed to provide. The need for a new regional hospital is clearly recognized as it will increase accessibility and decrease travel times for the North Kona Community. The Kona Community Hospital in Kealahou (15 miles south) and North Hawaii Community Hospital (35 miles north) currently service the emergency and trauma needs of this area. We applaud all involved in the effort to develop this much needed facility.*



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Response: The Petitioner appreciates OHA's support of a new regional hospital within the Kaloko Makai development.

#### Kona Judiciary Complex

*We also applaud the applicant for committing 10 acres of land within the project area for the possible development of the new Kona Judiciary Complex (complex). It is our understanding that the State Department of Accounting and General Services (DAGS) has commissioned a selection study to determine the most viable alternative locations (locations) for the complex. These locations will be comprehensively assessed in a forthcoming draft environmental impact statement prepared by DAGS.*

Response: Since the publication of the Draft EIS, DAGS selected Kealahou as the future site of the Kona Judiciary Complex. The forthcoming Second DEIS has been revised accordingly.

#### Schools

*The State Department of Education (DOE) has informed the applicant that this project will have a "significant impact" on DOE facilities in West Hawaii. The project is within the West Hawaii School Impact Fee District and thus, the applicant is subject to impact land and cash payment fee components (impact fees). The applicant references a July 21, 2011 meeting with the DOE to discuss impact fees, but it is unclear whether the results of this meeting ensure compliance with applicable State laws. This information should be provided in the DEIS.*

Response: The discussion on schools has been revised in the forthcoming Second DEIS to include an update on consultations with the State DOE.

#### Housing

*We appreciate that the applicant is committed to providing 700 "affordable" units with pricing to be determined in consultation with government agencies.*

*A "Social Impact Assessment" (SIA) was prepared as a technical report to support the DEIS. Twenty-four (24) interviewees or "stakeholders" representing a "wide spectrum of beliefs and interests" were deliberately selected to share their thoughts on: issues independent of the project affecting West Hawaii, overall issues specific to the project and specific issues related to project elements. Interestingly, the "affordable housing" criteria established by the U.S. Department of Housing and Urban Development (HUD) and how this criteria affects the community in general, and specifically Native Hawaiians was a prevailing theme during these interviews. The SIA then attempted to determine the extent of "actual inequities" in HUD and County of Hawaii affordable housing guidelines and criteria.*

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*The SLA analysis of the potential "inequities" in affordable housing guidelines and criteria concludes that "all groups ...face serious affordability issues in regard to housing in West Hawai'i (especially North Kona)" and that "Native Hawaiians (and perhaps Filipinos) are particularly challenged in West Hawai'i 'due to lower overall incomes that reflect differences in overall education, age, and family structure". This conclusion seems to be ambiguously dismissed by a closing comment on this issue that:*

*the social challenges facing West Hawai'i will probably have less to do with the fairness of "affordable housing" guidelines than with the soaring prices of market housing. The social impact of the Kaloko Makai project will be positive to the extent that it succeeds in the goal of providing more affordable market housing to working families- a goal that would likely be achieved by greater densities consistent with the Kona Community Development Plan*

*OHA sees the conclusion and closing statement in the SLA as doing very little to address the concerns of interviewees, or comprehensively assessing any actual inequities in HUD or County of Hawaii affordable housing criteria and guidelines that adversely affect Native Hawaiians. OHA sees the DEIS preparer's outright dismissal of concerns relative to affordable housing expressed by SLA interviewees as a "fleeting fantasy" as extremely alarming. We urge caution in the approach the applicant utilized to discuss this important issue.*

Response: The purpose of the Social Impact Assessment (SIA) is to investigate and disclose findings as a basis for assessing the social impacts of the proposed action. While such findings may suggest potential inequities of governmental housing programs, any such perceived inequities would not be an impact of the proposed action. Therefore, the Petitioner has no basis for recommending changes in governmental policy as a mitigation measure for the proposed action.

The forthcoming Second Draft EIS will be revised to state the following:

*Kaloko Makai will contribute to ameliorating Kona's housing supply issues through (a) market-priced housing aimed primarily at working families rather than off-shore buyers, and (b) 700 "affordable" units with pricing to be determined in consultation with government agencies. These contributions cannot totally reverse the high land and development costs that have kept Hawai'i among the most expensive housing markets in the nation for the past 50 or 60 years. However, failure to*

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*provide housing supply in pace with increasing demand by local residents would worsen rather than help the overall housing affordability situation.*

#### Conclusion

*The aspects of this project ranging from housing to employment and economic benefits that are offered as "beneficial impacts" must be carefully balanced against the long term vision of the Kona Community and impacts to resources that we must ensure are available for future generations.*

*As we have already recognized, this project area is consistent with uses described in the County general Plan and is within the Urban Area designated within the Kona Community Development Plan (CDP). Thus the years of planning which went into the CDP, seems to confirm the community's long term vision that this project would one day become a reality.*

*What the elements of the CDP do not specifically provide for or address however, is how the direct, secondary and cumulative affects of each project will impact our resources and this is the source of our opposition to seeing this project move forward at this time. OHA believes that our review of this DEIS provides adequate evidence that the project will result in adverse impacts to three resources (groundwater, native dryland forest species, and archaeological and burial sites) of importance to the Native Hawaiian people and to a certain extent all of Hawaii. These adverse impacts are both extreme and unresolved and thus, the LUC and other decision makers are unable to fulfill their responsibilities to conduct informed decision making in accordance with constitutional and statutory mandates and judicial opinion.*

*We believe that these impacts and unresolved issues can be addressed, but it will take a comprehensive and collaborative effort (effort) that involves all stakeholders. We look forward to participating, as appropriate or needed to advocate for the interests of our beneficiaries in this effort. As we await a response, we will caution the applicant that unless the recommended effort is reflected and all concerns of all DEIS reviewers addressed, rather than simply responded to, we will continue to be opposed to this project.*

Response: Please refer to our previous responses regarding groundwater, native dryland forest species and archaeological and burial sites. Based on the findings of studies to be included in the forthcoming Second DEIS, we feel that sufficient information is available for the LUC and other decision makers to consider in their deliberations and render an informed decision.

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Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in cursive script, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission



UNIVERSITY  
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MĀNOA

FAX TRANSMITTAL SHEET

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September 21, 2011  
RE: 0809

Peter Phillips  
SCD-TSA Kaloko Makai LLC  
1100 Alakea Street, 27th Floor  
Honolulu, HI 96804  
VIA FAX TO (808) 537-1801

Dear Mr. Phillips,

Draft Environmental Impact Statement  
Kaloko Makai, Hawaii

SCD-TSA Kaloko Makai LLC proposes to reclassify 224.436 acres of land within the state conservation district, and approximately 724.436 acres of land within the state agricultural district, as state urban district land. The purpose of the proposed reclassification would be to construct 5,000 new residential housing units and 120 visitor accommodation units; provide 75 acres of land for light industrial uses; accommodate 25 acres of new commercial space; and construct associated infrastructure and support facilities (including new water sources and a wastewater treatment plant), altogether covering over 1,100 acres in Kaloko and Kohanaiki, North Kona, Hawaii. Future use of the proposed project area could also include up to three public schools, a fire station, a police substation, a hospital/medical center, and a transit station.

This review of SCD-TSA Kaloko Makai LLC's Draft Environmental Impact Statement (DEIS) is a service activity of the University of Hawaii's Environmental Center to help determine and maintain the optimum quality of the environment. It is not intended to represent the official views of the University of Hawaii. The objectives of our review process are to enhance environmental consciousness, encourage cooperation and coordination, and facilitate public participation. These comments were drafted with the assistance of George A. Wilkins (Hawaii Institute of Geophysics, retired), James Beets (UH-Hilo, Marine Science Department), and David Penn, Environmental Center.

General Comments

1. EIS Trigger and Focus

Because the preparation of this DEIS was triggered by the reclassification of Conservation District lands within the project area, we suggest that the FEIS highlight (1) the specific details of the proposed changes to the Conservation District lands, and (2) the potential impact of removing these particular Conservation District lands from their present use, including an assessment of their site-specific function and value as open space under the current General subzone designation.

DATE: 09/21/2011

FROM: Philip Moravcik  
Water Resources Research Center  
956-3097

TO: SCD-TSA Kaloko Makai, LLC (Peter Phillips)  
537-1801

State of Hawaii Office of Environmental Quality Control (OEQC)  
586-4186

State of Hawaii Land Use Commission (LUC)  
587-3827

Wilson Okamoto Corporation (Earl Matsukawa)  
946-2253

SUBJECT: Draft Environmental Impact Statement  
Kaloko Makai, Hawaii

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## 2. *Unresolved Issues*

The DEIS identifies several unresolved issues that should be advanced towards resolution in the Final EIS (FEIS). One of the unresolved issues discussed on pages 1-17 to 1-18, State Historic Preservation Division review of archaeological inventory surveys, raises a recurring concern. In general, we suggest that historic preservation consultation with DLNR-SHPD be completed as early as possible in the environmental impact assessment process, preferably before a DEIS is issued. This would maximize the opportunity for disclosure and meaningful public review of potential cultural impacts and proposed mitigation measures within the context of the process governed by Hawaii Revised Statutes Chapter 343.

Throughout the DEIS it is difficult to determine if the footprint for the impact analysis includes the full build-out of public facilities on lands within the proposed project area that would be dedicated for public purposes. Therefore, we suggest that the potential additional impacts of the future construction of schools, fire/police facilities, a hospital, and a transit station may represent an additional unresolved issue that should be more directly addressed in the FEIS, particularly with regard to traffic impacts, water and energy demands, and waste disposal capacity.

## 3. *Cumulative Impacts*

In the 37 years that have elapsed since the State of Hawaii first established its EIS requirements, the North Kona region has been subjected to a multitude of environmental impacts and mitigating measures that were identified in accepted EISs. Similarly, the proposed action represents just one set of another multitude of environmental impacts and mitigating measures that may be imposed on the region in the future. Therefore, we suggest that the cumulative impacts analysis in the DEIS be based on a more comprehensive regional, historical approach to the environmental quality of Kaloko, Kohanaiki, and adjacent areas that includes the following components:

1. Compare environmental quality in 1974 with present environmental quality.
2. Identify and quantify the land use changes that occurred from 1974 to present, including a table of completed actions that were the subject of an accepted EIS, and a matrix of anticipated impacts and actual mitigation measures.
3. Compare the size and scope (potential impacts) of all planned actions (including the proposed action) with the cumulative size and scope (actual impacts) of all past actions.
4. Compare the size and scope of the proposed action with the cumulative size and scope of all other planned actions.

For example, in this regard, Table 8-1 of the DEIS would be more useful if it included additional features of planned developments in the project vicinity (e.g. change in impermeable surface)

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and provided a cumulative, regional subtotal for each development feature (e.g. number of residential units). This approach would help to clarify the size and scope of the proposed action within the context of past and future changes in environmental quality.

## 5. *Housekeeping*

In order to improve the utility of Chapter 1, Introduction and Summary, we suggest that each section of the chapter provide a cross-reference to the portion of the main document that addresses the same content as that section. For example, "Parties Consulted During the EISPN Process," page 1-4, would direct the reader to Chapter 9, Consultation, for the complete discussion of this topic.

## Consultation

The comments and responses associated with each consulted party are not indexed or grouped in a manner that would facilitate their readability. For example, although page 9-2 indicates that four programs within the state department of health (DOH) submitted comments, these comments (and responses) are scattered throughout Appendix S, which makes it overly burdensome for the reader to review DOH program comments and responses as a whole. Therefore, in order to better communicate the results of EISPN process, we suggest that the Consultation chapter of the FEIS indicate the pages of the FEIS that document the pertinent communications for each consulted party. We also suggest that the appendix containing the comments and responses organize them so that they are grouped in accordance with the listing presented in the text of the Consultation chapter (e.g. pages 9-1 to 9-3). Typically this is accomplished by providing, in the appendix, a table of contents that lists each commenter and the pages of the appendix that include the associated comment and response letter. We also suggest that the FEIS employ this same mode of organization for comments and responses on the DEIS.

## Page Numbering, Bookmarking, and Digital Page Orientation

Page numbering in the paper version of the DEIS is confusing and leads to the appearance of missing pages within the document. For example, Figures 2-11 to 2-14 appear between pages 2-30 and 2-39 on four consecutive, unnumbered, fold-out pages. According to the Table of Contents these figures appear on pages 2-31, 2-33, 2-35, and 2-37, respectively. Therefore, we suggest numbering the pages of the paper FEIS so as to remove all doubt that pages 2-32, 2-34, 2-36, and 2-38 may be missing from the document, consistent with the page numbering in the digital version of the DEIS.

In order to facilitate the readability of the digital version of the FEIS, we suggest (1) detailed bookmarking of the digital document that corresponds with the lowest level of subheadings that appears in the table of contents, and (2) vertical orientation of all pages such that the reader need not rotate a digital page in order to read it onscreen from a normal orientation.

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### Land Use Allocation

Throughout the DEIS, Kaloko Makai's footprint is billed as "an approximately 1,139 acre" area that also includes a well field of approximately 18 acres of land mauka of the proposed project site. However:

- (1) Table 2-6, Estimated Allocation by Land Use Type and Phase, shows a total estimated area of only 1,039 acres;
- (2) the numbers in the "Estimated Area" column of Table 2-6 add up to 1,041; and
- (3) the total acreage for all land use types indicated in the legend of Figures 2-11 to 2-14 is 1,065.5 acres.

Therefore, we suggest that the FEIS include corrections and additions to Table 2-6, Figures 2-11 to 2-14, and all related content such that the project acreage calculations are more consistent throughout the document, and include the 18 acre well field, along with any additional area that would be required for water transmission from the well field to the proposed project site.

Moreover, the names and acreages assigned to the different land use types shown in Table 2-6 do not match those listed in the legend of Figures 2-11 to 2-14. Again, for the sake of consistency, we suggest corrections and additions to Table 2-6, Figures 2-11 to 2-14, and all related content such that the information presented in Table 2-6 is directly comparable with the information presented in Figures 2-11 to 2-14.

### Specific Comments:

#### 1. *Water sources*

Because the DEIS raises the possibility of desalination as a water source solution, we suggest that the FEIS clarify the nature of federal and state regulations with regard to the salinity of water supplied for domestic use. Federal and state regulations do not establish enforceable standards for chloride content in drinking water, they merely include notification requirements for water that exceeds a certain chloride level. In this regard, we also suggest that the FEIS quantify the volume and constituents of the process water that would be generated by desalination, in order to better account for the potential cumulative impact of wastewater, stormwater, and process water injection throughout the proposed project area.

The Draft Groundwater Assessment (Appendix C) notes that "[t]he [Hawaii County Water Use & Development Plan] WUDP acknowledges that there is not sufficient supply to accommodate the worst-case scenario (full build out of land uses . . .)" and "serves to alert decision makers that the current [Land Use Pattern Allocation Guide] LUPAG designations and zoning classifications cannot be supported with existing water resources." Therefore, we suggest that overall impact of the proposed action, and other planned actions, on water resource availability be further disclosed in the cumulative impacts analysis and the alternatives analysis,

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such that trade-offs between the water resource impacts and other environmental impacts of all planned future actions can be better addressed in the land use decisionmaking address.

#### 2. *Water quality impacts in inland and marine receiving waters*

The proposed action would alter pollutant loading dynamics in ways that are insufficiently identified and quantified in the DEIS. Although "[e]ffluent disposal for the Private WWTP shall be in accordance with all applicable laws" (page 3-43), the ultimate effluent disposal method is not entirely clear. Effluent injection and effluent reuse are both lawful disposal methods, but their environmental impacts could differ significantly. Would the proposed WWTP use injection wells, as well as effluent reuse, for effluent disposal purposes, or would it employ reuse only, as implied (but not explicitly stated) in the DEIS? Where and how would the necessary back-up storage capacity for a reuse facility be provided? Would the self-sufficiency of the on-site WWTP include its energy supply?

For analytical purposes, we suggest that the DEIS include greater detail about (1) the location, volume, and content of wastewater inputs and altered stormwater inputs that would be generated by the proposed action, and (2) their transport and fate in the environment. For example, the DEIS states (Groundwater Assessment, p.16) "As the excess irrigation water percolates downward through the unsaturated zone to the groundwater, removal rates of nitrogen and phosphorus from the water will be significant." This statement is meaningless without numbers (goals), rates, and variances. We suggest that the DEIS more thoroughly identify the volume and quality of effluent that would be produced, and the location, timing, and rate of proposed reuse applications. The DEIS states that "estimates of cumulative changes to groundwater from the total assemblage of existing and proposed projects also do not appear to have the potential for alterations to pond or marine habitats." We suggest that the DEIS reference the source of these estimates and of the technical analysis that leads to this conclusion.

Specifically, we suggest that any reinjection scheme proposed for effluent and runoff disposal be very site specific. The injection site would be thoroughly described with regard to characteristics such as location, flow rate, dispersal depth (re sea level), and expected surface emergence locale relative to the shoreline. Under no conditions should this exit point be mauka of the reef (or, say, into ocean depths less than 200 feet). We suggest that piping of R-1 effluent to a point near the shoreline, followed by directional drilling of a sub-seafloor pipe to the final exit point, should be considered as a technologically valid option.

The analysis of water quality conditions, impacts, and mitigation that is presented in the DEIS suffers from several regulatory and administrative mischaracterizations that warrant correction:

(1) The Land Use Commission (LUC) does not have the authority to determine whether or not violations of the state water quality standards have occurred in state waters. Absent a record of a violation notice, declaratory ruling, impairment decision under Clean Water Act Section 303(d), or other official action of the State Department of Health (DOH), we suggest that

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the violations of water quality standards previously recorded as LUC Findings of Fact should not be relied upon to determine the regulatory compliance status of receiving waters that would be affected by the proposed action. The principal authority on the water quality status of state receiving waters is the 2006 Water Quality Monitoring and Assessment Report published by DOH. The assessments of other government agencies and private parties are not jurisdictional in this regard.

(2) Some of the receiving waters within the national park boundaries may be more properly classified as class I.a. inland waters, not class AA marine waters. Moreover, these inland waters may include waterbody types for which specific numeric water quality criteria that regulate conventional pollutants, other than bacterial indicator criteria, do not exist or apply. This implies that a more exhaustive analysis may be desirable in order to evaluate the compliance or noncompliance of the proposed action with the state water quality antidegradation policy.

(3) In many cases DOH is not obligated to review, comment on, accept, or approve the various water quality management proposals that are volunteered by the proponent of the proposed action or that may be required by the LUC. The LUC does not have the authority to require that DOH review, endorse, or otherwise approve water quality monitoring plans, water quality data, water quality assessments, best management practices, pollution prevention plans, etc., even though the LUC typically requires DOH involvement as a condition of approving the proposed action. Therefore, we suggest that the DEIS describe an alternative approach for assuring the adequacy of the proposed water pollution mitigation measures and water quality management programs that would be part of the proposed action.

Overall, we suggest that a more collaborative, regionalized approach to water quality monitoring and assessment be developed and implemented by all of the parties concerned, particularly DOH, LUC, the County of Hawaii, the National Park Service, other landowners, and developers. It would be useful for the DEIS to describe and incorporate the current objectives and status of ongoing University of Hawaii investigations in this area. In particular, we suggest that this monitoring program address the detection of changes in contaminant flows toward the sea along the shorelines of Kaloko National Historical Park and/or Honokohau Harbor. The harbor's mauka third, for example, has well over 1 million gallons of brackish water seaward flow per day, however the magnitude and impact of the pollutant load carried by this flow is currently unknown.

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Thank you for considering our comments on this Draft Environmental Impact Statement. We hope that our comments will help the Land Use Commission to weigh carefully whether the social benefits of the proposed action would justify the environmental impacts that would likely occur. When the Final Environmental Impact Statement is distributed, please send one printed copy to the Environmental Center.

Sincerely,



Philip Moravcik  
Water Resources Research Center

cc: State of Hawaii Office of Environmental Quality Control (OEQC)  
Chittaranjan Ray, Interim Director, Water Resources Research Center, UH Manoa  
Orlando Dan Davidson, State of Hawaii Land Use Commission  
Earl Matsukawa, Wilson Okamoto Corporation  
George A. Wilkins  
James Beets  
David Penn



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July 25, 2013

Mr. Phillip Moravcik  
Water Resources Research Center  
Environmental Center  
University of Hawaii  
2500 Dole Street, Krauss Annex 19  
Honolulu, Hawaii'i 96822

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Moravcik:

Thank you for your letter dated September 21, 2011 (RE:0809). The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

#### General Comments

##### 1. *EIS Trigger and Focus*

*Because the preparation of this DEIS was triggered by the reclassification of Conservation District lands within the project area, we suggest that the FEIS highlight (1) the specific details of the proposed changes to the Conservation District lands, and (2) the potential impact of removing these particular Conservation District lands from their present use, including an assessment of their site-specific function and value as open space under the current General subzone designation.*

Response: Although the EIS process under Chapter 343, Hawaii Revised Statutes was "triggered" by the reclassification of State Conservation District designated land, there is no requirement under Chapter 343 or its rules under Title 11, Chapter 200 Hawaii Administrative Rules, to single out component(s) of a project for assessment because it is the "trigger." To the contrary, Section 11-200-7 requires



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that when components of a project are part of a larger action, they must be treated as a single action.

##### 2. *Unresolved Issues*

*The DEIS identifies several unresolved issues that should be advanced towards resolution in the Final EIS (FEIS). One of the unresolved issues discussed on pages 1-17 to 1-18, State Historic Preservation Division review of archaeological inventory surveys, raises a recurring concern. In general, we suggest that historic preservation consultation with DLNR-SHPD be completed as early as possible in the environmental impact assessment process, preferably before a DEIS is issued. This would maximize the opportunity for disclosure and meaningful public review of potential cultural impacts and proposed mitigation measures within the context of the process governed by Hawaii Revised Statutes Chapter 343.*

Response: The Kaloko Makai AIS was submitted to DLNR-SHPD on October 30, 2008. To date we have not received comments from them regarding the AIS. We acknowledge that the AIS will not be considered finalized until the AIS is approved by SHPD.

*Throughout the DEIS it is difficult to determine if the footprint for the impact analysis includes the full build-out of public facilities on lands within the proposed project area that would be dedicated for public purposes. Therefore, we suggest that the potential additional impacts of the future construction of schools, fire/police facilities, a hospital, and a transit station may represent an additional unresolved issue that should be more directly addressed in the FEIS, particularly with regard to traffic impacts, water and energy demands, and waste disposal capacity.*

Response: The DEIS traffic study includes factors for traffic generation by public facilities, as does the preliminary engineering report for water and wastewater demand. The air quality study includes factors for energy consumption by public facilities. Although difficult to separate the impact of the full build-out of public facilities entirely from the rest of the project, Kaloko Makai has made an effort to show the demands in the DEIS and forthcoming Second DEIS. We generally reserve the identification of unresolved issues for areas of discussion for which insufficient information could significantly affect the outcome of an impact.

##### 3. *Cumulative Impacts*

*In the 37 years that have elapsed since the State of Hawaii first established its EIS requirements, the North Kona region has been subjected to a multitude of environmental impacts and mitigating measures that were identified in accepted EISs. Similarly, the proposed action represents just one set of another multitude of*





*environmental impacts and mitigating measures that may be imposed on the region in the future. Therefore, we suggest that the cumulative impacts analysis in the DEIS be based on a more comprehensive regional, historical approach to the environmental quality of Kaloko, Kohanaiki, and adjacent areas that includes the following components:*

- a. Compare environmental quality in 1974 with present environmental quality.*
- b. Identify and quantify the land use changes that occurred from 1974 to present, including a table of completed actions that were the subject of an accepted EIS, and a matrix of anticipated impacts and actual mitigation measures.*
- c. Compare the size and scope (potential impacts) of all planned actions (including the proposed action) with the cumulative size and scope (actual impacts) of all past actions.*
- d. Compare the size and scope of the proposed action with the cumulative size and scope of all other planned actions.*
- e. For example, in this regard, Table 8-1 of the DEIS would be more useful if it included additional features of planned developments in the project vicinity (e.g. change in impermeable surface) and provided a cumulative, regional subtotal for each development feature (e.g. number of residential units). This approach would help to clarify the size and scope of the proposed action within the context of past and future changes in environmental quality.*

Response: Neither Chapter 343, HRS nor its implementing rules under Title 11, Chapter 200 HAR require that the baseline for assessing cumulative impact be set at 1974 when Chapter 343 was enacted. In practice, the description of the affected environment generally begins with present conditions and, if relevant, some historic context for those conditions. This establishes the cumulative impacts of past actions in the area. In considering future cumulative impacts, known projects that may cumulatively affect the proposed project's impacts would be discussed or quantitatively included, such as in a traffic study.

The type of study you suggest to assess cumulative impact throughout a region would more appropriately be undertaken by government, such as in conjunction with a community development plan. The Kona Community Development Plan (CDP), for example, took a long view of historic trends and the community's vision for the future. Notably, the Kaloko Makai project is consistent with the Kona CDP, as discussed in the DEIS and the forthcoming Second DEIS.



#### 4. Housekeeping

- a. In order to improve the utility of Chapter I, Introduction and Summary, we suggest that each section of the chapter provide a cross-reference to the portion of the main document that addresses the same content as that section. For example, "Parties Consulted During the EISPN Process," page 1-4, would direct the reader to Chapter 9, Consultation, for the complete discussion of this topic.*

Response: The rules for EIS content, under Section 11-200-17 do not require such cross-referencing. Nevertheless, per your suggestions, cross-references will be included in the forthcoming Second DEIS.

- b. Consultation*

*The comments and responses associated with each consulted party are not indexed or grouped in a manner that would facilitate their readability. For example, although page 9-2 indicates that four programs within the state department of health (DOH) submitted comments, these comments (and responses) are scattered throughout Appendix S, which makes it overly burdensome for the reader to review DOH program comments and responses as a whole. Therefore, in order to better communicate the results of EISPN process, we suggest that the Consultation chapter of the FEIS indicate the pages of the FEIS that document the pertinent communications for each consulted party. We also suggest that the appendix containing the comments and responses organize them so that they are grouped in accordance with the listing presented in the text of the Consultation chapter (e.g. pages 9-1 to 9-3). Typically this is accomplished by providing, in the appendix, a table of contents that lists each commenter and the pages of the appendix that include the associated comment and response letter. We also suggest that the FEIS employ this same mode of organization for comments and responses on the DEIS.*

Response: The rules for EIS content, under Section 11-200-17 do not require such indexing. Nevertheless, per your suggestion, the comment and response letters will be organized in accordance with the listing presented in the text of Chapter 9 Consultation in the forthcoming Second DEIS. Adding the page number to the letters in the Appendix is not practical since revisions requiring re-pagination frequently occur as the document is being finalized. This would require multiple repagination.

- c. Page Numbering, Bookmarking, and Digital Page Orientation*

*Page numbering in the paper version of the DEIS is confusing and leads to the appearance of missing pages within the document. For example, Figures 2-11*



to 2-14 appear between pages 2-30 and 2-39 on four consecutive, unnumbered, fold-out pages. According to the Table of Contents these figures appear on pages 2-31, 2-33, 2-35, and 2-37, respectively. Therefore, we suggest numbering the pages of the paper FEIS so as to remove all doubt that pages 2-32, 2-34, 2-36, and 2-38 may be missing from the document, consistent with the page numbering in the digital version of the DEIS.

Response: The current requirement for preparing documents in paper and electronic formats is challenging for a document that is typically undergoing refinements under a filing deadline. Nevertheless, we will take your suggestion in consideration in preparing the Second DEIS.

In order to facilitate the readability of the digital version of the DEIS, we suggest (1) detailed bookmarking of the digital document that corresponds with the lowest level of subheadings that appears in the table of contents, and (2) vertical orientation of all pages such that the reader need not rotate a digital page in order to read it onscreen from a normal orientation.

Response: Your comments regarding facilitating the readability of the digital version of the DEIS have been noted.

d. *Land Use Allocation*

Throughout the DEIS, Kaloko Makai's footprint is billed as "an approximately 1,139 acre" area that also includes a well field of approximately 18 acres of land mauka of the proposed project site. However:

- a. Table 2-6, *Estimated Allocation by Land Use Type and Phase*, shows a total estimated area of only 1,039 acres;
- b. the numbers in the "Estimated Area" column of Table 2-6 add up to 1,041; and
- c. the total acreage for all land use types indicated in the legend of Figures 2-11 to 2-14 is 1,065.5 acres.
- d. Therefore, we suggest that the FEIS include corrections and additions to Table 2-6, Figures 2-11 to 2-14, and all related content such that the project acreage calculations are more consistent throughout the document, and include the 18 acre well field, along with any additional area that would be required for water transmission from the well field to the proposed project site.

Moreover, the names and acreages assigned to the different land use types shown in Table 2-6 do not match those listed in the legend of Figures 2-11 to 2-14. Again, for the sake of consistency, we suggest corrections and additions to Table 2-6, Figures 2-11 to 2-14, and all related content such



that the information presented in Table 2-6 is directly comparable with the information presented in Figures 2-11 to 2-14.

Response: The approximate acreage of the entire project is 1,139 acres. The off-site potable well site has been removed from consideration. The amended approximate acreage of the project site is reflected throughout the forthcoming Second DEIS. Additionally, the tables referenced above have been revised to be consistent.

*Specific Comments:*

1. *Water sources*

Because the DEIS raises the possibility of desalination as a water source solution, we suggest that the FEIS clarify the nature of federal and state regulations with regard to the salinity of water supplied for domestic use. Federal and state regulations do not establish enforceable standards for chloride content in drinking water, they merely include notification requirements for water that exceeds a certain chloride level. In this regard, we also suggest that the FEIS quantify the volume and constituents of the process water that would be generated by desalination, in order to better account for the potential cumulative impact of wastewater, storm-water, and process water injection throughout the proposed project area.

Response: The desalinated water that would be used as the drinking water supply will comply with the EPA and DOH secondary standard limit for chlorides which is 250 MG/L. In reality, the actual chloride level of the desalinated water will be 120 MG/L or less to avoid taste and other issues. The 2012 report by Tom Nance Water Resource Engineering identifies the potential impacts of the desalination process, including disposal of the concentrate (wastewater). This report will be included in the forthcoming Second DEIS.

The Draft Groundwater Assessment (Appendix C) notes that "[t]he [Hawaii County Water Use & Development Plan] WUDP acknowledges that there is not sufficient supply to accommodate the worst-case scenario (full build out of land uses ... )" and "serves to alert decision makers that the current [Land Use Pattern Allocation Guide] LUPAG designations and zoning classifications cannot be supported with existing water resources." Therefore, we suggest that overall impact of the proposed action, and other planned actions, on water resource availability be further disclosed in the cumulative impacts analysis and the alternatives analysis, such that trade-offs between the water resource impacts and other environmental impacts of all planned future actions can be better addressed in the land use decision making address.

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Letter to Mr. Phillip Moravcik

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Response: The 2012 report by Tom Nance Water Resource Engineering discusses water resource impacts in detail. It might also be noted that a recent USGS study estimated recharge for the Keauhou Aquifer to be 1.77 times greater than the amount used by the State Commission on Water Resource Management to set the aquifer's sustainable yield at 38 MGD. As most of this greater recharge is in the high rainfall belt overlying the high level groundwater body, this new information suggests the aquifer's actual sustainable yield is more than twice the current 38 MGD regulatory amount. Current aquifer pumpage is 14 MGD, less than 20 percent of the aquifer's likely sustainable yield.

2. *Water quality impacts in inland and marine receiving waters*

*The proposed action would alter pollutant loading dynamics in ways that are insufficiently identified and quantified in the DEIS. Although "[e]ffluent disposal for the Private WWTP shall be in accordance with all applicable laws" (page 3-43), the ultimate effluent disposal method is not entirely clear. Effluent injection and effluent reuse are both lawful disposal methods, but their environmental impacts could differ significantly. Would the proposed WWTP use injection wells, as well as effluent reuse, for effluent disposal purposes, or would it employ reuse only, as implied (but not explicitly stated) in the DEIS? Where and how would the necessary back-up storage capacity for a reuse facility be provided? Would the self sufficiency of the on-site WWTP include its energy supply?*

Response: The amount of R-1 treated effluent will exceed its onsite irrigation reuse. If other uses cannot be found, this excess would be disposed of in injection wells located at on-site wastewater treatment plant (WWTP).

All of the questions raised in this comment are dealt with in detail in the 2012 report by Tom Nance Water Resource Engineering.

*For analytical purposes, we suggest that the DEIS include greater detail about (1) the location, volume, and content of wastewater inputs and altered storm water inputs that would be generated by the proposed action, and (2) their transport and fate in the environment. For example, the DEIS states (Groundwater Assessment, p. 16) "As the excess irrigation water percolates downward through the unsaturated zone to the groundwater, removal rates of nitrogen and phosphorus from the water will be significant." This statement is meaningless without numbers (goals), rates, and variances. We suggest that the DEIS more thoroughly identify the volume and quality of effluent that would be produced, and the location, timing, and rate of proposed reuse applications. The DEIS states that "estimates of cumulative changes to groundwater from the total assemblage of existing and proposed projects also do not appear to have the potential for alterations to pond or marine habitats."*

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*We suggest that the DEIS reference the source of these estimates and of the technical analysis that leads to this conclusion.*

Response: An Assessment of the Potential Impact of the Proposed Kaloko Makai Project on Water Resources has been prepared by Tom Nance Water Resource Engineering 2012 and will be included in the forthcoming Second DEIS. This report will replace the draft groundwater report included in the DEIS. The forthcoming Second DEIS references the source of the estimates and technical analysis used in the analysis of water quality.

As with the response above, all of the information requested in this comment is presented in detail in the 2012 report by Tom Nance Water Resource Engineering.

*Specifically, we suggest that any reinjection scheme proposed for effluent and runoff disposal be very site specific. The injection site would be thoroughly described with regard to characteristics such as location, flow rate, dispersal depth (re sea level), and expected surface emergence locale relative to the shoreline. Under no conditions should this exit point be mauka of the reef (or, say, into ocean depths less than 200 feet). We suggest that piping of R-1 effluent to a point near the shoreline, followed by directional drilling of a sub-seafloor pipe to the final exit point, should be considered as a technologically valid option.*

Response: The 2012 report by Tom Nance Water Resource Engineering provides information on the disposal of excess R-1 and desalinization concentrate. In both cases, injection wells would be used to deliver wastewater into the saline groundwater zone, thereby using movement of this saline groundwater beneath the basal lens to offshore discharge. Cost and property ownerships make your suggestion of directional drilling for disposal infeasible. The Tom Nance Water Resource Engineering-proposed disposal scheme makes it unnecessary.

*The analysis of water quality conditions, impacts, and mitigation that is presented in the DEIS suffers from several regulatory and administrative mischaracterizations that warrant correction:*

*(1) The Land Use Commission (LUC) does not have the authority to determine whether or not violations of the state water quality standards have occurred in state waters. Absent a record of a violation notice, declaratory ruling, impairment decision under Clean Water Act Section 303(d), or other official action of the State Department of Health (DOH), we suggest that the violations of water quality standards previously recorded as LUC Findings of Fact should not be relied upon to determine the regulatory compliance status of receiving waters that would be affected by the*



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 July 25, 2013  
 Page 9 of 10

*proposed action. The principal authority on the water quality status of state receiving waters is the 2006 Water Quality Monitoring and Assessment Report published by DOH. The assessments of other government agencies and private parties are not jurisdictional in this regard.*

Response: We acknowledge that the LUC does not have the authority to determine whether or not violations of the State water quality standards have occurred in State waters.

*(2) Some of the receiving waters within the national park boundaries may be more properly classified as class 1.a. inland waters, not class AA marine waters. Moreover, these inland waters may include water body types for which specific numeric water quality criteria that regulate conventional pollutants, other than bacterial indicator criteria, do not exist or apply. This implies that a more exhaustive analysis may be desirable in order to evaluate the compliance or noncompliance of the proposed action with the state water quality antidegradation policy.*

Response: Class 1.a brackish waters have no specific compliance criteria, and are subject to only basic criteria set forth in section 11-54-4. As there is no discharge into these waters, basic criteria are met.

We acknowledge that your department considers receiving waters within the national park boundaries as class 1.a. inland waters, not class AA marine waters.

*(3) In many cases DOH is not obligated to review, comment on, accept, or approve the various water quality management proposals that are volunteered by the proponent of the proposed action or that may be required by the LUC. The LUC does not have the authority to require that DOH review, endorse, or otherwise approve water quality monitoring plans, water quality data, water quality assessments, best management practices, pollution prevention plans, etc., even though the LUC typically requires DOH involvement as a condition of approving the proposed action. Therefore, we suggest that the DEIS describe an alternative approach for assuring the adequacy of the proposed water pollution mitigation measures and water quality management programs that would be part of the proposed action.*

Response: The Petitioner will prepare a pollution prevention plan (PPP) that provides best management practices (BMP), including structural BMP, for pollution prevention that address all categories of permitted uses within the project, and shall address environmental stewardship and the non-point sources of water pollution that can be generated from uses allowed within the project.



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 Letter to Mr. Phillip Moravcik  
 July 25, 2013  
 Page 10 of 10

The Petitioner will also comply with applicable Federal, State and County regulations.

*Overall, we suggest that a more collaborative, regionalized approach to water quality monitoring and assessment be developed and implemented by all of the parties concerned, particularly DOH, LUC, the County of Hawaii, the National Park Service, other landowners, and developers. It would be useful for the OBIS to describe and incorporate the current objectives and status of ongoing University of Hawaii investigations in this area. In particular, we suggest that this monitoring program address the detection of changes in contaminant flows toward the sea along the shorelines of Kaloko National Historical Park and/or Honokōhau Harbor. The harbor's mauka third, for example, has well over 1 million gallons of brackish water seaward flow per day, however the magnitude and impact of the pollutant load carried by this flow is currently unknown.*

Response: Should a regional monitoring program be established, the Petitioner will participate in a regional water quality monitoring program based on its pro-rata interest.

*Thank you for considering our comments on this Draft Environmental Impact Statement. We hope that our comments will help the Land Use Commission to weigh carefully whether the social benefits of the proposed action would justify the environmental impacts that would likely occur. When the Final Environmental Impact Statement is distributed, please send one printed copy to the Environmental Center.*

Response: The DEIS is being revised and one printed copy of the forthcoming Second DEIS will be mailed to you.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the environmental review process.

Sincerely,

Earl Matsukawa, AICP  
 Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
 Mr. Daniel Orodener, State Land Use Commission

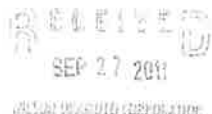


**DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII**  
 345 KĒKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720  
 TELEPHONE (808) 961-8050 • FAX (808) 961-8657

*EM*

September 26, 2011

Orlando Dan Davidson, Executive Officer  
 Department of Business, economic Development & Tourism  
 State Land Use Commission  
 P.O. Box 2359  
 Honolulu, HI 96804



**DRAFT ENVIRONMENTAL IMPACT STATEMENT  
 TAX MAP KEY 7-3-009:017, 025 (PORTION), 026, AND 028**

Thank you for allowing us the opportunity to comment on the subject Draft Environmental Impact Statement and have the following comments.

We would like to confirm that the County of Hawai'i, Department of Water Supply is in discussions with the developers of Kaloko Makai with respect to the options available for the potable water supply for the proposed development.

The developer will be required to enter into a Water Development Agreement with the Water Board, which will establish the necessary offsite water system improvements required to support the development and the allocation of water commitments from any new source(s) developed. Water service within the proposed development will not be granted until the necessary offsite and onsite water system improvements are completed and accepted by/dedicated to the Water Board.

Should the integration of a desalination facility for source development be required, the design, construction, operation and maintenance would be the responsibility of the developer because the Department's water System Standards and Rules & Regulations do not cover such treatment facilities. The possibility to dedicate the desalination facility will be subject to the review and approval of the Water Board.

Any amendments to prior water development agreements will have to be approved by the Water Board. The "transfer" of water commitments should be revised to "assigned" or "allocated", as our Rules and Regulations does not allow the transfer of water commitments that have been issued.

Alternative #5 - The current water availability conditions in the area, which are subject to change without notice, provides for the same number of water units as the number of lots or dwelling units allowable under the current zoning, not to exceed a maximum of 50 units of water, per existing lot of record. Six (6) additional units of water are available, per existing lot of record, if a change of zone


*... Water, Our Most Precious Resource ... Ka Wai A Kāne ...*

Orlando Dan Davidson, Executive Officer  
 Page 2  
 September 26, 2011

application is approved. For your information, one unit of water is equal to a maximum daily usage of 600 gallons per day, which is suitable for only one single-family dwelling. As the existing lot of record has been subdivided several times, additional water is not available under this alternative.

Should there be any questions, please contact Mr. Ryan Quitoriano of our Water Resources and Planning Branch at 961-8070, extension 256.

Sincerely yours,

  
 Milton D. Pavao, P.E.  
 Manager/Chief Engineer

RQ:dfg

copy – SCD Kaloko Makai, LLC  
 Wilson Okamoto Corporation



7469-01  
July 25, 2013

Mr. Quirino Antonio, Manager  
Department of Water Supply  
County of Hawaii  
345 Kekuanao'a Street, Suite 20  
Hilo, HI 96720

1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Antonio:

Thank you for your letter dated September 26, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

*We would like to confirm that the County of Hawaii, Department of Water Supply is in discussions with the developers of Kaloko Makai with respect to the options available for the potable water supply for the proposed development.*

*The developer will be required to enter into a Water Development Agreement with the Water Board, which will establish the necessary offsite water system improvements required to support the development and the allocation of water commitments from any new source(s) developed. Water service within the proposed development will not be granted until the necessary offsite and onsite water system improvements are completed and accepted by/dedicated to the Water Board.*

Response: The Petitioner confirms and appreciates the discussions with the County of Hawaii, Department of Water Supply with respect to the options available for the potable water supply to serve the proposed development.

The Petitioner acknowledges the requirement of entering into a Water Development Agreement with the Water Board and that water service within the proposed development will not be granted until the necessary offsite and



7469-01  
Letter to Mr. Quirino Antonio  
July 25, 2013  
Page 2 of 3

onsite water system improvements are completed and accepted by/dedicated to the Water Board.

*Should the integration of a desalination facility for source development be required, the design, construction, operation and maintenance would be the responsibility of the developer because the Department's water System Standards and Rules & Regulations do not cover such treatment facilities. The possibility to dedicate the desalination facility will be subject to the review and approval of the Water Board.*

Response: The forthcoming Second DEIS includes the alternative of constructing a desalination facility complying with all applicable State Department of Health and DWS standards, with the potential for dedication to DWS. The Petitioner acknowledges that the design, construction, operation and maintenance of the desalination facility would be the responsibility of the Petitioner because the Department's Water System Standards and Rules & Regulations do not cover such treatment facilities.

The Petitioner will continue discussions with DWS and the Water Board regarding the possibility of dedicating the desalination facility to the County.

*Any amendments to prior water development agreements will have to be approved by the Water Board. The "transfer" of water commitments should be revised to "assigned" or "allocated", as our Rules and Regulations does not allow the transfer of water commitments that have been issued.*

Response: The Petitioner acknowledges that any amendments prior to water development agreements will have to be approved by the Water Board.

Per your suggestion, the references to "transfer" of water commitments in the Second DEIS has been changed to "assigned" or "allocated" water commitments throughout the document.

*Alternative #5 - The current water availability conditions in the area, which are subject to change without notice, provides for the same number of water units as the number of lots or dwelling units allowable under the current zoning, not to exceed a maximum of 50 units of water, per existing lot of record. Six (6) additional units of water are available, per existing lot of record, if a change of zone application is approved. For your information, one unit of water is equal to a maximum daily usage of 600 gallons per day, which is suitable for only one single-family dwelling. As the existing lot of record has been subdivided several times, additional water is not available under this alternative.*

7469-01

Letter to Mr. Quirino Antonio

July 25, 2013

Page 2 of 3



Response: The Petitioner acknowledges your explanation of the current water availability conditions in the area and that additional water is not available under Alternative #5.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", written over a horizontal line.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

William P. Kenoi  
Mayor

William T. Takaha  
Managing Director



County of Hawai'i  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

25 Aupuni Street • Hilo, Hawai'i 96720  
(808) 961-8083 • Fax (808) 961-8086  
[http://co.hawaii.hi.us/directory/dir\\_envmgng.htm](http://co.hawaii.hi.us/directory/dir_envmgng.htm)

Dora Beck, P.E.  
Acting Director

Hunter Bishop  
Deputy Director

EM

August 9, 2011

State Land Use Commission  
Department of Business, Economic Development & Tourism  
P. O. Box 2359  
Honolulu, HI 96804

Attention: Mr. Orlando Dan Davidson  
Executive Officer

RE: Draft EIS  
Kaloko Makai  
Kaloko & Kohanaiki, North Kona  
TMK: (3) 7-3-00917, 019 (port.), 025, 026, 028, 063 (port.) and 063

Dear Mr. Davidson,

We have no comments to offer on the subject project.

Thank you for allowing us to review and comment on this project.

Sincerely,

Dora Beck, P.E.  
ACTING DIRECTOR

cc: SCD - TSA Kaloko Makai, LLC  
1100 Alakea St., 27<sup>th</sup> Floor  
Honolulu, HI 96813  
Attention: Mr. Peter Phillips

Wilson Okamoto Corp.  
1907 South Beretania St., Suite 400  
Honolulu, HI 96826  
Attention: Mr. Earl Matsukawa, AICP

County of Hawai'i is an Equal Opportunity Provider and Employer.



1907 South Beretania Street  
Artesian Plaza, Suite 400  
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[www.wilsonokamoto.com](http://www.wilsonokamoto.com)

7469-01  
July 25, 2013

Ms. Bobby Jean Leithead-Todd, Director  
Department of Environmental Management  
County of Hawaii  
25 Aupuni Street  
Hilo, HI 96720

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Leithead-Todd:

Thank you for your letter dated August 9, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we acknowledge that you have no comments to offer at this time.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel E. Orodener, State Land Use Commission



William P. Kenoi  
Mayor



## County of Hawai'i

**POLICE DEPARTMENT**  
349 Kapi'olani Street • Hilo, Hawai'i 96720-3998  
(808) 935-3311 • Fax (808) 961-2389

August 18, 2011

Mr. Earl Matsukawa, AICP  
Project Manager  
Wilson Okamoto Corporation  
1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

**SUBJECT:** Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Island of Hawaii  
Tax Map Keys: (3) 7-3-009: 017, 019 (port.), 025, 026, 028, 062  
(port.) and 063


The above-referenced Draft Environmental Impact Statement (DEIS) has been reviewed, and we have the following comments.

We continue to express our concerns that a development of this size will increase traffic on all roadways associated with the development. Major roadways affected will include Hina Lani Street, Mamalahoa Highway, Queen Kaahumanu Highway, and Palani Road.

Thank you for the opportunity to comment. Should you have any questions, please contact Captain Samuel Kawamoto, Commander of the Kona District, at (808)326-4646, ext. 299.

Sincerely,

HARRY S. KUBOJIRI  
POLICE CHIEF

  
PAUL H. KEALOHA JR.  
ASSISTANT POLICE CHIEF  
AREA II OPERATIONS

SK:dmv  
RS100754

Harry S. Kubojiri  
Police Chief

Paul K. Ferreira  
Deputy Police Chief

EM



1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7469-01  
July 25, 2013

Mr. Harry S. Kubojiri, Chief of Police  
Police Department  
County of Hawaii  
349 Kapiolani Street  
Hilo, HI 96720

**Subject:** Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Kubojiri:

Thank you for your letter dated August 18, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we acknowledge your concerns about the potential impacts the proposed project will have on nearby roadways. As discussed in the DEIS and in the forthcoming Second DEIS traffic in Kona is expected to increase even if Kaloko Makai is not built.

The County of Hawaii General Plan Section 15.1 (February 2005, as amended) calls for the preparation of community development plans "to translate the broad General Plan statements to specific actions as they apply to specific geographical areas." The General Plan requires CDPs be adopted as an "ordinance," giving the plans force of law. The CDPs are long-term plans with a planning horizon to the year 2020, consistent with the General Plan.

The Kona CDP is the first community development plan to commence under the framework of the February 2005 County of Hawaii General Plan. The Kona CDP was adopted by County Council via ordinance in September 2008. The purposes of the Kona CDP are:

- Articulate Kona's residents' vision for the planning area;
- Guide regional development in accordance with that vision, accommodating future growth while preserving valued assets;
- Provide a feasible infrastructure financing plan to improve existing deficiencies and proactively support the needs of future growth;



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Letter to Mr. Harry S. Kubojiri  
July 25, 2013  
Page 2 of 3

- Direct growth to appropriate areas;
- Create a plan of action where government and the people work in partnership to improve the quality of life in Kona for those who live, work, and visit;
- Provide a framework for monitoring the progress and effectiveness of the plan and to make changes and update it, if necessary.

The General Plan notes, Urban Expansion Areas allow for a mix of high density, medium density, low density, industrial, industrial-commercial and/or open designations in areas where new settlements may be desirable, but where the specific settlement pattern and mix of uses have not yet been determined.

The Kona CDP recognizes that the General Plan LUPAG Urban Area is larger than needed in order to accommodate the projected growth within the planning horizon, so it emphasizes that future growth within the urban area is encouraged in a pattern of compact villages at densities that support public transit.

Transit-Oriented Developments (TODs) and Traditional Neighborhood Developments (TNDs) are identified as the planning tool to manage this anticipated growth within the defined "Kona Urban Area." The Kona CDP defines these as compact mixed-use villages, characterized by a village center within a higher-density urban core, roughly equivalent to a 5-minute walking radius (1/4-mile), surrounded by a secondary mixed-use, mixed-density area with an outer boundary roughly equivalent to a 10-minute walking radius from the village center (1/2-mile).

The State and County of Hawai'i have many roadway improvements planned to meet the expected growth in the area and to expanded roadway networks. Kaloko Makai will be part of the regional solution to address congestion and improve traffic circulation.

Widening, improving and extending major arterials, as well as increasing connectivity between and within existing and future development are necessary to enhance mobility in Kona. As noted in the Second DEIS, priority arterial highway projects include widening Queen Kaahumanu Highway between Henry Street and the airport and Ane Keohokalole Highway. These will reduce demands on the existing regional facilities.

As noted in the Kona CDP, transit oriented development are contingent upon the development of compact mixed-use villages in the Kona Urban Area, served by a road network in the Official Transportation Network Map. The new Ane Keohokalole Highway (Mid-Level Road) will function as the trunk transit route connecting Kailua Village with the airport, along which TODs will be located.



7469-01  
Letter to Mr. Harry S. Kubojiri  
July 25, 2013  
Page 3 of 3

Through the Kona CDP, the Kona Urban Area is designated as a "critical road area," as defined in HCC 25-2-46. Rezoning within the Kona Urban Area will comply with the Official Concurrency Map that identifies the road segments to be constructed concurrent with occupancy of units as the minimum "area mitigation," as defined in HCC 25-2-46 (Zoning Code).

Kona CDP Prioritized Road Improvements - In order to rectify existing deficiencies and influence the pattern of future growth and new roads, the following are priorities in the vicinity of Kaloko Makai:

- Keanalehu Street-Manuwalea Street
- Ane Keohokalole Highway (Mid-Level Road), Phase I Palani to Kealakehe Parkway
- Kamanu Street Extension
- Ane Keohokalole Highway (Mid-Level Road), Phase II, Kealakehe Parkway to Hina Hani Street
- Kealakehe Street Extension
- Ane Keohokalole Highway (Mid-Level Road), Phase III, Hina Lani Street to Kaiminani Drive
- University Drive

The Petitioner will coordinate with the Police Department to address service capabilities of police operations, address concerns, and develop appropriate mitigation measures, as appropriate.

Your letter, along with this response, will be reproduced and included in the forthcoming Second Draft EIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

William F. Kenoi  
Mayor



County of Hawai'i  
HAWAII FIRE DEPARTMENT  
25 Aupuni Street • Suite 2501 • Hilo, Hawai'i 96720  
(808) 932-2900 • Fax (808) 932-2928

Darryl J. Oliveira  
Fire Chief

Glen P. I. Honda  
Deputy Fire Chief

EM

Earl Matsukawa  
August 26, 2011  
Page 2

August 26, 2011

Mr. Earl Matsukawa  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

**SUBJECT:** DRAFT ENVIRONMENTAL IMPACT STATEMENT  
KALOKO MAKAI  
KALOKO AND KOHANA'IKI, NORTH KONA  
TMK: (3) 7-3-009:017, 019 (POR), 025, 026, 028, 062 (POR) and 063

In regards to the above-mentioned draft Environmental Impact Statement, currently we find there no special environmental impacts or conditions however the Fire Department would require the following, at a minimum:

Fire apparatus access roads shall be in accordance with UFC Section 10.207:

**"Fire Apparatus Access Roads**

"Sec. 10.207. (a) **General.** Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

"(b) **Where Required.** Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access as measured by an unobstructed route around the exterior of the building.

"EXCEPTIONS: 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, nonnegotiable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.301 (b).



Hawai'i County is an Equal Opportunity Provider and Employer.

"3. When there are not more than two Group R, Division 3 or Group M Occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.

"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"For high-piled combustible storage, see Section 81.109.

"(c) **Width.** The unobstructed width of a fire apparatus access road shall meet the requirements of the appropriate county jurisdiction.

"(d) **Vertical Clearance.** Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

"EXCEPTION: Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) **Permissible Modifications.** Vertical clearances or widths required by this section may be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

"(f) **Surface.** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) **Turning Radius.** The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) **Turnarounds.** All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) **Bridges.** When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designed live loading sufficient to carry the imposed loads of fire apparatus.

"(j) **Grade.** The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief." (15%)

"(k) **Obstruction.** The required width of any fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under this section shall be maintained at all times.

"(l) **Signs.** When required by the fire chief, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both."

Water supply shall be in accordance with UFC Section 10.301(c):

"(c) **Water Supply.** An approved water supply capable of supplying required fire flow for fire protection shall be provided to all premises upon which buildings or portions of buildings are hereafter constructed, in accordance with the respective county water requirements. There shall be provided, when required by the chief, on-site fire hydrants and mains capable of supplying the required fire flow.

"Water supply may consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

"The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be protected as set forth by the respective county water requirements. All hydrants shall be accessible to the fire department apparatus by roadways meeting the requirements of Section 10.207.

  
DARRYL OLIVEIRA  
Fire Chief

RP:ipc

CC: Orlando Dan Davidson - State Land Use Commission, DBEDT  
Peter Phillips - SCD, TSA Kaloko Makai, LLC



7469-01  
July 25, 2013

Mr. Darren J. Rosario, Fire Chief  
Fire Department  
County of Hawaii  
25 Aupuni Street  
Hilo, HI 96720

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Rosario:

We received a comment letter from former Fire Chief Darryl Oliveira dated August 26, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, the forthcoming Second DEIS will be revised to state that Kaloko Makai will contain complete fire prevention measures including access roads in accordance with Uniform Fire Code (UFC) Section 10.207, water supply for fire suppression in accordance with UFC Section 10.301(c), and buildings under construction in compliance with the provisions of UFC Article 87.

The Petitioner will coordinate with the Fire Department to address service capabilities of fire protection services, address their concerns and develop appropriate mitigation measures, if appropriate. Plans include providing a site for a Fire Station with room for a Police Sub-Station on Hina Lani Street.

The Fire Department's letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,  
  
Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodnenker, State Land Use Commission



September 13, 2011

EM  
TF

Wilson Okamoto Corporation  
Attention: Mr. Earl Matsukawa, AICP  
1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii 96826

RECEIVED  
SEP 15 2011  
WILSON OKAMOTO CORPORATION

Gentlemen:

SUBJECT: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai, North Kona, Hawai'i  
TMK: 7-3-009:017, 019 (port.), 025, 026, 028, 062 (port.) and 063

Thank you for the opportunity to comment on the subject's Draft Environmental Impact Statement (DEIS). HELCO's response to the subject's EA/EISPN dated October 1, 2010 has not changed. It is stated as follows:

HELCO will be able to provide electrical service to the proposed development in North Kona. A detailed analysis will be performed after the receipt of the consultant's detailed design drawings and estimated load. The following is a summary of our comments:

1. Generation capacity - HELCO's current system peak load is 194,600kW and our total generation system capability is 285,800kW. Our reserve margin is 37% and may have adequate generation to serve the above.
2. Electrical Substation - The area is served by our existing Kaloko electrical substation and a 12,470 volt underground distribution along Hina Lani Street. The capacity of our existing substation is not adequate to serve the anticipated load. A lot with a minimum size of 250' x 250' must be deeded to HELCO for the construction of a new substation.
3. Off-Site Electrical Transmission System – The existing 69,000 volt transmission line along Queen Kaahumanu Highway will need to be extended to the new electrical substation.
4. Off-Site Electrical Distribution System – The existing off-site 12,470 volt distribution system along Hina Lani Street is not adequate to serve the proposed development. Off-site 12,470 volt distribution lines and easements from the new substation to the on-site development are required to serve the anticipated load.
5. On-Site Electrical Distribution System – On-site distribution line extensions and easements are required on the developer's property to serve the anticipated load.

Wilson Okamoto Corporation  
Page 2  
September 13, 2011

After the development's detailed loading and civil plans are submitted, HELCO will prepare a firm cost to provide electrical power to this development.

HELCO recommends energy efficient and conservation measures to reduce the maximum electrical demand and energy consumption. The developer may call HELCO's Energy Services department at (808) 935-1171 for questions or details on available programs.

It is encouraged that the developer's electrical consultant open a service request with HELCO Engineering department as soon as practicable to ensure timely electrical facility installation. If you have any questions, please contact me at (808) 969-0222 or Shelley Doctor at (808) 327-0504.

Sincerely,

Kevin K.M. Waltjen  
Manager, Engineering Department

KKMW:SD:bb

cc: H. Kamigaki  
S. Doctor  
K. Whitener





7469-01  
July 25, 2013

Mr. Kevin K.M. Waltjen, Manager  
Engineering Department  
Hawaii Electric Light Company  
P.O. Box 1027  
Hilo, Hawaii 96721-1027

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Mr. Waltjen:

Thank you for your letter dated September 13, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the order of your comments:

*1. Generation capacity - HELCO's current system peak load is 194,600 kW and our total generation system capability is 285,800 kW. Our reserve margin is 37% and may have adequate generation to serve the above.*

Response: The Petitioner acknowledges that HELCO has adequate generation to serve the project.

*2. Electrical Substation - The area is served by our existing Kaloko electrical substation and a 12,470 volt underground distribution along Hina Lani Street. The capacity of our existing substation is not adequate to serve the anticipated load. A lot with a minimum size of 250' x 250' must be deeded to HELCO for the construction of a new substation.*

Response: The Petitioner acknowledges that HELCO will require a lot with a minimum size of 250' x 250' to be deeded to HELCO for the construction of a new substation. A substation site has been noted on the makai-north portion of the project plan.



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Letter to Mr. Kevin K.M. Waltjen  
July 25, 2013  
Page 2 of 3

*3. Off-Site Electrical Transmission System - The existing 69,000 volt transmission line along Queen Kaahumanu Highway will need to be extended to the new electrical substation.*

Response: The Petitioner acknowledges that the existing 69,000 volt transmission line along Queen Kaahumanu Highway will need to be extended to the new electrical substation.

*4. Off-Site Electrical Distribution System - The existing off-site 12,470 volt distribution system along Hina Lani Street is not adequate to serve the proposed development. Off-site 12,470 volt distribution lines and easements from the new substation to the on-site development are required to serve the anticipated load.*

Response: The Petitioner acknowledges that the existing off-site volt distribution system along Hina Lani Street is not adequate to serve the proposed development and that volt distribution lines and easements from the new substation to the on-site development are required to serve the anticipated load.

*5. On-Site Electrical Distribution System - On-site distribution line extensions and easements are required on the developer's property to serve the anticipated load.*

*After the development's detailed loading and civil plans are submitted, HELCO will prepare a firm cost to provide electrical power to this development. HELCO recommends energy efficient and conservation measures to reduce the maximum electrical demand and energy consumption.*

*It is encouraged that the developer's electrical consultant open a service request with HELCO Engineering department as soon as practicable to ensure timely electrical facility installation.*

Response: The Petitioner acknowledges that on-site distribution line extensions and easements are required to accommodate the anticipated load and that HELCO will prepare a firm cost to provide electrical power to Kaloko Makai.

Attached within the Exhibits of the forthcoming Second DEIS is a Sustainability Plan, which will include a discussion of priority guidelines and principles to promote sustainability within the project.

*Pursuant to Chapter 344 (State Environmental Policy) and Chapter 226 (Hawaii State Planning Act), HRS, all Kaloko Makai activities, buildings and grounds will be*

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Letter to Mr. Kevin K.M. Waltjen

July 25, 2013

Page 3 of 3



*designed with a significant emphasis on energy conservation and efficiency. Efficient design practices and technologies will be the cornerstone of Kaloko Makai's design phase. Buildings within Kaloko Makai will further comply with the County of Hawaii Energy Code (Hawaii County Code, Section 5, Article 2). Furthermore, solar water heaters will be utilized as made requisite under Section 196-6.5, HRS.*

Response: The Petitioner will confer with HELCO in regards to suggestions and proposals for customized demand-oriented management programs offering rebates for the installation of alternative energy efficient technologies and measures

The Petitioner is committed to renewable energy and energy efficiently as ways to reduce environmental harm and self sufficiency. The Petitioner will continue to improve programs and create new programs as the development is initiated.

The Petitioner will open a service request with HELCO's Engineering department as soon as practicable to ensure timely electrical facility installation.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", written over a white background.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission



EM  
TF



7469-01  
July 25, 2013

September 6, 2011

Wilson Okamoto Corporation  
Engineers and Planners  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

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SEP 15 2011

WILSON OKAMOTO CORPORATION

1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

Dr. Bruce S. Anderson, Ph.D., HHSC President & CEO  
Kona Community Hospital  
Hawaii Health Systems Corporation  
79-1019 Haukapila Street  
Kealekekua, Hawaii 96750

Re: Kaloko Makai - Comments on draft EIS

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Gentlemen:

Dear Dr. Anderson:

We would like to thank you for the opportunity to provide these comments on the draft EIS for the Kaloko Makai project in Kailua Kona.

Thank you for your letter dated September 6, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

First of all, on behalf of the members of the Kona Community Hospital Regional Board of Directors and its Strategic Planning Committee, I want to thank Kaloko Makai representatives for taking the time to meet with us on several occasions to discuss the prospect of locating a new acute care hospital within the Kaloko Makai project. We look forward to continued discussions.

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

Relative to this, please use this letter as confirmation of our request to relocate the hospital site within the Kaloko Makai project to the north-mauka corner of the Hina Lani Street/Ane Keohokalole Highway intersection. We believe this is the appropriate location for the hospital and we are hopeful that it does not complicate nor negatively impact the project planning for Kaloko Makai.

*We would like to thank you for the opportunity to provide these comments on the draft EIS for the Kaloko Makai project in Kailua Kona.*

Again, we appreciate Kaloko Makai's willingness to work with us to provide a new acute care hospital within the Kaloko Makai project.

*First of all, on behalf of the members of the Kona Community Hospital Regional Board of Directors and its Strategic Planning Committee, I want to thank Kaloko Makai representatives for taking the time to meet with us on several occasions to discuss the prospect of locating a new acute care hospital within the Kaloko Makai project. We look forward to continued discussions. Relative to this, please use this letter as confirmation of our request to relocate the hospital site within the Kaloko Makai project to the north-mauka corner of the Hina Lani Street/Ane Keohokalole Highway intersection. We believe this is the appropriate location for the hospital and we are hopeful that it does not complicate nor negatively impact the project planning for Kaloko Makai.*

With kind regards,

Bruce S. Anderson, Ph.D.  
HHSC President & CEO

Alistair Bajros, MD  
Chairman, WHR Board of Directors

Jay E. Kreuzer  
West Hawaii Regional CEO

*Again, we appreciate Kaloko Makai's willingness to work with us to provide a new acute care hospital within the Kaloko Makai project.*

cc: Alice Hall, HHSC

Response: Per your request, the Petitioner has relocated the hospital site within the Kaloko Makai project to the north-mauka corner of the Hina Lani

KONA COMMUNITY HOSPITAL  
HAWAII HEALTH SYSTEMS CORPORATION  
79-1019 Haukapila Street  
Kealekekua, HI 96750  
(808) 322-9311



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Letter to Dr. Bruce S. Anderson

July 25, 2013

Page 2 of 2



Street/Ane Keohokalole Highway intersection. The relocation does not complicate nor negatively impact the project planning for Kaloko Makai.

The forthcoming Second DEIS reflects the location change of the hospital site.

The Petitioner looks forward to continued discussions with you regarding the prospect of locating a new acute care hospital within the Kaloko Makai project.

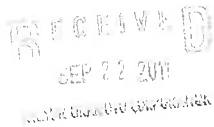
Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission



TF

September 20, 2011

Aloha mai kākou,

This letter is in regards to specific items found in the draft Environmental Impact Statement for the proposed development of Kaloko Makai.

If not known, the lowland dryforest ecosystems of Hawai'i are the most endangered ecosystems with less than 10% still remaining. Of that approximate 10%, only fractions of that are actually healthy and intact. Kaloko Makai is one of those remnant healthy patches and is in grave danger of the threat of habitat destruction by way of human development.

The Habitat Conservation Plan (HCP) for the dryland forest preserve states many positive conservation actions that must be implemented to see this lowland dryforest ecosystem into perpetuity. Certainly, the planned conservation efforts and "Best Management Practices" are responsible and well thought out, yet there are some problems posed by the HCP and those points of concern need to be addressed prior to any development. Such items as the "3-for-1" planting plan and the potential issuance of the Incidental Take License (ITL) must be further reviewed and re-assessed.

"3 outplanted individuals-for the invaluable price of 1 endangered, elder tree" does not sound like a balanced figure. Especially when we know that dryland trees are extremely slow growing. Furthermore, it is with an irresponsible environmental ethic that a plant's survival is gauged off a three year period. A forest does not grow in three years, and after all numbers are met, does the active restoration come to a halt?

Moreover, if this 150-acre preserve really is being managed to ensure that this dryforest exists for generations to come, then why would the development propose to jeopardize the lives of a certain few of our critical genetic materials sources? Not to mention, these are highly endangered species, so protected by law, that unless permitted, you cannot even take a dead twig from the plant. Yet, somehow the proposed development can call for the extraction of a whole living tree?

If an ITL is entitled and the Hala pepe (*Pleomele hawaiiensis*) and 'Aiea (*Nothocestrum breviflorum*) are to be moved, the chances of survival after re-location are extremely low. These plants have environmental conditions that are hard enough and to attempt to "take" these individuals would be detrimental. Not only detrimental to this

specific ecosystem, but also to our Hawaiian culture. The richness of our unique Hawaiian flora and fauna mirror the richness of our cultural heritage, and with every species lost, every individual lost, we lose another facet of our history. This is why it is imperative that the ITL is not permitted and either there be a "no action alternative" or perhaps the development of a mini-preserve alternative to manage the individual trees where they currently exist in-situ.

The plans of action for restoration and stewardship of the Kaloko Makai dryforest preserve are wonderful; but there must be some revision to certain aspects of the proposed HCP as a part of the proposed development. As a conservationist in the lowlands of North Kona, it is evident that there are building pressures upon our remaining lowland forest ecosystems, yet I am consistently dumbfounded by the short-sightedness of development projects.

The natural and cultural resources of Kaloko Makai are inherently intertwined and they must be protected in all entirety. We cannot expect to grow a forest; we cannot expect nature to live on the same time scale as humans, but we can expect and hope that all persons or parties involved with the decision making process for land use entitlements, make their decisions on a basis of responsible, long term opportunity. The idea of havng the opportunity to save and preserve that which is so rare, and that which already exists.

Please feel free to contact me if there are any questions or comments to the matters addressed within this letter.

Aloha 'Āina,

Wilds Pihanui Iaitia Brawner  
Site Manager, Ka'ūpulehu and La'i'ōpua Dryland Forest Preserves  
808.987.0305  
wilds.hfia@hawaiiiforest.org



7469-01  
July 25, 2013

Ms. Wilds Pihanui Ilaitia Brawner, Site Manager  
Kaupulehu and Laiopua Dryland Forest Preserves  
Hawaii Forest Industry Association  
P.O. Box 66  
Ookala, HI 96774

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Brawner:

Thank you for your letter dated September 20, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

*If not known, the lowland dry forest ecosystems of Hawaii are the most endangered ecosystems with less than 10% still remaining. Of that approximate 10%, only fractions of that are actually healthy and intact. Kaloko Makai is one of those remnant healthy patches and is in grave danger of the threat of habitat destruction by way of human development.*

Response: Recognizing the importance of the Dryland Forest, the Petitioner incorporated a large portion (150-acres) of the Dryland Forest into their preliminary design as the Kaloko Makai Dryland Forest Preserve. By preserving these 150-acres, the Petitioner is ensuring that the Kaloko Dryland Forest is preserved for generations to come.

*The Habitat Conservation Plan (HCP) for the dryland forest preserve states many positive conservation actions that must be implemented to see this lowland dry forest ecosystem into perpetuity. Certainly, the planned conservation efforts and "Best Management Practices" are responsible and well thought out, yet there are some problems posed by the HCP and those points of concern need to be addressed prior to any development. Such items as the "3-for-1" planting plan and the potential issuance of the Incidental Take License (ITL) must be further reviewed and re-assessed.*

*"3 outplanted individuals-for the invaluable price of 1 endangered, elder tree" does not sound like a balanced figure. Especially when we know that dryland trees are*



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Letter to Ms. Wilds Pihanui Ilaitia Brawner  
July 25, 2013  
Page 2 of 3

*extremely slow growing. Furthermore, it is with an irresponsible environmental ethic that a plant's survival is gauged off a three year period. A forest does not grow in three years, and after all numbers are met, does the active restoration come to a halt?*

Response: The Kaloko Makai property has been the subject of numerous botanical surveys over the years. Based on these surveys, four listed endangered plant species are found within the project site.

- 'aiea (*Nothocestrum breviflorum*)
- hala pepe (*Pleomele hawaiiensis*)
- uhiuhi (*Caesalpinia kavaiensis*)
- ma'aloa (*Neraudia ovata*)

In the anticipated development discussed in the Draft EIS, only one 'aiea and two hala pepe plants are found outside the dryland forest preserve; the action, then, proposed removal of these plants due to the proposed development. Based on comments during the DEIS process and further evaluation of the project layout, under the development proposal described in the Second Draft EIS, none of the listed endangered plants situated outside the dryland forest preserve will be "taken" in the development and construction of the Kaloko Makai project. It is not anticipated that a Habitat Conservation Plan (HCP) will be prepared.

Instead, Kaloko Makai will leave those plants in place and incorporate a 50-foot buffer around the one 'aiea and two hala pepe and any structure within the project. The plants will be incorporated into landscaping within the 50-foot buffers.

Kaloko Makai will set aside 150-acres in the Kaloko Makai Dryland Forest. Within this preserve, a variety of endangered species will have continued protection and their habitats set aside in perpetuity, enhancing their prospects for survival.

*Moreover, if this 150-acre preserve really is being managed to ensure that this dry forest exists for generations to come, then why would the development propose to jeopardize the lives of a certain few of our critical genetic materials sources? Not to mention, these are highly endangered species, so protected by law, that unless permitted, you cannot even take a dead twig from the plant. Yet, somehow the proposed development can call for the extraction of a whole living tree?*

*If an ITL is entitled and the Hala pepe (*Pleomele hawaiiensis*) and Aiea (*Nothocestrum breviflorum*) are to be moved, the chances of survival after re-location are extremely low. These plants have environmental conditions that are hard enough and to attempt to "take" these individuals would be detrimental. Not only detrimental to this specific ecosystem, but also to our Hawaiian culture. The richness of our*

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Letter to Ms. Wilds Pihanui Iaitia Brawner

July 25, 2013

Page 3 of 3



*unique Hawaiian flora and fauna mirror the richness of our cultural heritage, and with every species lost, every individual lost, we lose another facet of our history. This is why it is imperative that the ITL is not permitted and either there be a "no action alternative" or perhaps the development of a mini-preserve alternative to manage the individual trees where they currently exist in-situ.*

Response: See previous response.

*The plans of action for restoration and stewardship of the Kaloko Makai dry forest preserve are wonderful; but there must be some revision to certain aspects of the proposed HCP as a part of the proposed development. As a conservationist in the lowlands of North Kona, it is evident that there are building pressures upon our remaining lowland forest ecosystems, yet I am consistently dumbfounded by the shortsightedness of development projects.*

*The natural and cultural resources of Kaloko Makai are inherently intertwined and they must be protected in all entirety. We cannot expect to grow a forest; we cannot expect nature to live on the same time scale as humans, but we can expect and hope that all persons or parties involved with the decision making process for land use entitlements, make their decisions on a basis of responsible, long term opportunity. The idea of having the opportunity to save and preserve that which is so rare, and that which already exists.*

Response: Recognizing the importance of the Dryland Forest, the Petitioner incorporated a large portion (150-acres) of the Dryland Forest into their preliminary design as the Kaloko Makai Dryland Forest Preserve. By preserving these 150-acres, the Petitioner is ensuring that the Kaloko Dryland Forest is preserved for generations to come.

Your letter, along with this response, will be reproduced and included in the forthcoming Supplemental DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", written over a large, stylized flourish.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

FM

**SIERRA CLUB, HAWAII CHAPTER  
MOKU LOA GROUP**

**P.O.Box 1137  
Hilo HI 96721**

September 20, 2011

Mr Peter Phillips,  
SCD-TSA Kaloko Makai LLC  
1100 Alakea St 27<sup>th</sup> Floor  
Honolulu HI 968133

Wilson Okamoto Corp  
1907 S Beretania, St Ste 400  
Honolulu HI 96826  
Attn: Mr Earl Matsumoto AICP

State Land Use Commission  
DBEDT  
P.O. Box 2539  
Honolulu HI 96804  
Mr Orlando Dan Davison, Exec Officer

RE: Kaloko Makai, North Kona, Hawaii Island TMK (3) 7-3-09; 017, 025, 026, 028, 63, 19, 62

Dear Mr Philipps et al,

Sierra Club is writing in response the EIS for the proposed Kaloko Makai development project. We are concerned that the project could have significant, deleterious and irreversible effects on the natural and cultural resources of the Kaloko Honokohau National Historical Park (KHNHP), which is situated downslope of the development proposed.

The KHNHP is comprised of significant cultural resources, including ancient Hawaiian fishponds, anchialine ponds, and nearshore coastal waters important for fishing and gathering by native Hawaiians, and for education and recreation for the public including Sierra Club members. The water features provide habitat for federally protected and candidate endangered species, including the Hawaiian tilt and Hawaiian coot, migratory waterfowl, and hoary bat. The near shore waters and coral reef ecosystems are host to native endemic and indigenous species.

We are concerned that the development and use of wells in the high level aquifer to support the project may affect the availability of groundwater that supports the fishponds, wetlands, and anchialine ponds downslope. The anchialine ponds support endemic and native flora and fauna that depend on brackish groundwater. The pools, ponds, wetlands and offshore coral reef ecosystems are all dependent on freshwater stored in the basal lens and perched aquifers. Withdrawals from the high-level aquifer could affect the basal lens, decreasing water levels and increasing salinity.

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STATE LAND USE COMMISSION

4.10.1 Water System

The DEIS (p 4-106) projects 3-4.7 million gallons a day demand for the project at build-out. The water in the high level aquifer identified may or may not be of sufficient quantity or quality to provide potable water at this rate. The Water Use and Development Plan states that the demand for water for existing permitted uses (not including this proposal) is twice the amount available in the aquifer. The DEIS does not provide the necessary quantitative data to describe or assess the environmental impacts to regional groundwater and to the National Park, whose cultural and natural resources are dependent on groundwater quantity and quality. A plan to secure water quantities for the proposed development is not complete, and data is not provided to show sustainable use. As a result, the impacts to the National Park and mitigation measures have not been adequately addressed in this DEIS. The lack of information is demonstrated by the proposal that desalinization may be necessary of groundwater is too saline or insufficient. If 3-4.7 MGD is required to develop the project, what is the full hydrologic implication of removal of that quantity of water on regional sustainability? Oki et al. (1999) showed that groundwater flux to the coast along Kaloko-Honokohau NHP has decreased by ~50% and water levels throughout the National Park have dropped by ~0.6 ft since 1978 in response to modest levels of withdrawal. The demand for this project requires much higher withdrawal levels. Saltwater intrusion into the local aquifers would be an irreversible, significant long-term adverse impact to the local ecosystem and future groundwater use.

The desalination option proposed would source water from a source not identified. After reverse osmosis, the project would discharge concentrated saline brine and conditioning chemicals into a proposed well below the basal lens. The discharge could have unknown and unforeseen impacts on the coral reef ecosystems along the coastline.

4.10.2 Wastewater System and 4.10.3 Drainage System

The area proposed for development has highly permeable lava with little soil. Rain and surface runoff carry pollutants, both to groundwater discharged offshore, and to surface waters that enter the wetlands, pools, ponds and coastline downslope. The impact of polluted surface-water runoff from roadways, houses, commercial areas, hospital, schools, irrigation of recreation facilities and more, on increased nutrients and pollutants (such as petroleum products, metals, pesticides) in surface runoff is inadequately described. The total amount of nutrients to the nearshore will be greater due to the increased flow rates exacerbated by paving areas that are now permeable.

Sheet flow of storm runoff will occur on the proposed development. Surface water runoff even during low rainfall will carry pollutants and nutrients to groundwater and coastal waters Mitigation should discuss a ten year flood and a 100 year flood, and outline the overall stormwater management plan, impacts, and responsibilities.

The claim on the same page that "surface runoff does not occur" due to the high permeability of the natural ground surface, is not grounded. Surface runoff is high following rainfall events. For example on July 29, 2006, Hurricane Daniel led to rainfall measuring 1.08 inches per hour was observed by NPS staff, with large quantities of water flowing as sheet flow across areas of natural unpaved ground and impervious surfaces. In February 1, 2007, more than 3 inches in 3 hours (4.37 inches of rainfall in 24-hr) fell in the area, according the NPS RAWs rainfall data. The Rainfall Atlas of Hawaii provides a range of 19.6-29.5 inches per year. Planning for retention of runoff during the high rainfall events is the only way to reduce the impact on the sensitive ecosystems downslope. Unmitigated, this discharge water would to enter the enter Class AA waters. HAR §11-54-03(c) (1) states, in part, "It is the objective of Class AA

waters that these waters remain in their natural pristine state as nearly as possible with an **absolute minimum of pollution or alteration of water quality from any human-caused source or actions.** [emphasis added] To the extent practicable, the wilderness character of these areas shall be protected." As a result of this development, water quality would be significantly altered by human caused actions in contradiction to HAR §11-54-03(c) (1).

According to the DEIS (p 4-132) Stormwater over the site to be developed (changed from permeable surface to paved hardened surface) will either percolate directly into the ground or will be collected in catch basins and disposed of in drywells throughout the developed area. There is no discussion of the treatment or filtration of the runoff for non-point source pollutants prior to percolation into the groundwater that will directly affect the National Park downslope. The DEIS offers few details on the site design of stormwater system, the discharge points for 10-yr and 100-yr stormwaters, or impacts to receiving water bodies. County and state stormwater requirements are not designed to protect ecosystems, only drinking water. The drywell system is no more than a hole in the ground and offers no additional protections to groundwater.

The DEIS (p 4-132) assumes that 15% of applied R-1 (recycled water) irrigation water percolates downward to the groundwater, and that removal rates of nitrogen and phosphorus from the water "will be significant".

Hawaii water quality standards state the following for basic water quality criteria applicable to all waters: "All waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including ... (5) Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life;" [HAR §11-54-4 (a)] It is possible that the significant changes resulting from the various aspects of the water features may create conditions that are beneficial to pathogens or alien invasive species. Currently, the state of West Hawaii's reefs is good (e.g., Waddell 2005). However, a current University of Hawaii study contracted by the County of Hawaii (Wiegner et al. 2006) analyzed available long term water quality data for coastal developments in West Hawaii and suggests that "conditions in West Hawaii may be developing for extreme environmental degradation, possibly resulting in algal blooms like those in West Maui" (Wiegner et al. 2006, page 5).

Protective measures regarding non-point source pollution could include storm drain, roadway and parking lot drainage wells to filter petrochemical pollutants in the drainage basin. Fertilizers and pesticides applied to landscaped areas also affect surface water runoff, and percolation through thin undeveloped soil layers will not mediate these pollutants. Ideally all surface runoff would be subject to waste water treatment. Pollutants in surface water not subject to treatment will *not* be effectively filtered by the porous basalt.

Mitigation measures proposed in the DEIS include recommendations and suggestions that others, including homeowners, would be encouraged to follow. None are required, and the agencies reviewing have no means to require the implementation, nor is there a timetable for implementation, monitoring or reporting. The BMPs mentioned are not discussed in detail.

The groundwater monitoring program described on 3-45 should be increased in frequency; monthly monitoring beginning before the initiation of the project, and continuing for at least ten years following completion should be included as a condition.

#### Natural Resources

Anchialine pools in particular could be susceptible to degradation by poor water quality. The loss of anchialine pools and their rare endemic inhabitants (two of which are candidate endangered species) would be significant and irreversible. Anchialine pools are an important cultural and natural resource being lost island-wide to development. The pools on this site in particular have **national significance** and were specifically described in the nomination form designating the Honokohau Settlement National Historic Landmark. Preservation of these unique and nationally significant resources is of paramount importance.

Page 3-57 states "The development of this site does not pose direct threats to these (wetland bird) species or their habitat, although, the potential exists that the development could pose secondary threats to the National Park and to its endangered birds if noxious substances such as petroleum, oils lubricants, and sewage were to migrate downslope (maka) from the project into the Park."

Primary threats, such as reduced groundwater flow into the wetlands, pools and coastal reefs, and secondary threats, such as polluted runoff, are significant, and are not sufficiently addressed in the DEIS.

#### Botanical Resources

The Dryland Forest comprises 265 Acres, and includes four endangered species; ma`aloa, hala pepe, uhiuhi and `aiea. Other native trees include lama, maia pilo, mamane, `ohi`a lehua, `ohe, naio, and `a`ali`i. Given the extreme rarity of intact dryland forest and the high quality of this remnant, we recommend that the entire 254 acres be preserved and managed, as opposed to the loss of 100 acres of dryland forest to development. Figure 3-15 shows only the 150 acres proposed for protection, but it would be helpful to see the entire dryland remnant in the figure.

#### 4.2.8 Cultural Resources, Traditional Practices

Kaloko-Honokohau National Historical Park is a high cultural-use area for subsistence fishing. An outbreak of ciguatera as a result of the proposed project would affect traditional subsistence fishing, and pose a significant human health hazard. The Kona coast already leads the state in ciguatera poisoning (Gollop 1992, Ley 2002, Parsons *in press*). The ciguatera-causing dinoflagellate, *Gambierdiscus toxicus*, has been known to increase in concentrations after human or natural disturbances, including harbor construction (Randall 1958, Anderson & Lobel 1987). Thus, the project could cause a local outbreak of ciguatera in the National Park.

The Land Use commission has recognized the potential adverse impacts of upslope development, and found that "...for all proposed development adjacent to or near a National Park that raises threats of harm to the environment, cultural resources, or human health, precautionary measures should be taken to protect the NP cultural and natural resources..." (2002 Decision and Order on Docket A00-732).

#### 3.7 Fauna

The project will cause the increase of predatory species in the area, including pets, feral cats and dogs, and invasive species such as mongoose and rats. These animals will have impacts on the native birds and waterfowl in the National Park. The predators will move into the NP lands, increasing pressure on endangered populations. The direct and cumulative impact and its mitigation is not addressed in the DEIS.

#### 4.1 Archaeological Resources

The project proposes to permanently destroy archaeological sites. Given the cultural significance of the site, and the numerous trails to the upland resources, we would prefer to see some of the archaeological resources set aside for preservation.

#### 4.3 Trail Access

Trails to lava tubes used for gathering water, burial, fortification, shelter, and agriculture are ample evidence of intensive use of the area. All trails should be preserved, along with the sites associated with them.

#### 4.10.5 Electrical (Light)

Project lighting will also have a negative effect on visual resources and nightscape in the National Park. Light pollution of the night sky will interfere with visitor experience and evening traditional cultural practices. No impact analysis of light pollution, or its mitigation, to the National Park is made in the DEIS. Page 3-57 does say "The principal potential impact that the development of this site poses to Hawaiian Petrels and Newell's Shearwaters is the increased threat that birds will be downed after becoming disoriented by external lights associated with the new development. To reduce the potential for interactions between nocturnally flying birds with external lights and man-made structures, any external lighting that may be required in conjunction with development of the project will be shielded. This mitigation would serve the dual purpose of minimizing the threat of disorientation and downing of birds, while at the same time complying with the Hawai'i County Code § 14 – 50 *et seq.* which requires the shielding of exterior lights so as to lower the ambient glare caused by unshielded lighting to the astronomical observatories located on Mauna Kea."

Page 3-60 "Light is attractive to all arthropods. The potential presence of *Manduca blackburni* in the greater area makes shielded lighting an important protection for this endangered invertebrate. As discussed in 3.7 external lights will be shielded and comply with the Hawai'i County Code § 14 – 50 *et seq.*"

We would like to see discussion of the lighting effects on species of concern from sources such as the Kilauea National Refuge on Kauai to discern the applicability of the lighting codes for species protection.

#### 8.2 Cumulative Impacts

##### Cultural and Recreational impacts:

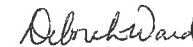
The preferred alternative would lead to Irrecoverable loss of open space and would obscure mauka-makai views to the shoreline. The cultural sense of place at the National Park would be impacted by the urban expansion. The view from shoreline to the summit of Hualalai would be impacted by development. The views of the mountain and the entire viewshed are of utmost importance to traditional practices. It is not clear in the DEIS how mauka to mauka viewsheds would be preserved by the proposed construction. The DEIS does not provide a visual impact analysis of vertical structures proposed for the site on surrounding view-planes, including from within the National Park. This type of analysis is critical for public review and comment. Visual impact analysis that takes into account the estimates of the proposed site grading heights and height details of each building to reveal how each would be elevated above the current natural grade, or above a baseline of sea level.

#### 8.5 Probably Adverse Environmental Effects that Cannot be Avoided

The absence of discussion regarding the impacts to the National Park is notable. This glaring omission provides grounds to request that this DEIS be withdrawn, to be resubmitted with completed studies in place.

Review of the DEIS shows that the proposed development is incompatible with the KHNHP, and would have major, adverse, long-term irreversible impacts to the natural and cultural resources. The precautionary principle must be applied in this case, and we recommend the no action alternative be applied in this case.

Sincerely,



Deborah Ward  
Conservation Committee  
Moku Loa Group, Sierra Club, Hawaii Chapter

Please address communication to  
Deborah Ward  
P.O. Box 918  
Kurtistown HI 96760



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July 25, 013

Ms. Deborah Ward  
Conservation Committee  
Moku Loa Group, Sierra Club, Hawaii Chapter  
P.O. Box 918  
Kurtistown, HI 96760

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Ward:

Thank you for your letter dated September 20, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

*Sierra Club is writing in response the EIS for the proposed Kaloko Makai development project. We are concerned that the project could have significant, deleterious and irreversible effects on the natural and cultural resources of the Kaloko Honokohau National Historical Park (KHNHP), which is situated downslope of the development proposed.*

*The KHNHP is comprised of significant cultural resources, including ancient Hawaiian fishponds, anchialine ponds, and nearshore coastal waters important for fishing and gathering by native Hawaiians, and for education and recreation for the public including Sierra Club members. The water features provide habitat for federally protected and candidate endangered species, including the Hawaiian still and Hawaiian coot, migratory waterfowl, and hoary bat. The near shore waters and coral reef ecosystems are host to native endemic and indigenous species.*

*We are concerned that the development and use of wells in the high level aquifer to support the project may affect the availability of groundwater that supports the fishponds, wetlands, and anchialine ponds downslope. The anchialine ponds support endemic and native flora and fauna that depend on brackish groundwater. The pools, ponds, wetlands and offshore coral reef ecosystems are all dependent on freshwater*



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*stored in the basal lens and perched aquifers. Withdrawals from the high-level aquifer could affect the basal lens, decreasing water levels and increasing salinity.*

Response: Two deep monitor wells (State Nos. 3858-01 and 3959-01) have provided insight on the occurrence of high level groundwater and its relationship to the brackish basal lens that exists in the nearshore area including Kaloko-Honokōhau National Historic Park. These deep monitor wells establish that most, if not all of the high level groundwater passes far beneath the basal groundwater rather than discharging into it. Results of these two wells indicate that the subsurface "mechanism" creating the high level groundwater and its physical separation from the basal lens is a series of poorly permeable lavas flows which total hundreds of feet thick and create an effective hydrologic separation between the two groundwater bodies.

The water supply alternatives for the Kaloko Makai project have been developed specifically to eliminate any impact on the basal groundwater that flows beneath the Kaloko-Honokōhau National Historic Park and discharges along its shoreline. A well will be drilled at the upper end of the project site. If it encounters a developable supply of "high level" groundwater from the strata at depth below the confining poorly permeable lava flows, pump testing and extensive monitoring during this testing would be undertaken to demonstrate that drawing water from this stratum would have no impact on the basal lens, hence no impact on Kaloko-Honokōhau National Historic Park. If that fact is affirmatively demonstrated, on-site production wells would be developed to tap this resource.

In the event that groundwater at depth below the basal lens can not be developed at all or without impact to the basal lens, desalinization would be utilized as the project's source of drinking water supply. In this case, wells would be developed at lower elevation on the project site and they would draw saline groundwater from beneath the basal lens, again with the affirmative demonstration that this use would not impact the overlying basal groundwater that flows through Kaloko-Honokōhau National Historic Park and discharges at the shoreline.

Section 3.5 in the forthcoming Second DEIS includes a discussion on groundwater source alternatives, potential impacts to groundwater resources and nearshore marine environment.

#### **4.10.1 Water System**

*The DEIS (p 4-106) projects 3-4.7 million gallons a day demand for the project at build-out. The water in the high level aquifer identified may or may not be of sufficient*





quantity or quality to provide potable water at this rate. The Water Use and Development Plan states that the demand for water for existing permitted uses (not including this proposal) is twice the amount available in the aquifer. The DEIS does not provide the necessary quantitative data to describe or assess the environmental impacts to regional groundwater and to the National Park, whose cultural and natural resources are dependent on groundwater quantity and quality. A plan to secure water quantities for the proposed development is not complete, and data is not provided to show sustainable use. As a result, the impacts to the National Park and mitigation measures have not been adequately addressed in this DEIS. The lack of information is demonstrated by the proposal that desalination may be necessary of groundwater is too saline or insufficient. If 3-4.7 MGD is required to develop the project, what is the full hydrologic implication of removal of that quantity of water on regional sustainability? Oki et al. (1999) showed that groundwater flux to the coast along Kaloko-Honokohau NHP has decreased by ~50% and water levels throughout the National Park have dropped by ~0.6 ft since 1978 in response to modest levels of withdrawal. The demand for this project requires much higher withdrawal levels. Saltwater intrusion into the local aquifers would be an irreversible, significant long-term adverse impact to the local ecosystem and future groundwater use.

Response:

There are several points to be made in response to this comment:

- As is shown in the Second DEIS, at full build out, the project's potable and non-potable supply requirements will be 2.18 and 0.58 MGD, respectively.
- The non-potable supply will be provided by recycled, R-1 quality wastewater.
- The potable supply will be provided by one of the three alternatives described in the first response above, none of which would diminish the flowrate in the basal lens passing through Honokohau National Park.
  - If wells at 710-foot elevation tapping high level groundwater at depth do not require desalination treatment, they would be dedicated to DWS with one third of their capacity used by DWS for other users in North Kona. Total draft of groundwater would be 3.27 MGD, 2.18 MGD for the Kaloko Makai project and the remainder for other DWS customers.
  - If the 710-foot wells require desalination treatment, they would remain private. At a product recovery rate on the order of 60 to 70 percent, total groundwater pumpage would be about 3.33 MGD. The additional 1.15 MGD would be concentrate from the desalination plant which would be disposed of into the lower part of



the basal lens at a depth of comparable salinity. Such disposal would actually increase the flow of basal groundwater flowing beneath the Park.

- If the potable supply is produced using low elevation wells (363-foot elevation) drawing saline groundwater from beneath the basal lens, this draft and its RO concentrate disposal would have no impact on the basal lens.
- The Oki et al (1999) study you reference does not incorporate recent findings of the high level groundwater occurrence. It also does not have the benefit of the recent assessment of groundwater recharge by the US Geological Survey (Engott, 2011) which shows the recharge in the Keauhou Aquifer to be 77 percent greater than in the CWRM's 2008 Water Resource Protection Plan.

*The desalination option proposed would source water from a source not identified. After reverse osmosis, the project would discharge concentrated saline brine and conditioning chemicals into a proposed well below the basal lens. The discharge could have unknown and unforeseen impacts on the coral reef ecosystems along the coastline.*

Response: The forthcoming Second DEIS will discuss alternative sources of water, including those that will require desalination through reverse osmosis (RO). All chemicals used in the periodic maintenance of the RO desalination filters would be collected, neutralized, and then treated prior to disposal. The concentrate produced by RO desalination will be disposed of in deep wells which will deliver the concentrate into the saline zone far below the basal lens. It will discharge at depth offshore and have no impact to the coastal ecosystem.

#### **4.10.2 Wastewater System and 4.10.3 Drainage System**

*The area proposed for development has highly permeable lava with little soil. Rain and surface runoff carry pollutants, both to groundwater discharged offshore, and to surface waters that enter the wetlands, pools, ponds and coastline downslope. The impact of polluted surface-water runoff from roadways, houses, commercial areas, hospital, schools, irrigation of recreation facilities and more, on increased nutrients and pollutants (such as petroleum products, metals, pesticides) in surface runoff is inadequately described. The total amount of nutrients to the nearshore will be greater due to the increased flow rates exacerbated by paving areas that are now permeable.*

Response: Potential sources and their respective amounts of nutrients that would be added to the basal groundwater by the project are identified and calculated in "An Assessment of the Potential Impact of the Proposed Kaloko

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Makai Project on Water Resources" by Tom Nance Water Resource Engineering (2013), which will be appended to the upcoming RDEIS. These results are summarized in Table 4 of that report as follows: a 6.2% increase in the basal groundwater flowrate; a -5.1 % decrease in the salinity of the basal groundwater; a 5.2% increase in nitrogen; and a 2.1% increase in phosphorus.

As anchialine pools have been shown not to be nutrient limited systems, these small increases in nutrients in groundwater will have no effect on pools or fishponds. In addition, the flux of nutrients to the nearshore ocean off the project site has been reported and discussed in the Assessment of Marine and Pond Environments prepared by Marine Research Consultants. The assessment will be included in the forthcoming Second DEIS. In brief, the expected change in nutrient flux to the ocean will be inconsequential in terms of effects to marine biotic community structure owing to rapid mixing. Much of the coastal areas of West Hawaii receive far more nutrient input from naturally occurring groundwater with no effect.

*Sheet flow of storm runoff will occur on the proposed development. Surface water runoff even during low rainfall will carry pollutants and nutrients to groundwater and coastal waters. Mitigation should discuss a ten year flood and a 100 year flood, and outline the overall stormwater management plan, impacts, and responsibilities.*

Response: The design concept for the drainage system is to eliminate surface runoff from leaving the site in compliance with County of Hawaii design standards. These standards are not directly based on a specific flood event. Natural areas, seepage pits, and dry wells will collect runoff and allow it to infiltrate rather than leave the site as surface water. The passage of such runoff from the ground surface to the groundwater below, through the unsaturated (vadose) zone, provides natural filtration and adsorption. Surface runoff from most of the developed areas in Kailua-Kona is handled in a similar manner without identifiable adverse impacts to groundwater or the makai environment.

*The claim on the same page that "surface runoff does not occur" due to the high permeability of the natural ground surface, is not grounded. Surface runoff is high following rainfall events. For example on July 29, 2006, Hurricane Daniel led to rainfall measuring 1.08 inches per hour was observed by NPS staff, with large quantities of water flowing as sheet flow across areas of natural unpaved ground and impervious surfaces. In February 1, 2007, more than 3 inches in 3 hours (4.37 inches of rainfall in 24-hr) fell in the area, according the NPS RAWs rainfall data. The Rainfall Atlas of Hawaii provides a range of 19.6-29.5 inches per year. Planning for retention of runoff during the high rainfall events is the only way to reduce the impact on the sensitive ecosystems downslope. Unmitigated, this discharge water would to*

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*enter the enter Class AA waters. HAR §11-54-03(c) (1) states, in part, "It is the objective of Class AA waters that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. [emphasis added] To the extent practicable, the wilderness character of these areas shall be protected." As a result of this development, water quality would be significantly altered by human caused actions in contradiction to HAR §11-54-03(c) (1).*

Response: Rainfall runoff does occur locally from impervious surfaces, both natural and manmade, but as soon as this surface flow crosses into a naturally pervious area, it is lost to seepage. Development of the project will obviously create additional impervious surfaces. However, this surface flow will be directed to pits, sumps, drywells and naturally pervious areas such that surface runoff will not leave the project site. Contaminants in the surface runoff disposed of in this manner, in the process of percolating downward through the unsaturated lavas to the basal groundwater below, will be naturally filtered and adsorbed, thereby removing a substantial fraction of these contaminants. Virtually all of Kailua-Kona has handled surface runoff in this manner for decades with no identifiable negative impacts on coastal resources.

Storm events which create sufficient runoff for continuous surface flow from the project site, across or beneath Queen Kaahumanu Highway, and across the Park property to discharge at the shoreline would leave unmistakable eroded pathways and deposits of soil washed down with the runoff. There is no such physical evidence on the project site or anywhere across the Park site. The project site and the Park site downgradient do not have such runoff potential.

*According to the DEIS (p 4-132) Stormwater over the site to be developed (changed from permeable surface to paved hardened surface) will either percolate directly into the ground or will be collected in catch basins and disposed of in drywells throughout the developed area. There is no discussion of the treatment or filtration of the runoff for non-point source pollutants prior to percolation into the groundwater that will directly affect the National Park downslope. The DEIS offers few details on the site design of stormwater system, the discharge points for 10-yr and 100-yr stormwaters, or impacts to receiving water bodies. County and state stormwater requirements are not designed to protect ecosystems, only drinking water. The drywell system is no more than a hole in the ground and offers no additional protections to groundwater.*

Response: The design concept for the drainage system is to eliminate surface runoff from leaving the site. Use of detention basins, natural swales, pits, and dry wells will collect runoff and allow it to infiltrate rather than leave the site as surface water. The passage of such runoff from the ground surface to the

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groundwater below, though the unsaturated (vadose) zone, provides natural filtration and adsorption. Surface runoff from most of the developed areas in Kailua-Kona is handled in a similar manner without identifiable adverse impacts to groundwater or the makai environment. This information will be included in the forthcoming Second DEIS.

*The DEIS (p 4-132) assumes that 15% of applied R-1 (recycled water) irrigation water percolates downward to the groundwater, and that removal rates of nitrogen and phosphorus from the water "will be significant".*

*Hawaii water quality standards state the following for basic water quality criteria applicable to all waters: "All waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including ... (5) Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life;" [HAR §11-54-4 (a)] It is possible that the significant changes resulting from the various aspects of the water features may create conditions that are beneficial to pathogens or alien invasive species. Currently, the state of West Hawaii's reefs is good (e.g., Waddell 2005). However, a current University of Hawaii study contracted by the County of Hawaii (Wiegner et al. 2006) analyzed available long term water quality data for coastal developments in West Hawaii and suggests that "conditions in West Hawaii may be developing for extreme environmental degradation, possibly resulting in algal blooms like those in West Maui" (Wiegner et al. 2006, page 5).*

Response: The report by Wiegner et al. 2006 has been shown to be without merit for many reasons and does not present a valid interpretation of long-term trends of impacts (or lack of impacts) from shoreline development to marine waters. As an example, this report is seriously flawed in that it does not recognize that naturally occurring groundwater contains nutrient concentrations far above marine waters. For this reason alone, this report cannot be cited as a justification of environmental degradation.

The Second DEIS includes an assessment of potential impacts to water resources which estimates an increase of 5.2% in nitrogen and 2.1% increase in phosphorous over present groundwater flow as a result of excess applied irrigation.

*Protective measures regarding non-point source pollution could include storm drain, roadway and parking lot drainage wells to filter petrochemical pollutants in the drainage basin. Fertilizers and pesticides applied to landscaped areas also affect surface water runoff, and percolation through thin undeveloped soil layers will not mediate these pollutants. Ideally all surface runoff would be subject to waste water*

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*treatment. Pollutants in surface water not subject to treatment will not be effectively filtered by the porous basalt.*

Response: We acknowledge your comments regarding protective measures and. The design concept for the drainage system is to eliminate surface runoff from leaving the site. Use of detention basins, natural swales, seepage pits, and dry wells will collect runoff and allow it to infiltrate rather than leave the site as surface water. The passage of such runoff from the ground surface to the groundwater below, though the unsaturated (vadose) zone, provides natural filtration and adsorption. Surface runoff from most of the developed areas in Kailua-Kona is handled in a similar manner without identifiable adverse impacts to groundwater or the makai environment.

*Mitigation measures proposed in the DEIS include recommendations and suggestions that others, including homeowners, would be encouraged to follow. None are required, and the agencies reviewing have no means to require the implementation, nor is there a timetable for implementation, monitoring or reporting. The BMPs mentioned are not discussed in detail.*

Response: As mentioned in the Draft EIS, all drainage improvements will be developed in accordance with the applicable DOH and County drainage requirements regarding runoff and non-point source pollution.

To reduce the potential non-point source pollution to impact groundwater and marine waters Kaloko Makai will:

- Design and construct best management practices to prevent violation of State water quality standards as a result of storm runoff discharges originating from Kaloko Makai. To the extent practicable and consistent with applicable laws, Kaloko Makai will design storm and surface runoff BMPs to treat the first flush runoff volume to remove pollutants from storm and surface runoff.
- Where applicable, design sub-surface drainage structures with a debris catch basin to allow the detention and periodic removal of rubbish and sediments deposited by runoff. Storm water runoff shall first enter the debris catch basin before flowing into any subsurface drainage structures. The debris catch basin's volume will be designed using current industry and engineering standards.
- Design and construct to the extent practicable and consistent with applicable laws, landscaped areas, including grassed or vegetative swales, grass filter strips, vegetated open space areas, or other advance storm water BMPs.



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- Provide signs for all subsurface drainage structures with warnings such as “Dump No Wastes. Goes to Groundwater and Ocean. Help Protect Hawai‘i’s Environment.”
- Develop Pollution Prevention Plan (PPP), before constructing Kaloko Makai that: 1) addresses environmental stewardship and non-point sources of water pollution that can be generated in residential areas, 2) provides BMPs for pollution prevention. The PPP will include water conservation, landscape runoff, erosion control, use of fertilizers and other chemicals, environmentally safe automobile maintenance, and management of household chemicals. The PPP will also include information on the National Park and the significant natural and cultural resources within the Park.

*The groundwater monitoring program described on 3-45 should be increased in frequency; monthly monitoring beginning before the initiation of the project, and continuing for at least ten years following completion should be included as a condition.*

Response: The developer will conduct quarterly monitoring prior to the start of construction, monthly during initial construction and one year following, and then quarterly thereafter for five years.

#### **Natural Resources**

*Anchialine pools in particular could be susceptible to degradation by poor water quality. The loss of anchialine pools and their rare endemic inhabitants (two of which are candidate endangered species) would be significant and irreversible. Anchialine pools are an important cultural and natural resource being lost island-wide to development. The pools on this site in particular have national significance and were specifically described in the nomination form designating the Honokohau Settlement National Historic Landmark. Preservation of these unique and nationally significant resources is of paramount importance.*

*Page 3-57 states “The development of this site does not pose direct threats to these (wetland bird) species or their habitat, although, the potential exists that the development could pose secondary threats to the National Park and to its endangered birds if noxious substances such as petroleum, oils lubricants, and sewage were to migrate downslope (makai) from the project into the Park.”*

*Primary threats, such as reduced groundwater flow into the wetlands, pools and coastal reefs, and secondary threats, such as polluted runoff, are significant, and are not sufficiently addressed in the DEIS.*



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Response: As indicated in a previous response, the impacts to water resources are identified and quantified in the 2013 report by TNWRE. The report will be included in the forthcoming Second Draft EIS.

As reported in TNWRE 2013, the proposed project will actually increase the potential for maintaining the health of anchialine pools by increasing hydraulic flux. As noted in Marine Research Consultants 2012, anchialine pools are not nutrient limited systems, so the small increases in nutrients that may result from the development will not change pond dynamics. The major factor responsible for degradation of anchialine pools is introduction of non-native fish, which prey upon naturally occurring pond biota which disrupts the metabolic balance.

#### **Botanical Resources**

*The Dryland Forest comprises 265 Acres, and includes four endangered species; ma`aloa, hala pepe, uhiuhi and `aiea. Other native trees include lama, maia pilo, mamane, `ohi`a lehua, `ohe, naio, and `a`ali`i. Given the extreme rarity of intact dryland forest and the high quality of this remnant, we recommend that the entire 254 acres be preserved and managed, as opposed to the loss of 100 acres of dryland forest to development. Figure 3-15 shows only the 150 acres proposed for protection, but it would be helpful to see the entire dryland remnant in the figure.*

Response: The entire Kaloko Makai project area is within the Kona Urban Area as set forth in the Kona Community Development Plan, and is designated as a TOD under the Official Kona Land Use Map. Additionally, Figure 2-7 “County General Plan Land Use Pattern Allocation Guide” delineates the portion of the dryland forest below (south) of Hina Lani as conservation and above (north) of Hina Lani as Urban Expansion. This is consistent with Kaloko Makai’s land use plan and the boundaries of the Kaloko Makai Dryland Forest preserve.

The 150-acres of the proposed Kaloko Makai Dryland Forest Preserve was determined in consultation with the USFWS, FHWA and County of Hawaii. The Petitioner continues to consult with USFWS regarding the dryland forest.

#### **4.2.8 Cultural Resources, Traditional Practices**

*Kaloko-Honokohau National Historical Park is a high cultural-use area for subsistence fishing. An outbreak of ciguatera as a result of the proposed project would affect traditional subsistence fishing, and pose a significant human health hazard. The Kona coast already leads the state in ciguatera poisoning (Gollop 1992, Ley 2002, Parsons in press). The ciguatera-causing dinoflagellate, Gambierdiscus toxicus, has been known to increase in concentrations after human or natural disturbances,*



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*including harbor construction (Randall 1958, Anderson & Lobel 1987). Thus, the project could cause a local outbreak of ciguatera in the National Park.*

*The Land Use commission has recognized the potential adverse impacts of upslope development, and found that "...for all proposed development adjacent to or near a National Park that raises threats of harm to the environment, cultural resources, or human health, precautionary measures should be taken to protect the NP cultural and natural resources..." (2002 Decision and Order on Docket A00-732).*

Response: The project's water supply will be designed to have no impact on the basal groundwater flowing beneath Kaloko-Honokōhau National Historic Park. These alternatives have been described above in an earlier response.

No aspect of this project will change any physical attributes of the Park, and the project does not include any harbor construction. Hence, the assumption that ciguatera outbreaks could result from the project has no basis.

### 3.7 Fauna

*The project will cause the increase of predatory species in the area, including pets, feral cats and dogs, and invasive species such as mongoose and rats. These animals will have impacts on the native birds and waterfowl in the National Park. The predators will move into the NP lands, increasing pressure on endangered populations. The direct and cumulative impact and its mitigation is not addressed in the DEIS.*

Response: The proposed project will increase the population of pets in the presently undeveloped Kaloko Makai project site. There is no evidence, however, to suggest that the existing feral dog and cat population in the area is at a threshold, such that any increase would cause their behavior to turn to predation upon native birds and waterfowl at the National Park. There has long been a feral dog and cat population in the vicinity of Honokohau Harbor that has thrived without becoming an increasing threat to native birds and waterfowl at the park.

### 4.1 Archaeological Resources

*The project proposes to permanently destroy archaeological sites. Given the cultural significance of the site, and the numerous trails to the upland resources, we would prefer to see far more of the archeological resources set aside for preservation.*

Response: All archaeological sites that were found and recorded in our AIS were given recommendations by the archeologists of Cultural Surveys Hawaii as to how the sites should be preserved. It is recommended that of the 341



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sites in the project area, 80 sites be subjected to a program of data recovery to address scientific and informational concerns, and a total of 72 sites be preserved. The remaining 189 sites are not recommended to undergo further research, as the documentation and plotting during the survey has addressed the limited information available at these sites. These sites are classified under Criterion D significance only and are generally characterized as sites in poor structural condition, or sites such as minimally modified lava tubes, trail remnants, agricultural features or animal husbandry walls that lack excavation potential. Therefore, following additional data collection for the 80 sites, a total of 269 sites will not be preserved and may be impacted as construction work proceeds.

### 4.3 Trail Access

*Trails to lava tubes used for gathering water, burial, fortification, shelter, and agriculture are ample evidence of intensive use of the area. All trails should be preserved, along with the sites associated with them.*

Response: It should indeed be understood that all discussion of site types, functions, and mitigations should not be considered finalized until the AIS is approved by SHPD. We acknowledge that lava tubes were used for gathering water, burial, fortification, shelter and agriculture. A total of 57 trail remnants are described. While many of these are recommended for preservation it is true that many are recommended for no further work. Many of these trail segments are on the order of 10 m long. The SHPD has always supported judicious consideration of site preservation typically on a case-by-case basis.

### 4.10.5 Electrical (Light)

*Project lighting will also have a negative effect on visual resources and nightscape in the National Park. Light pollution of the night sky will interfere with visitor experience and evening traditional cultural practices. No impact analysis of light pollution, or its mitigation, to the National Park is made in the DEIS.*

*Page 3-57 does say "The principal potential impact that the development of this site poses to Hawaiian Petrels and Newell's Shearwaters is the increased threat that birds will be downed after becoming disoriented by external lights associated with the new development. To reduce the potential for interactions between nocturnally flying birds with external lights and man-made structures, any external lighting that may be required in conjunction with development of the project will be shielded. This mitigation would serve the dual purpose of minimizing the threat of disorientation and downing of birds, while at the same time complying with the Hawai'i County Code § 14 - 50 et seq. which requires the shielding of exterior lights so as to lower the*



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*ambient glare caused by unshielded lighting to the astronomical observatories located on Mauna Kea."*

*Page 3-60 "Light is attractive to all arthropods. The potential presence of Manduca blackburni in the greater area makes shielded lighting an important protection for this endangered invertebrate. As discussed in 3.7 external lights will be shielded and comply with the Hawai'i County Code § 14 – 50 et seq."*

*We would like to see discussion of the lighting effects on species of concern from sources such as the Kilauea National Refuge on Kauai to discern the applicability of the lighting codes for species protection.*

Response: Kaloko Makai lighting mitigation measures will be in compliance with Hawaii County Code § 14 – 50, as stated in Section 3.7 of the DEIS. Thus, project lighting should not effect any species of concern.

#### **8.2 Cumulative Impacts**

##### *Cultural and Recreational impacts:*

*The preferred alternative would lead to Irretrievable loss of open space and would obscure mauka-makai views to the shoreline. The cultural sense of place at the National Park would be impacted by the urban expansion. The view from shoreline to the summit of Hualalai would be impacted by development. The views of the mountain and the entire viewshed are of utmost importance to traditional practices. It is not clear in the DEIS how makai to mauka viewsheds would be preserved by the proposed construction. The DEIS does not provide a visual impact analysis of vertical structures proposed for the site on surrounding view-planes, including from within the National Park. This type of analysis is critical for public review and comment. Visual impact analysis that takes into account the estimates of the proposed site grading heights and height details of each building to reveal how each would be elevated above the current natural grade, or above a baseline of sea level.*

Response: The entire Kaloko Makai project area is within the Kona Urban Area as set forth in the Kona Community Development Plan, and is designated as a TOD under the Official Kona Land Use Map. The development will change the visual appearance of the property from vacant land to a built environment in accordance with Kona CDP. The project area is flanked by light industrial uses along Hulikoia Drive and Kaloko Industrial Park to the south. In addition, the Kaloko Heights development is proposed immediately mauka of Kaloko Makai. Much of the viewplane of the project area from Queen Kaahumanu Highway is presently blocked by industrial/commercial developments.



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#### **8.5 Probably Adverse Environmental Effects that Cannot be Avoided**

*The absence of discussion regarding the impacts to the National Park is notable. This glaring omission provides grounds to request that this DEIS be withdrawn, to be resubmitted with completed studies in place.*

Response: To the extent that impacts to the National Park can be determined, they were discussed in the DEIS and will be discussed in the forthcoming Second Draft EIS, based on comments received on the DEIS. Some of the concerns you raise regarding impacts via groundwater movement, however, were not substantiated by the *Assessment of the Potential Impact of the Kaloko Makai on Water Resources* (TNWRE, 2013) and the *Marine Assessment Report* (Marine Research Consultants, 2012) that will be appended in the forthcoming Second DEIS.

*Review of the DEIS shows that the proposed development is incompatible with the KHNHP, and would have major, adverse, long-term irreversible impacts to the natural and cultural resources. The precautionary principle must be applied in this case, and we recommend the no action alternative be applied in this case.*

Response: Please refer to our preceding response. The EIS process is intended to disclose potential environmental impacts. The decision to approve the project or pursue a no action alternative will be determined through the subsequent land use entitlement processes.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodnenker, State Land Use Commission

**Yukino Tanaka**

---

**From:** Earl Matsukawa  
**Sent:** Thursday, October 06, 2011 1:14 PM  
**To:** Yukino Tanaka  
**Subject:** FW: Kaloko comments with Surfrider heading included

**Attachments:** \_kaloko DEIS-final KKE comments.docx



\_kaloko DEIS-final  
KKE comment...

---

**From:** Janice Palma-Glennie [mailto:palmtree7@hawaiiantel.net]  
**Sent:** Thursday, October 06, 2011 12:58 PM  
**To:** Earl Matsukawa  
**Subject:** Kaloko comments with Surfrider heading included

Aloha, earl,  
Sorry about this. I just realized I hadn't said from whence the comments I sent came!  
Please use this final draft as our testimony.  
Mahalo again,  
Janice

Surfrider Foundation Kona Kai Ea chapter  
c/o P.O. Box 4849  
Kailua-Kona, Hawai'i 96745

---

Mr Peter Philipps,  
SCD-TSA Kaloko Makai LLC  
1100 Alakea St 27<sup>th</sup> Floor  
Honolulu HI 968133

State Land Use Commission  
DBEDT  
P.O. Box 2539  
Honolulu HI 96804  
Mr Orlando Dan Davison, Exec Officer

Wilson Okamoto Corp  
1907 S Beretania, St Ste 400  
Honolulu HI 96826  
Attn: Mr Earl Matsumoto AICP

October 2, 2011

RE: Kaloko Makai, North Kona, Hawaii Island TMK (3) 7-3-09:, 017. 025, 026, 028, 63, 19, 62

Aloha Mr Philipps et al,

I am writing on behalf of our group's members in response to the proposed Kaloko Makai Draft Environmental Impact Statement (DEIS). Our concerns are based on the potential and irreversible damage which the project could have on natural resources, including the nearshore waters and cultural resources of the Kaloko Honokohau National Historical Park, Kohanaiki, 'O'oma, and beyond.

*Recreation, Culture, Water Quality*

Our local organization's hundreds of members as well as thousands of national and international members and their ohana depend upon the health of both coastal waters and the aquifers which feed into them. Many of our members' involvement in surfing, paddling, fishing, and other ocean-related activities is based upon the cultural origin and historical value of those activities. As is true of many aspects of Hawaiian culture, the continuation of those practices depends upon the waters of this state being protected as Public Trust resources, as they are legally mandated to be. As is questioned in the National Park Service and other expert testimony, the DEIS for this proposed project does not provide evidence that assures the protection of those resources.

*Native Habitat*

The offshore waters fed by the aquifer which would flow from the proposed project are habitat to rare and endangered indigenous and endemic species of flora and fauna. Those species are culturally important as well as environmentally and economically significant to Hawai'i's residents and their quality of life. Environmentally sensitive wetlands, anchialine ponds, and fishponds are significant features directly downslope of this proposed development. As has been shown by studies including those of the University of Hawai'i, the integrity of these coastal ecosystems is being undermined by expanding urban and resort development. In the DEIS, there appear to be no guarantees that potential and extreme harm to sensitive habitat caused by excessive upslope development will, or realistically can be, mitigated.

*Potable Water*

A sufficient, reliable source for potable water has not been clearly identified.

*Kona Community Development Plan (KCDP)*

Our group supports implementation of the Kona Community Development Plan (KCDP). While that plan supports a Transit Oriented Development (TOD) to be created in this general area, the public charette process and comments of thousands of members of the public who took part in that process have made it clear that *their top priority for regional planning is protection of coastal resources, including cultural and environmental resources*. The most dense T-5 Urban Center is what this developer is requesting as described by the DEIS. However, a less dense T-3 or T-4 development would fulfill the KCDP's "Smart Growth" goals while creating far less damage to the fragile coastal resources mauka of it.

In relation to a potable water source, the North Kona region is known for being arid. Some water experts deny that there is enough potable water in this aquifer to sustain development already permitted and entitled in the proposed project area, no less to support the additional needs of such a high density, T-5 development.

In conclusion, a healthy coastline supports the recreational, cultural, and spiritual activities upon which our members depend for their quality of life. Because of that and other reasons, we question the proposed development's compatibility with the long-term goals of our community, especially as it relates to sustainable and smart regional growth. Meanwhile, we fully support and defer to the Kaloko-Honokohau National Cultural Park's experts regarding critical questions related to the proposed development and its DEIS. There are enough unanswered questions and inconsistencies in the document that relate to the potential damage to water quality, cultural integrity, and the flora and fauna that lead us to ask that this proposal be denied as described and outlined in the DEIS.

Mahalo for your consideration of our views and for this opportunity to work within the State's critical and public-inclusive land use process. Your decision of this project is critical to the well-being of our members and their extended island ohana.

Sincerely,

Janice Palma-Glennie

For the Surfrider Foundation's Kona Kai Ea chapter





7469-01  
July 25, 2013

Ms. Janice Palma-Glennie  
Surfrider Foundation Kona Kai Ea Chaper  
P.O. Box 4849  
Kailua-Kona, HI 96745

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Palma-Glennie:

Thank you for your letter dated October 2, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the respective order of your comments:

1. Recreation, Culture, Water Quality: *Our local organization's hundreds of members as well as thousands of national and international members and their ohana depend upon the health of both coastal waters and the aquifers which feed into them. Many of our members' involvement in surfing, paddling, fishing, and other ocean-related activities is based upon the cultural origin and historical value of those activities. As is true of many aspects of Hawaiian culture, the continuation of those practices depends upon the waters of this state being protected as Public Trust resources, as they are legally mandated to be. As is questioned in the National Park service and other expert testimony, the DEIS for this proposed project does not provide evidence that assures the protection of those resources.*

Response: We acknowledge your concerns regarding potential impacts on coastal, natural and cultural resources.

2. Native Habitat: *The offshore waters fed by the aquifer which would flow from the proposed project are habitat to rare and endangered indigenous and endemic species of flora and fauna. Those species are culturally important as well as environmentally and economically significant to Hawaii's residents*

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Letter to Ms. Janice Palma-Glennie  
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*and their quality of life. Environmentally sensitive wetlands, anchialine ponds, and fishponds are significant features directly downslope of this proposed development. As has been shown by studies including those of the University of Hawaii, the integrity of these coastal ecosystems is being undermined by expanding urban and resort development. In the DEIS, there appear to be no guarantees that potential and extreme harm to sensitive habitat caused by excessive upslope development will, or realistically can be, mitigated.*

Response: An Assessment of the Potential Impact on Water Resources and An Assessment of Marine and Pond Environments were prepared for the project by Tom Nance Water Resource Engineering (TNWRE) and Marine Research Consultants (MRC), respectively. Both reports will be included in the forthcoming Second DEIS.

Results of analyses of changes to groundwater resulting from the proposed project as reported by TNWRE indicate that there will be an increase in hydraulic flux as well as a slight reduction in salinity of groundwater reaching the ponds. As sensitive wetland, anchialine pools and fishponds rely on input of freshwater, the predicted changes will not provide any detrimental alteration to these water bodies. In addition, as anchialine pools and fishponds are not nutrient limited, the small additions of dissolved nutrients that will be added to groundwater will not create any detrimental alteration to groundwater dynamics within ponds or wetlands. Time-course measurements reported by Marine Research Consultants in the fishponds indicate no detrimental changes to metabolic functioning within these water bodies resulting from existing development upslope of KAHO, which indicates that future increments of development will similarly have little or no effect.

3. Potable Water: *A sufficient, reliable source for potable water has not been clearly identified.*

Response: Kaloko Makai is aware of the range of opinions that exist among water experts regarding ground water resources pertaining to development within the North Kona region. The Second DEIS includes a discussion of ground water resources and provides an outline of the proposed project's plans to source sufficient potable to water to sustain development, as well as measures to mitigate the water demands of such development.

The alternatives being considered for the Project's drinking water supply have been narrowed down to those that can be affirmatively demonstrated as having no impact on the basal lens. These are limited to use of the high-level groundwater drawn from strata far below the basal groundwater so as not to



impact it and desalinizing saline groundwater, also drawn from below the basal lens.

A well will be drilled at the upper end of the Project Site. If it encounters a developable supply of high level groundwater from the strata at depth below the confining poorly permeable lava flows, pump testing and extensive monitoring during this testing would be undertaken to demonstrate that drawing water from this stratum would have not impact on the basal lens. If that fact is affirmatively demonstrated, on-site production wells would be developed to tap this resource.

In the event groundwater at depth below the basal lens cannot be developed at all or without impact to the basal lens, desalinization would be utilized as the project's source of drinking water. In this case, wells would be developed at lower elevation on the Project Site, drawing saline groundwater from beneath the basal lens.

4. *Kona Community Development Plan:* Our group supports implementation of the Kona Community Development Plan (KCDP). While that plan supports a Transit Oriented Development (TOD) to be created in this general area, the public charette process and comments of thousands of members of the public who took part in that process have made it clear that their top priority for regional planning is protection of coastal resources, including cultural and environmental resources. The most dense T-5 Urban Center is what this developer is requesting as described by the DEIS. However, a less dense T-3 or T-4 development would fulfill the KCDP's "Smart Growth" goals while creating far less damage to the fragile coastal resources mauka of it.

*In relation to a potable water source, the North Kona region is known for being arid. Some water experts deny that there is enough potable water in this aquifer to sustain development already permitted and entitled in the proposed project area, no less to support the additional needs of such a high density, T-5 development.*

In conclusion, a healthy coastline supports the recreational, cultural, and spiritual activities upon which our members depend for their quality of life. Because of that and other reasons, we question the proposed development's compatibility with the long-term goals of our community, especially as it relates to sustainable and smart regional growth. Meanwhile, we fully support and defer to the Kaloko-Honokohau National Cultural Park's experts regarding critical questions related to the proposed development and its DEIS. There are enough unanswered questions and inconsistencies in the document that relate



to the potential damage to water quality, cultural integrity, and the flora and fauna that lead us to ask that this proposal be denied as described and outlined in the DEIS.

Response: The Kaloko Makai development is consistent with the Kona CDP. The CDP was developed through, as you state, "the public charrette process and comments of thousands of members of the public who took part in that process". What was developed from the process was the CDP with which Kaloko Makai is in conformance.

Although the Kona CDP allows Kaloko Makai to be a Regional Center TOD, since the proposal includes reserve land for a regional hospital, heading the communities desire for a lower density development, Kaloko Makai has decided to develop a Neighborhood TOD with or without a hospital, as shown on the Official Kona Land Use Map of the Kona CDP. This change has been reflected in the Second DEIS.

The Kona CDP defined Transit-Oriented Development (TOD) as "The development of compact, mixed-use villages which would integrate housing, employment, shopping, and recreation opportunities. Villages would be designed around transit stations/stops which would reduce the need for daily trips and financially support the expanded transit system."

Additionally, please note that one of the alternatives described within the Second DEIS is the development of a "Neighborhood TOD with Maximum Density Permitted Under Kona CDP Guidelines".

This alternative assumes the existing Kaloko Makai layout (Figure 2-11,) including the GB, T3, T4, T5 and SD1 transects, and the Traditional Neighborhood Design component in the mauka-south portion of the property, are allocated units to each "T" transect according to the maximum allowable density permitted in the Kona CDP.

As noted, the maximum densities for the three primary transects of the Kona CDP are as follows: T3 Sub-Urban Zone, 6 units/acre; T4 General Urban Zone, 12 units/acre; T5 Urban Center Zone, 30 units per acre. Given the proposed Kaloko Makai layout, this equates to approximately 11,400-allowable residential units (however, Kaloko Makai is proposing a total of 5,000-units, less than half the total allowable unit count.)

Kaloko Makai proposes up to 600,000-square feet of gross leasable area of various commercial uses, including retail and office. The market analysis



supported development of previously proposed 1.1-million square feet (more than double the presently-proposed commercial space.)

In addition, as supported by the market analysis and consistent with the Kona CDP, a hospital site, 120 room Lodge and Business Center, 75 acres of SD1 and 150 acre dryland forest preserve will make up the balance of the development.

The Second DEIS also contains discussions of impacts to coastal resources, including cultural and environmental resources. This information will be considered in the processing of entitlements for the proposed project.

The County of Hawaii General Plan section 15.1 (February 2005, as amended) calls for the preparation of community development plans "to translate the broad General Plan statements to specific actions as they apply to specific geographical areas." The General Plan requires CDPs be adopted as an "ordinance", giving the plans force of law. The CDPs are long-term plans with a planning horizon to the year 2020, consistent with the General Plan.

The Hawaii County Planning Department recognized that only with broad public input can the Kona residents take ownership of the Kona Community Development Plan (Kona CDP,) by which they may embrace the vision and commit to a better future. Initiated in September 2005, this plan is the result of an extensive public process.

The Hawaii County Mayor and the Hawaii County Council appointed 15 citizens to serve on the Kona CDP Steering Committee, representing a cross-section of the Kona community. Several large community meetings were held. Additionally, recognizing that the process needed to go to the people, meetings were held at people's homes, churches and community centers.

One-hundred-and-nine meetings were held throughout Kona from November 2005 through January 2006. All these meetings received input from a balanced demographic and geographic representation of the North and South Kona Districts. Over 800 residents participated in the individual meetings.

Three-hundred-and-fifty people attended the Mapping the Future Workshop to brainstorm where future growth should occur. Breakout groups also addressed critical questions such as housing choice and affordability, agriculture, transportation and land use, congestion, parks/recreation/open space, protection of the environment, hazard mitigation, protection of ancestral and historic sites, community character, retail and tourism.



There were two charrettes, the first held in March 2006 and the other in June 2006. In the first charrette, the public identified alternative growth scenarios and selected a preferred scenario. In the second charrette, the public articulated desired principles to provide details for a preferred scenario.

Eleven working groups made up of citizens and community stakeholders met monthly, from May 2006 – September 2006, to focus in more detail on specific issue areas. Finally, the draft plan was recommended for approval by the Steering Committee, and then it was approved by the County Council and signed into law by the Mayor.

The Kona CDP is the first community development plan to commence under the framework of the February 2005 County of Hawai'i General Plan. The Kona CDP was adopted by County Council via ordinance in September 2008. The purposes of the Kona CDP are:

- Articulate Kona's residents' vision for the planning area;
- Guide regional development in accordance with that vision, accommodating future growth while preserving valued assets;
- Provide a feasible infrastructure financing plan to improve existing deficiencies and proactively support the needs of future growth;
- Direct growth to appropriate areas;
- Create a plan of action where government and the people work in partnership to improve the quality of life in Kona for those who live, work, and visit;
- Provide a framework for monitoring the progress and effectiveness of the plan and to make changes and update it, if necessary.

According to the General Plan, Urban Expansion Areas allow for a mix of high density, medium density, low density, industrial, industrial-commercial and/or open designations in areas where new settlements may be desirable, but where the specific settlement pattern and mix of uses have not yet been determined.

The Kona CDP recognizes that the General Plan Land Use Pattern Allocation Guide (LUPAG) Urban Area is larger than needed to accommodate the projected growth within the planning horizon, so it emphasizes that future growth within the urban area should be encouraged in a pattern of compact villages at densities that support public transit.

Transit-Oriented Developments (TODs) and Traditional Neighborhood Developments (TNDs) are identified as the planning tool to manage this anticipated growth within the defined "Kona Urban Area." The Kona CDP



defines these as compact mixed-use villages, characterized by a village center within a higher-density urban core, roughly equivalent to a 5-minute walking radius (1/4-mile), surrounded by a secondary mixed-use, mixed-density area with an outer boundary roughly equivalent to a 10-minute walking radius from the village center (1/2-mile).

The distinction between a TOD and TND is that the approximate location of a TOD is currently designated on the Official Kona Land Use Map along the trunk or secondary transit route and contains a transit station. TND locations, on the other hand, have not been designated and may be located off of the trunk or secondary transit route at a location approved by a rezoning action.

According to the Kona-CDP, Transit Oriented Development (TOD) and Traditional Neighborhood Design (TND) Village developments shall exhibit the following characteristics and conform to the following design principles:

- a) Commercial Village or Neighborhood Villages with mixed uses. A mixture of non-residential and residential uses of various densities, intensities and types designed to promote walking between uses and a variety of transportation modes such as bicycles, transit, and automobiles.
- b) Functional Villages. Villages are located and designed to embrace a full range of urban facilities including neighborhood retail centers, a variety of housing types, public/civic space and a variety of open space amenities,
- c) Walkable streets. Village designs are based on reasonable walking distances, the location of parking and the design of streetlights, signs and sidewalks.
- d) Interconnected circulation network. An interconnected street system that prioritizes pedestrians and bicycle features and links neighborhoods to shopping areas, civic uses, parks and other recreational features.
- e) Respect for natural and cultural features. Development activity recognizes the natural and environmental features of the area and incorporates the protection, preservation and enhancement of these features.
- f) Public Transit. A major public transit stop shall be located within the Village Center of most Villages.

Transit-Oriented Development (TOD) would integrate housing, employment, shopping and recreation opportunities. Villages would be designed around transit stations/stops, which would reduce the need for daily trips and financially support the expanded transit system. TOD Urban Villages are



located a minimum of one mile apart, between major transit stations, along the Keohokālole Highway trunk route, in order to preserve the transit efficiency of this route.

Transect Zones (T-Zones) organize the density, complexity and intensity of the land use within the TOD Village. The operating principle is that there is an urban core with a main center focus such as a transit station and plaza. This urban core area, which is spatially defined based on walkable distances called Pedestrian Sheds, has the highest density, complexity, and intensity of uses. The land uses transition to less dense uses moving away from the center.

The Transect Zones that correspond to the urban core, secondary area and greenbelt referred to in the Kona CDP and Village Design Guidelines are as follows (also noted are the allowable residential densities and building heights in each transect zone):

- i. Urban Core
  1. T-5 Urban Center (Maximum density - 30 units per acre)
    - i. Mix of residential units, such as townhouses, and apartments mixed with commercial, offices and retail
    - ii. Typical Building Height: 2- to 5-Story with some variation (all, excluding attics and raised basements)
  2. T-4 General Urban (Maximum density - 12 units per acre)
    - i. Neighborhood commercial uses with single-family and multi-family residential
    - ii. Typical Building Height: 2- to 3-Story with a few taller Mixed Use buildings
- ii. Secondary Area
  1. T-3 Suburban (Maximum density - 6 units per acre)
    - i. Single-family units, with ancillary community and public uses, and neighborhood and convenience-type commercial uses
    - ii. Typical Building Height is 1- to 2-Story with some 3-Story
- iii. Greenbelt
  1. GB1, GB2 (Maximum density .25 units per acre)
    - i. Greenbelt is an undeveloped area and may also serve multi-purpose uses, such as for drainage (e.g., flow ways or retention basins), sensitive resource preserves or wildfire protection buffers
- iv. Mixed-Use Industrial
  1. SD1 (Maximum density - 12 units per acre)

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Letter to Ms. Janice Palma-Glennie

July 25, 2013

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The Kaloko Makai project was conceived, planned and designed to be consistent with the Hawaii County General Plan, the Keāhole to Kailua Development Plan (K-to-K Plan) and the Kona Community Development Plan (Kona CDP.) Kaloko Makai is situated in the Kona Urban Area of the Kona CDP and Urban Expansion Area in the General Plan and serves to implement these planning documents.

Kaloko Makai is a compact, mixed-use, master-planned community offering a wide range of housing types and affordability, and a variety of businesses and employment opportunities, focused around an initial urgent care medical facility with land available (at no cost) for a new Kona regional hospital.

Kaloko Makai has been designated as a Neighborhood Transit Oriented Development (TOD) in the Official Kona Land Use Map of the Kona Community Development Plan. Kaloko Makai also supports many of the Guiding Principles. Kaloko Makai:

- Directs future growth patterns toward compact centers – Kaloko Makai is planned around a compact urban center within the Kona Urban Area.
- Provides connectivity and transportation choices – Kaloko Makai will be transit-ready and is located along key alignments for regional transportation. The Petitioner will also contribute to the development of Ane Keohokālole Highway. The Project itself is planned to offer walking and biking trails in addition to vehicular roads.
- Provides housing choices – Kaloko Makai will offer a broad range of housing types including affordable as well as “market-priced” housing units. Offerings will range from traditional single-family homes to mid- and higher-density multifamily homes, and may include live-work and mixed use developments.
- Provides recreation opportunities – Kaloko Makai features a 150-acre dryland forest preserve, as well as numerous community parks, a district-scale park and trails.
- Provides infrastructure and essential facilities concurrent with growth – In addition to the recreational and transportation contributions noted above, Kaloko Makai is planned to include a Hospital and medical complex, Lodge and Business Center, two Elementary Schools and a Middle School.

Kaloko Makai is situated in a region that is rapidly developing, with immediate access to Kona International Airport and is adjacent to the well established commercial and light industrial-service centers of North Kona and Kailua

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Letter to Ms. Janice Palma-Glennie

July 25, 2013

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Kona which serve the needs of the visitor, agriculture, ranching and technology industries, among others, that populate the western half of the island.

As indicated in the Market Study prepared for the project (Appendix A in the DEIS and updated in the forthcoming Second DEIS) Kaloko Makai is planned to respond to the market and demographic trends, as well as community needs. The project will serve a County population that is changing in terms of size, geographic dispersion, age profile and lifestyle. Over the course of approximately 30-years Kaloko Makai will deliver the anticipated needed homes in a diverse, planned community.

The target market is the local, rather than the offshore, buyer. Overall, the project is intended to respond to already-anticipated economic growth, rather than to generate more of it. The project's inventory could represent a significant solution for the anticipated future unmet demand for some 9,400-new housing units through 2040, based on currently entitled projects and their plan maximums.

As noted, the maximum densities for the three primary transects of the Kona CDP are as follows: T3-Sub-Urban Zone, 6-units/acre; T4-General Urban Zone, 12-units/acre; T5-Urban Center Zone, 30-units per acre. Given the proposed Kaloko Makai layout, this equates to approximately 11,400-allowable residential units however, Kaloko Makai is proposing a total of 5,000-units, less than half the total allowable unit count.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

TF

Ruth Aloua  
MA Student  
Department of Archaeology  
Simon Fraser University  
8888 University Drive  
Burnaby, British Columbia V5A 1S6  
808-326-4893 ~ [raloua@sfu.ca](mailto:raloua@sfu.ca)

SEP 22 2011  
WILSON OKAMOTO CORPORATION

20 September 2011

**Subject:** Kaloko Makai DEIS Comments

**To:** Orlando Dan Davidson  
Executive Officer  
Land Use Commission  
Department of Business, Economic Development and Tourism  
P.O. Box 2359, Honolulu, HI 96804

This letter is being written on behalf of Kailua-Kona resident, Ruth Aloua to address concerns and questions for the Kaloko Makai DEIS. Areas of concern include, but are not limited to, archaeological resource protection, environmental impacts, Hawaiian traditional cultural practices and mixed-use development plans.

**Archaeological Resources**

A total of 341 archaeological sites were identified in the archaeological inventory survey for four land parcels; TMK 17, TMK 25, TMK 26 and TMK 28. Seventy two of the total 341 sites surveyed will be preserved. Presumably sixty five are assumed burials leaving only seven under the category of trails, housing sites, or religious structures. According to Mitigation Measures outlined in Section 4.2, interviewed participants requested that burials, "holding corrals" (puakini), and trails be preserved and protected. Based upon the current archaeological protection plan, only seven sites in addition to the sixty five burials will be preserved. Current preservation plans should be revised in accordance with community participants (Section 4.2).

In addition to these recommendations, SCD should consult with lineal and cultural descendents to understand the significance of the sites not included for preservation. Consultation with lineal and cultural practitioners is currently listed as a mitigation measure (4-57). These consultations should be conducted prior to the destruction of any archaeological site. Knowledge and insight gained through consultation will provide a better understanding of the archaeological landscape in relation to the significance of the Kaloko Makai development. By implementing these changes Kaloko Makai will meet their vision of:

"perpetuating the life of the land in that which is pono (righteous), and to promote better understanding and aloha among SCD and the larger community, SCD will continue to meet, consult and cooperate with cultural practitioners regarding the protection and incorporation of Hawaiian cultural perspectives, traditions and practices in appropriate areas and segments of Kaloko Makai."

(Wilson Okamoto Corporation and Ho'okuleana LLC 2011: 4-57)

**Cultural Resources**

Section 4.2 states that no specific ongoing traditional cultural practices were identified relative to the land within the property. This is false for the community consulted voiced concerns in regard to the disturbance of Ko'oko'olau which is a traditional plant used in Hawaiian medicine. According to Hawai'i Supreme Court ruling, *Ka Pa'akai O Ka 'Aina v. Land use Commission, State of Hawai'i*. 94 Haw.31 (2000) the developer must take the protection of native Hawaiian culture and rights into consideration. By doing so, the CIA contacted twenty-five people of which eighteen responded. Kaloko Makai is obligated to respond appropriately to their concerns.

### Trails and Access

The DEIS does not provide a preservation plan for the mauka-makai trail which will be opened for public use. Other than a 10-foot wide buffer, there are no mitigation measures that deal with increased pedestrian use, possible bike use, vandalism, pollution and degradation.

Incorporating the trail into the development will bring resource degradation because they will be used to connect communities. The development states in Section 2.2.1 that the mixed-use community will “emphasize non-vehicular transit for mainstream community-wide travel”. In addition to Section 2.2.1, Section 4.2 explicitly outlines concerns voiced by community members regarding the preservation and protection of trails. These concerns must be addressed (*Ka Pa’akai O Ka ‘Aina v. Land use Commission, State of Hawai‘i*. 94 Haw.31).

In addition to trail preservation, trail modifications are subject to federal, state and county rules, regulations and laws. Furthermore, the relocation and realignment of the trail and cultural features found along the existing trail should be done through consultation with community members prior to any site alterations (4-57).

### Flora/Vegetation

To promote and encourage traditional and customary practices the harvesting of native and introduced woods will be permitted during development land clearing (4-56). Currently, the State of Hawai‘i regulates natural resource collection. These regulations promote and encourage Hawaiian traditional and customary practices to continue because primary sources cannot be harmed during gathering processes. The large scale land clearing that will be conducted by the developer will degrade traditional and customary practices. Hawaiian cultural practices will not be perpetuated, but rather eradicated due to intense land clearing

### Native Dryland Forest

Kaloko Makai recognizes that:

“ As the Kaloko Makai development is home to one of the largest remaining areas of Dryland Forest in the Hawaiian Islands. The Dryland Forest is located within the southern portion of the project site. The Dryland Forest is unique in that it has not been heavily impacted by ungulates, and therefore, has minimal impact from alien plant species. This area covers approximately 265 acres (crossing over several ownership boundaries) of an ‘a’ a lava flow that is much younger than the surrounding pahoehoe flow.

Dryland forests are the most impacted ecosystems in the Hawaiian Islands. While 42% of the rain forests in the Hawaiian Islands have been lost, 90% of the Dryland Forests have been eliminated. The remaining 10% has been heavily degraded by introduced plants and ungulates.”

(Wilson Okamoto Corporation and Ho’okuleana LLC 2011:3-49)

In accordance with the mitigation measures recommended by USFWS, Kaloko Makai will create a 150 acre dryforest preserve. The developer will manage invasive species within the project area, implement a fire safety plan, and propagate plants for the impacted ecosystem. Although these mitigation measures will protect more than 90% of the endangered species surveyed, dryland forest systems account for common, threatened, and endangered plant species. Preservation of Hawaii dryland forests must take best ecosystem management practices. These practices provide equal consideration for endangered, threatened and common plant species in relation to the surrounding environment. This approach delineates artificial boundaries created by zoning infrastructure. Hawaiian dryforest ecosystems are disappearing at an alarming rate.

Environmentally responsible BMP's involve not just the consideration of endangered and threatened species, but the landscape as a whole, for the environment is comprised of common species as well. For example, common plant species such as, pua pilo (*Capparis sandwichiana*), alaha'e (*Psydrax odoratum*), 'ōhi'a lehua (*Metrosideros polymorpha*), naio (*Myoporum sandwicense*) lama (*Diospyros sandwicensis*), and māmane (*Sophora chrysophylla*) are natural buffers that prohibit non-native plant species from establishing in the ecosystem. These common plant species are providing a refuge for endangered species like aiea (*Nothocestrum breviflorum*), ma'oloa (*Neraudia ovata*), hala pepe (*Pleomele hawaiiensis*), and uhiuhi (*Cesalpinia kawaiensis*). Elimination of these plant species may negatively affect current species.

Secondly, the Habitat Conservation Plan (HCP) addressed anticipated impacts on the dryland forest. The proposed actions within the HCP are subject to permits and funding. Currently, no definite funds are available to form the preservation area.

#### **Transportation Improvements**

Presently, there are no allocated funds available to deal with the cumulative traffic impacts (Section 4.4). The project will increase traffic congestion within the local vicinity and local roads. Increased use by the development will degrade the current transportation infrastructure. Although there are plans for a mixed-use transit oriented development, currently no funds exist. The lack of funds and increased use will put stress on local residents and the County of Hawai'i to maintain existing standards.

#### **Type of Transit Oriented Development Village**

The applicant has offered to provide 40 acres of land for the development of a regional Hospital. The state of Hawai'i will have to allocate the funds to construct, pay for and operate the Hospital facility. These funds are currently lacking for the state is facing economic constraints with supporting existing facilities. Also, project objectives include developing health care facilities in Kona that provide a range of health care services (Section 2.2.1). The donation of 40 acres does not support the project objective. Further evidence is needed to support that West Hawai'i will be able to provide and adequately support the increased population.

#### **Mix-Use Community**

Kaloko Makai states that a project objective is to, "Cultivate intrinsic respect for the land and natural surroundings, develop an inherent Hawaiian sense of place and nourish a sustaining living environment"(Section 2.2.1). Meeting this objective is not supported or discussed in the DEIS. Section 4 outlines mitigation measures that have been discussed in previous subsections outlined above. Further evidence is needed to support this statement.

#### **Conclusion**

Responsible planning and design should break Phase developments into individual EIS. Unforeseen long scale implications, such as, environment degradation, insufficient infrastructure, project overestimations, a lack of operation and management funds and capital investment will affect current development plans. Given that one cannot foresee challenges that will arise in 30 years it is strongly suggested that Phase plans be submitted individually. Each Phase will then be better equipped to provide and adjust to the community's needs and County infrastructure. Current plans regarding health facilities, transportation infrastructure, archaeological site and



dryland forest system preservation funds are lacking. The lack of funds will affect the overall project plans discussed in the DEIS.

Thank-you for your time and consideration.

Sincerely,

Ruth Aloua



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7469-01  
July 25, 2013

Ms. Ruth Aloua  
Department of Archaeology  
Simon Fraser University  
8888 University Drive  
Burnaby, British Columbia V5A 1S6

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Aloua:

Thank you for your letter dated September 20, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following responses in the respective order of your comments:

- 1. **Archaeological Resources:** A total of 341 archaeological sites were identified in the archaeological inventory survey for four land parcels; TMK 17, TMK 25, TMK 26 and TMK 28. Seventy two of the total 341 sites surveyed will be preserved. Presumably sixty five are assumed burials leaving only seven under the category of trails, housing sites, or religious structures. According to Mitigation Measures outlined in Section 4.2, interviewed participants requested that burials, "holding corrals" (Puakini), and trails be preserved and protected. Based upon the current archaeological protection plan, only seven sites in addition to the sixty five burials will be preserved. Current preservation plans should be revised in accordance with community participants (Section 4.2). In addition to these recommendations, SCD should consult with lineal and cultural descendants to understand the significance of the sites not included for preservation. Consultation with lineal and cultural practitioners is currently listed as a mitigation measure (4-57). These consultations should be conducted prior to the destruction of any archaeological site. Knowledge and insight gained through consultation will provide a better understanding of the archaeological landscape in relation to the significance of the Kaloko Makai development. By implementing these changes Kaloko Makai will meet their vision of: "perpetuating the life of the land in that which is pono (righteous), and to promote better understanding and aloha among SCD and the*



*larger community, SCD will continue to meet, consult and cooperate with cultural practitioners regarding the protection and incorporation of Hawaiian cultural perspectives, traditions and practices in appropriate areas and segments of Kaloko Makai." (Wilson Okamoto Corporation and Ho'okuleana LLC 2011: 4-57)*

Response: Seventy two of the sites surveyed are presently recommended to be preserved. While many of these sites-to-be-preserved do have a burial function many of those sites have other functions as well. Other types of sites recommended for preservation include trails, ahupua'a walls, ceremonial enclosures and platforms (possible heiau), excellent examples of temporary and permanent habitation complexes, animal husbandry walls, activity areas, water collection features, and petroglyphs. Preservation plans will be developed in consultation with community participants and lineal and cultural descendants.

2. ***Cultural Resources:** Section 4.2 states that no specific ongoing traditional cultural practices were identified relative to the land within the property. This is false for the community consulted voiced concerns in regard to the disturbance of Ko'oko'olau which is a traditional plant used in Hawaiian medicine. According to Hawaii's Supreme Court ruling, Ka Pa'akai O Ka 'Aina v. Land use Commission, State of Hawaii 'i. 94 Haw.31 (2000) the developer must take the protection of native Hawaiian culture and rights into consideration. By doing so, the CIA contacted twenty-five people of which eighteen responded. Kaloko Makai is obligated to respond appropriately to their concerns.*

Response: The Cultural Impact Assessment for this project makes reference to the medicinal use of ko'oko'olau (*Bidens* spp.) on pages v, vi, 60, 61, 72, 76 & 78 and recommends preservation of remaining areas of lowland forest in the project area containing several endangered and threatened native species, including ko'oko'olau.

Existing ko'oko'olau within the Kaloko Makai Dryland Forest Preserve will be preserved and managed through designation of the 150-acre Kaloko Makai Dryland Forest Preserve.

Kaloko Makai looks forward to working with the community on the appropriate harvesting of the ko'oko'olau for traditional and customary practices of the Native Hawaiian people within the Dryland Forest Preserve.

3. ***Trails and Access:** The DEIS does not provide a preservation plan for the mauka-makai trail which will be opened for public use. Other than a 10-foot wide buffer, there are no mitigation measures that deal with increased pedestrian use, possible bike use, vandalism, pollution and degradation. Incorporating the trail into the*



*development will bring resource degradation because they will be used to connect communities. The development states in Section 2.2.1 that the mixed-use community will "emphasize non-vehicular transit for mainstream community-wide travel". In addition to Section 2.2.1, Section 4.2 explicitly outlines concerns voiced by community members regarding the preservation and protection of trails. These concerns must be addressed (Ka Pa'akai O Ka 'Aina v. Land use Commission, State of Hawaii'i. 94 Haw.31). In addition to trail preservation, trail modifications are subject to federal, state and county rules, regulations and laws. Furthermore, the relocation and realignment of the trail and cultural features found along the existing trail should be done through consultation with community members prior to any site alterations (4-57).*

Response: The Kohanaiki Trail bisects the project site and is well defined for most of its alignment until the trail reaches the TMK 7-3-009:017. SCD and their sub-consultant Cultural Surveys Hawaii'i (CS) have been consulting with Na Ala Hele to determine the location of the remaining alignment. The alignment shown in Figure 2-11 is the alignment determined based on consultation with Na Ala Hele.

Treatment of Kohanaiki Trail will follow the agreement established after extensive discussions with the interested community at Kaloko Heights. This translates to a 10' wide trail pathway (meandering mauka to makai on what is believed to be the historic alignment) with a 10' wide buffer on each side of the trail (30' wide in total). In places where cut and fill are necessary, the elevation of the trail may change, but the general alignment will not be disturbed.

As noted in the DEIS, "Where the Trail intersects with Hina Lani Drive, Kaloko Makai will realign the remaining lower portion of the Trail from that point to run parallel with and adjoining the Hina Lani Street right-of-way down to Queen Ka'ahumanu Highway."

"Since the integrity of the historic trail is lost at that point, due to prior construction of Hina Lani Street, the adjoining industrial subdivision and the water tank, Kaloko Makai will realign the trail and have it run down the southern boundary of the property (fronting Hina Lani,) from the point of intersection with Hina Lani down to Queen Ka'ahumanu Highway."

"This alignment gives the users of the trail easy access to cross Queen Ka'ahumanu or Hina Lani at the bottom, as there are crosswalks with crossing signals at that point." This is also noted on the Site Plan map of the project.



Additionally, there are two trails that start at the same point on Hina Lani; one is an old stepping stone trail that leads mauka and the other runs across the dryland forest.

These trails are intended to be open for public use.

In addition, the land use plan for Kaloko Makai includes a school and park at the end of one of the trails so residents within the project will be able to walk to and from school via the trail. The other trail will connect to a public street and will allow people easy access to the trail.

The nature of the dryland forest and the reason it appears to be in the good shape is because it is rough and inhospitable a'ā flow. Over the years, even animals such as cattle and goats did not go in this area because it is so rough.

The trail system within the dryland forest will allow it to be accessed by residents and visitors and afford the ability for educational programs as well. Appropriate signage will also be developed to encourage public cooperation and discourage trespassing, vandalism or arson within the Kaloko Makai Dryland Forest Preserve.

4. Flora/Vegetation: *To promote and encourage traditional and customary practices the harvesting of native and introduced woods will be permitted during development land clearing (4-56). Currently, the State of Hawai'i regulates natural resource collection. These regulations promote and encourage Hawaiian traditional and customary practices to continue because primary sources cannot be harmed during gathering processes. The large scale land clearing that will be conducted by the developer will degrade traditional and customary practices. Hawaiian cultural practices will not be perpetuated, but rather eradicated due to intense land clearing.*

Response: As stated in the DEIS and forthcoming Second DEIS, "To promote and encourage traditional and customary cultural practices, the harvesting of native woods (such as alahee, elama, maneke, iliahi and ulei, as well as other exotics like mango) or trees during the grubbing work, will be allowed by cultural practitioners."

As stated in the Cultural Impact Assessment, ko'oko'olau may be gathered within the existing area. Thus, existing ko'oko'olau within the Kaloko Makai dryland forest preserve will be preserved and managed through designation of the 150-acre Kaloko Makai Dryland Forest Preserve. Ko'oko'olau, as well as, a variety of endangered species within the Preserve will have continued protection and their habitats set aside in perpetuity which will enhance their prospects for survival.



Thus, Hawaiian cultural practices will be perpetuated with the perpetual protection and creation of the dryland forest preserve.

5. Native Dryland Forest: *Kaloko Makai recognizes that: "As the Kaloko Makai development is home to one of the largest remaining areas of Dry land Forest in the Hawaiian Islands. The Dryland Forest is located within the southern portion of the project site. The Dryland Forest is unique in that it has not been heavily impacted by ungulates, and therefore, has minimal impact from alien plant species. This area covers approximately 265 acres (crossing over several ownership boundaries) of an 'a'a lava flow that is much younger than the surrounding pahoehoe flow. Dryland forests are the most impacted ecosystems in the Hawaiian Islands. While 42% of the rain forests in the Hawaiian Islands have been lost, 90% of the Dryland Forests have been eliminated. The remaining 10% has been heavily degraded by introduced plants and ungulates." (Wilson Okamoto Corporation and Ho'okuleana LLC 2011:3-49)*

*In accordance with the mitigation measures recommended by USFWS, Kaloko Makai will create a 150 acre dry forest preserve. The developer will manage invasive species within the project area, implement a fire safety plan, and propagate plants for the impacted ecosystem. Although these mitigation measures will protect more than 90% of the endangered species surveyed, dry land forest systems account for common, threatened, and endangered plant species. Preservation of Hawaii dry land forests must take best ecosystem management practices. These practices provide equal consideration for endangered, threatened and common plant species in relation to the surrounding environment. This approach delineates artificial boundaries created by zoning infrastructure. Hawaiian dry forest ecosystems are disappearing at an alarming rate.*

*Environmentally responsible BMP's involve not just the consideration of endangered and threatened species, but the landscape as a whole, for the environment is comprised of common species as well. For example, common plant species such as, pua pilo (Capparis sandwichiana), alahe'e (Psydrax odoratum), 'ohi'a lehua (Metrosideros polymorpha), naio (Myoporum sandwicense) lama (Diospyros sandwicensis), and mamane (Sophora chrysophylla) are natural buffers that prohibit non-native plant species from establishing in the ecosystem. These common plant species are providing a refuge for endangered species like aiea (Nothocestrum breviflorum), ma'oloa (Neraudia ovata), hala pepe (Pleomele hawaiiensis), and uhiuhi (Cesalpinia kavaiensis). Elimination of these plant species may negatively affect current species.*

*Secondly, the Habitat Conservation Plan (HCP) addressed anticipated impacts on the dryland forest. The proposed actions within the HCP are subject to permits*



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*and funding. Currently, no definite funds are available to form the preservation area.*

Response: In the anticipated development discussed in the DEIS, only one 'aiea and two hala pepe plants are found outside the dryland forest preserve; the action, then, proposed removal of these plants due to the proposed development. Based on comments during the DEIS process and further evaluation of the project layout, under the development proposal described in the Second Draft EIS, none of the listed endangered plants situated outside the dryland forest preserve will be "taken" in the development and construction of the Kaloko Makai project. It is not anticipated that a Habitat Conservation Plan (HCP) will be prepared.

Instead, Kaloko Makai will leave those plants in place and incorporate a 50-foot buffer around the one 'aiea and two hala pepe and any structure within the project. The plants will be incorporated into landscaping within the 50-foot buffers.

Kaloko Makai will set aside 150-acres in the Kaloko Makai Dryland Forest. Within this preserve, a variety of endangered species will have continued protection and their habitats set aside in perpetuity, enhancing their prospects for survival.

6. *Transportation Improvements: Presently, there are no allocated funds available to deal with the cumulative traffic impacts (Section 4.4). The project will increase traffic congestion within the local vicinity and local roads. Increased use by the development will degrade the current transportation infrastructure. Although there are plans for a mixed-use transit oriented development, currently no funds exist. The lack of funds and increased use will put stress on local residents and the County of Hawai'i to maintain existing standards.*

Response: The Petitioner will consult with the State and the County to determine appropriate contributions for transportation improvements.

7. *Type of Transit Oriented Development Village: The applicant has offered to provide 40 acres of land for the development of a regional Hospital. The state of Hawai'i will have to allocate the funds to construct, pay for and operate the Hospital facility. These funds are currently lacking for the state is facing economic constraints with supporting existing facilities. Also, project objectives include developing health care facilities in Kona that provide a range of health care services (Section 2.2.1). The donation of 40 acres does not support the project*



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*objective. Further evidence is needed to support that West Hawai'i will be able to provide and adequately support the increased population.*

Response: The Petitioner is actively seeking a hospital developer/operator for the new facility through a public-private partnership. As stated in the DEIS and forthcoming Second DEIS, the Petitioner intends to continue discussions with Kona Hospital, Hawai'i Health System Corporation (KCH, HHSC) concerning the new hospital at Kaloko Makai. However, Kaloko Makai is seeking private entities, as well.

The Kona CDP, as well as residents interviewed for the Social Impact Assessment prepared for this DEIS (Appendix Q), identified the need for a new, centrally-located acute care hospital in North Kona. The Kona CDP states that the new hospital should be located on Ane Keohokālole Highway (Mid-Level Road) for optimum accessibility by automobile or transit.

Given the level of existing development in the Kona region and the appropriate accommodation of projected growth called for in the recently adopted Kona CDP, the region between Kailua-Kona and the Kona Airport was identified for urban growth in both the Hawaii County General Plan and Kona CDP. The Kona CDP provides more specificity as to areas to accommodate growth, including designation of various Transit Oriented Development (TOD) sites, among which is Kaloko Makai.

Policy ECON-1.1 of the Kona CDP states that a hospital serves as a stimulus for the healthcare industry. It further states that Kona needs a new hospital to replace its existing outdated and out-of-place facility, and that the hospital should be located on Ane Keohokālole Highway (Mid-Level Road) for optimum accessibility by automobile or transit.

Additionally, the Kona CDP encourages the private sector to negotiate a site for the hospital by granting any TOD designated as a Neighborhood TOD, automatic Regional TOD status.

8. *Mix-Use Community: Kaloko Makai states that a project objective is to, "Cultivate intrinsic respect for the land and natural surroundings, develop an inherent Hawaiian sense of place and nourish a sustaining living environment"(Section 2.2.1). Meeting this objective is not supported or discussed in the DEIS. Section 4 outlines mitigation measures that have been discussed in previous subsections outlined above. Further evidence is needed to support this statement.*

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Response: Preservation of the natural and archaeological resources (i.e. native dryland forest, ahupua'a wall, historic trails, activity areas, burials, habitation sites, markers, petroglyphs etc.) found within the project site will be incorporated into the development of the proposed project. Further discussion is included in the forthcoming Second DEIS.

9. *Conclusion: Responsible planning and design should break Phase developments into individual EIS. Unforeseen long scale implications, such as, environment degradation, insufficient infrastructure, project overestimations, a lack of operation and management funds and capital investment will affect current development plans. Given that one cannot foresee challenges that will arise in 30 years it is strongly suggested that Phase plans be submitted individually. Each Phase will then be better equipped to provide and adjust to the community's needs and County infrastructure. Current plans regarding health facilities, transportation infrastructure, archaeological site and dryland forest system preservation funds are lacking. The lack of funds will affect the overall project plans discussed in the DEIS.*

Response: The DEIS and forthcoming Second DEIS are prepared pursuant to Chapter 343, HRS, and Title 11, Chapter 200, HAR, Department of Health, State of Hawai'i. The forthcoming Second DEIS includes an in-depth discussion on phasing of the project.

SCD - TSA Kaloko Makai, LLC is the recorded fee owner of the project site. The Petitioner or its successors will be responsible to fund site work and the construction of on-site and off-site project-related infrastructure including roadways, potable water wells, reservoirs, transmission lines, wastewater transmission lines, and other utilities.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

Consultant:  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

September 20, 2011

TF

Aloha,

In regards to Hinalani development:

I am not in support of building more housing units that we do not need. Who are they for? What do they look like? Is this what the communities really want? Initial investments all look great when new, it's the upkeep after all is said and done that destroy the quality of life in communities. Communities want to be supportive and involved with decision making if they are listened to and not because they don't have the financial backing necessary to be listened to.

Who are the communities members? They are a mixed and interesting breed. If they are like myself, I would say more reserved; while others are more vocal. I am not comfortable having to defend an issue such as this in the public eye. For whatever this is worth I will convey what countless other community members may want to say.

Roadside Hinalani Street, as it stands now, is naturally appealing as it ascends skyward from the sea. It is one of few dry land forest reserves in close proximity to town and the people who live and visit here. What a rare opportunity to use this area to educate the public and visitors on how a dry land forest ecosystem works in a natural park-like setting. The community would much favor working in natural "green space" than buildings and infrastructure that go with heavy development. Treading lightly on the land suits this area best. Highlight the existing historic features of trails, plants, and cultural sites.

Planners and decision makers should work around the scenic beauty and cultural resources that already exists. Failure to do so should not allow development to proceed. Mandatory guidelines for development lack strong cultural context. Which should include seeking out community members associations and documentations to an area to be included in the EIS not only what is physically "on the ground." Our education system will thank you, our communities will love you.

Mahalo,  
Lily Anne Souza  
73-1223 Melomelo St.  
Kailua-Kona, HI 96740



7469-01  
July 25, 2013

Ms. Lily Anne Souza  
73-1223 Melomelo St.  
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Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Souza:

Thank you for your letter dated September 20, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

*I am not in support of building more housing units that we do not need. Who are they for? What do they look like? Is this what the communities really want? Initial investments all look great when new, it's the upkeep after all is said and done that destroy the quality of life in communities. Communities want to be supportive and involved with decision making if they are listened to and not because they don't have the financial backing necessary to be listened to.*

Response: The County of Hawaii General Plan section 15.1 (February 2005, as amended) calls for the preparation of community development plans "to translate the broad General Plan statements to specific actions as they apply to specific geographical areas." The General Plan requires CDPs be adopted as an "ordinance", giving the plans force of law. The CDPs are long-term plans with a planning horizon to the year 2020, consistent with the General Plan.

The Hawaii County Planning Department recognized that only with broad public input can the Kona residents take ownership of the Kona Community Development Plan (Kona CDP,) by which they may embrace the vision and commit to a better future. Initiated in September 2005, this plan is the result of an extensive public process.



The Hawaii County Mayor and the Hawaii County Council appointed 15 citizens to serve on the Kona CDP Steering Committee, representing a cross-section of the Kona community. Several large community meetings were held. In recognition that the process needed to go to the people, meetings were held at people's homes, churches, and community centers.

One-hundred-and-nine meetings were held throughout Kona from November 2005 through January 2006. All these meetings received input from a balanced demographic and geographic representation of the North and South Kona Districts. Over 800 residents participated in the individual meetings.

Three-hundred-and-fifty people attended the Mapping the Future Workshop to brainstorm where future growth should occur. Breakout groups also addressed critical questions such as housing choice and affordability, agriculture, transportation and land use, congestion, parks/recreation/open space, protection of the environment, hazard mitigation, protection of ancestral and historic sites, community character, retail and tourism.

There were two charrettes, the first held in March 2006 and the other in June 2006. In the first charrette, the public identified alternative growth scenarios and selected a preferred scenario. In the second charrette, the public articulated desired principles to provide details for a preferred scenario.

Eleven working groups made up of citizens and community stakeholders met monthly, from May 2006 – September 2006, to focus in more detail on specific issue areas. Finally, the draft plan was recommended for approval by the Steering Committee, and then it was approved by the County Council and signed into law by the Mayor.

The Kona CDP is the first community development plan to commence under the framework of the February 2005 County of Hawai'i General Plan. The Kona CDP was adopted by County Council via ordinance in September 2008. The purposes of the Kona CDP are:

- Articulate Kona's residents' vision for the planning area;
- Guide regional development in accordance with that vision, accommodating future growth while preserving valued assets;
- Provide a feasible infrastructure financing plan to improve existing deficiencies and proactively support the needs of future growth;
- Direct growth to appropriate areas;
- Create a plan of action where government and the people work in partnership to improve the quality of life in Kona for those who live, work, and visit;



- Provide a framework for monitoring the progress and effectiveness of the plan and to make changes and update it, if necessary.

The General Plan notes, Urban Expansion Areas allow for a mix of high density, medium density, low density, industrial, industrial-commercial and/or open designations in areas where new settlements may be desirable, but where the specific settlement pattern and mix of uses have not yet been determined.

The Kona CDP recognizes that the General Plan LUPAG Urban Area is larger than needed in order to accommodate the projected growth within the planning horizon, so it emphasizes that future growth within the urban area is encouraged in a pattern of compact villages at densities that support public transit.

Transit-Oriented Developments (TODs) and Traditional Neighborhood Developments (TNDs) are identified as the planning tool to manage this anticipated growth within the defined "Kona Urban Area." The Kona CDP defines these as compact mixed-use villages, characterized by a village center within a higher-density urban core, roughly equivalent to a 5-minute walking radius (1/4-mile), surrounded by a secondary mixed-use, mixed-density area with an outer boundary roughly equivalent to a 10-minute walking radius from the village center (1/2-mile).

The distinction between a TOD and TND is that the approximate location of a TOD is currently designated on the Official Kona Land Use Map along the trunk or secondary transit route and contains a transit station, while TND locations have not been designated and may be located off of the trunk or secondary transit route at a location approved by a rezoning action.

According to the Kona-CDP, Transit Oriented Development (TOD) and Traditional Neighborhood Design (TND) Village developments shall exhibit the following characteristics and conform to the following design principles:

- a) Commercial Village or Neighborhood Villages with mixed uses. A mixture of non-residential and residential uses of various densities, intensities, and types designed to promote walking between uses and a variety of transportation modes such as bicycles, transit, and automobiles.
- b) Functional Villages. Villages are located and designed to embrace a full range of urban facilities including neighborhood retail centers, a variety of housing types, public/civic space and a variety of open space amenities,



- c) Walkable streets. Village designs are based on reasonable walking distances, the location of parking, and the design of streetlights, signs and sidewalks.
- d) Interconnected circulation network. An interconnected street system that prioritizes pedestrians and bicycle features and links neighborhoods to shopping areas, civic uses, parks and other recreational features.
- e) Respect for natural and cultural features. Development activity recognizes the natural and environmental features of the area and incorporates the protection, preservation and enhancement of these features.
- f) Public Transit. A major public transit stop shall be located within the Village Center of most Villages.

Transit-Oriented Development (TOD) would integrate housing, employment, shopping and recreation opportunities. Villages would be designed around transit stations/stops which would reduce the need for daily trips and financially support the expanded transit system. TOD Urban Villages are located a minimum of one mile apart, between major transit stations, along Keohokālole Highway trunk route in order to preserve the transit efficiency of this route.

Transect Zones (T-Zones) organize the density, complexity and intensity of the land use within the TOD Village. The operating principle is that there is an urban core with a main center focus such as a transit station and plaza. This urban core area, which is spatially defined based on walkable distances called Pedestrian Sheds, has the highest density, complexity, and intensity of uses. The land uses transition to less dense uses moving away from the center.

The Transect Zones that correspond to the urban core, secondary area and greenbelt referred to in the Kona CDP and Village Design Guidelines are as follows (also noted are the allowable residential densities and building heights in each transect zone):

- i. Urban Core
  1. T-5 Urban Center (Maximum density - 30 units per acre)
    - i. Mix of residential units, such as townhouses, and apartments mixed with commercial, offices and retail
    - ii. Typical Building Height: 2- to 5-Story with some variation (all, excluding attics and raised basements)
  2. T-4 General Urban (Maximum density - 12 units per acre)



- i. Neighborhood commercial uses with single-family and multi-family residential
  - ii. Typical Building Height: 2- to 3-Story with a few taller Mixed Use buildings
- ii. Secondary Area
    1. T-3 Suburban (Maximum density - 6 units per acre)
      - i. Single-family units, with ancillary community and public uses, and neighborhood and convenience-type commercial uses
      - ii. Typical Building Height is 1- to 2-Story with some 3-Story
  - iii. Greenbelt
    1. GB1, GB2 (Maximum density .25 units per acre)
      - i. Greenbelt is an undeveloped area and may also serve multi-purpose uses, such as for drainage (e.g., flow ways or retention basins), sensitive resource preserves or wildfire protection buffers
  - iv. Mixed-Use Industrial
    1. SD1 (Maximum density - 12 units per acre)

The Kaloko Makai project was conceived, planned and designed to be consistent with the Hawaii County General Plan, the Keahole to Kailua Development Plan (K-to-K Plan) and the Kona Community Development Plan (Kona CDP.) Kaloko Makai is situated in the Kona Urban Area of the Kona CDP and Urban Expansion Area in the General Plan and serves to implement these planning documents.

Kaloko Makai is a compact, mixed-use, master-planned community offering a wide range of housing types and affordability, and a variety of businesses and employment opportunities, focused around an initial urgent care medical facility with land available (at no cost) for a new Kona regional hospital.

Kaloko Makai has been designated as a Neighborhood Transit Oriented Development (TOD) in the Official Kona Land Use Map of the Kona Community Development Plan. Kaloko Makai has been planned and designed as a Neighborhood Transit TOD and supports many of the Kona CDP Guiding Principles. Kaloko Makai:

- Directs future growth patterns toward compact centers – Kaloko Makai is planned around a compact urban center within the Kona Urban Area.
- Provides connectivity and transportation choices – Kaloko Makai will be transit-ready and is located along key alignments for regional transportation. Developer SCD will also contribute to the development



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of Ane Keohokalole Highway. The Project itself is planned to offer walking and biking trails in addition to vehicular roads.

- Provides housing choices – Kaloko Makai will offer a broad range of housing types including affordable as well as “market-priced” housing units. Offerings will range from traditional single-family homes to mid- and higher-density multifamily homes, and may include live-work and mixed use developments.
- Provides recreation opportunities – Kaloko Makai features a 150-acre dryland forest preserve, as well as numerous community parks, a district-scale park and trails.
- Provides infrastructure and essential facilities concurrent with growth – In addition to the recreational and transportation contributions noted above, Kaloko Makai is planned to include a Hospital and medical complex, Lodge and Business Center, two Elementary Schools and a Middle School.

Kaloko Makai is situated in a region that is rapidly developing, with immediate access to Kona International Airport and is adjacent to the well established commercial and light industrial-service centers of North Kona and Kailua Kona which serve the needs of the visitor, agriculture, ranching, and technology industries, among others, which populate the western half of the island.

As indicated in the Market Study prepared for the project (Appendix A in the DEIS) Kaloko Makai is planned to respond to the market and demographic trends, as well as community needs. The project will serve a County population that is changing in terms of size, geographic dispersion, age profile and lifestyle. Over the course of approximately 30-years Kaloko Makai will deliver the anticipated needed homes in a diverse, planned community.

The target market is the local, rather than the offshore, buyer. Overall, the project is intended to respond to already-anticipated economic growth, rather than to generate more of it. The project’s inventory could represent a significant solution for the anticipated future unmet demand for some 9,400-new housing units through 2040, based on currently entitled projects and their plan maximums.

As noted, the maximum densities for the three primary transects of the Kona CDP are as follows: T3 - Sub-Urban Zone, 6-units/acre; T4 - General Urban Zone, 12-units/acre; T5 - Urban Center Zone, 30-units per acre. Given the proposed Kaloko Makai layout, this equates to approximately 11,400-

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allowable residential units (however, Kaloko Makai is proposing a total of 5,000-units, less than half the total allowable unit count.)

Kaloko Makai proposes up to 500,000-square feet of gross leasable area of various commercial uses, including retail and office. The market analysis supported development of previously proposed 1.1-million square feet (more than double the presently-proposed commercial space.)

In addition, as supported by the market analysis and consistent with the Kona CDP, a hospital site, 120-room Lodge and Business Center, 75-acres of SD-1 and 150-acre dryland forest preserve will make up the balance of the development.

*Who are the communities members? They are a mixed and interesting breed. If they are like myself, I would say more reserved; while others are more vocal. I am not comfortable having to defend an issue such as this in the public eye. For whatever this is worth I will convey what countless other community members may want to say.*

Response: Chapter 9 of the DEIS summarizes the consultation process to date for the Kaloko Makai project. The Petitioner’s representatives have met with numerous groups and community members regarding the project.

Additionally, with regard to the Kona CDP, as noted in our response to your previous question, the Hawai’i County Planning Department recognized that only with broad public input can the Kona residents take ownership of the Kona Community Development Plan (Kona CDP,) by which they may embrace the vision and commit to a better future. Initiated in September 2005, this plan is the result of an extensive public process.

The Hawaii County Mayor and the Hawaii County Council appointed 15 citizens to serve on the Kona CDP Steering Committee, representing a cross-section of the Kona community. Several large community meetings were held. In recognition that the process needed to go to the people, meetings were held at people’s homes, churches, and community centers.

One-hundred-and-nine meetings were held throughout Kona from November 2005 through January 2006. All these meetings received input from a balanced demographic and geographic representation of the North and South Kona Districts. Over 800 residents participated in the individual meetings.

Three-hundred-and-fifty people attended the Mapping the Future Workshop to brainstorm where future growth should occur. Breakout groups also addressed



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critical questions such as housing choice and affordability, agriculture, transportation and land use, congestion, parks/recreation/open space, protection of the environment, hazard mitigation, protection of ancestral and historic sites, community character, retail and tourism.

There were two charrettes, the first held in March 2006 and the other in June 2006. In the first charrette, the public identified alternative growth scenarios and selected a preferred scenario. In the second charrette, the public articulated desired principles to provide details for a preferred scenario.

Eleven working groups made up of citizens and community stakeholders met monthly, from May 2006 – September 2006, to focus in more detail on specific issue areas. Finally, the draft plan was recommended for approval by the Steering Committee, and then it was approved by the County Council and signed into law by the Mayor.

*Roadside Hinalani Street, as it stands now, is naturally appealing as it ascends skyward from the sea. It is one of few dry land forest reserves in close proximity to town and the people who live and visit here. What a rare opportunity to use this area to educate the public and visitors on how a dry land forest ecosystem works in a natural park-like setting. The community would much favor working in natural "green space" than buildings and infrastructure that go with heavy development. Treading lightly on the land suits this area best. Highlight the existing historic features of trails, plants, and cultural sites.*

Response: Recognizing the importance of this dryland forest, the Petitioner incorporated a large portion (150-acres) of the dryland forest into their preliminary design as the Kaloko Makai Dryland Forest Preserve. By preserving these 150-acres, the Petitioner is ensuring that the Kaloko dryland forest is preserved for generations to come.

*Planners and decision makers should work around the scenic beauty and cultural resources that already exists. Failure to do so should not allow development to proceed. Mandatory guidelines for development lack strong cultural context. Which should include seeking out community members associations and documentations to an area to be included in the EIS not only what is physically "on the ground." Our education system will thank you, our communities will love you.*

Response: The purpose of the CIA is to consider the effects that the proposed project may have on the culture of Hawaii, and traditional and customary rights. The assessment also considers cultural resources, practices and beliefs



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within the broader context of Kaloko Ahupuaa and Kohanaiki Ahupuaa that are relevant to assessing the role of the project area.

The scope of work of the CIA also included conducting oral interviews with persons knowledgeable about the historic and traditional practices in the project area and region. This information is recorded and summarized within the CIA document.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa".

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission

September 21, 2011

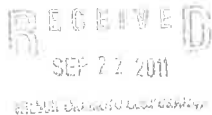
TF

Michelle Tomas

P O Box 337

Kailua Kona, HI 96745

## Response to Kaloko Makai DEIS



Aloha,

I would like to take the time to comment on the DEIS prepared by Wilson Okamoto Corp on behalf of TSA Kaloko Makai, LLC

In going over the very lengthy document I found many inconsistencies within the document that needs clarification. Chapter 4 page 86 states there will be " ...279 acres of open space, 58 acres of parks, and preservation of 150-acre Dryland Forest." Then on chapter 5 page 8 it says "There will be approximately 297 acres of parks and open space consisting of 89 acres of open space, 58 acres of parks, and preservation of 150-acre Kaloko Makal Dryland Forest." Also on Chapter 5 page 64 under the heading Cultural Resources, Objective CR-3 Preservation of Kanaka Maoli Culture and Island Values. Ensure that our Kanaka Maoli and island values and cultures are preserved and perpetuated.

Policy CR-3.1: Honor Kanaka Maoli culture and heritage. The Kanaka Maoli culture is the foundation of Hawaii's living culture. We must ensure that the Kanaka Maoli people are supported and that this part of our culture is perpetuated. The success of this endeavor will ensure that the way of the Kanaka Maoli will guide our actions and behaviors in the years ahead.

The contradiction is that how can Kaloko Makai preach preservation of the Kanaka Maoli when they specifically say that "Of the 341 sites in the project area, .....a total of seventy two (72) sites be preserved." KM (Kaloko Makai) will in effect destroy trails. On paper when you read "trails" that can evoke a thought of perhaps overgrown grass, but in actuality its water worn stones placed carefully one after the other for miles on a'a lava that once upon a time enabled the Kanaka Maoli of time gone by to walk from their homes in the mountain down to the shore to gather from the shoreline then back home again. These trails, once bulldozed, realigned,

and then “changed” to reflect a sidewalk on the side of Hina Lani road is no longer an ancient trail but a very poor substitute for it. In living celebration of the Kanaka Maoli do not destroy which we hold dear and that is our living culture. Do not bulldoze the trail or the endangered plants. Also on the chopping block is the native and endangered Halapepe, the favorite plant of the Goddess Laka (hula). Also the endangered plant Aiea. While KM says they will “take” the plants Halapepe and Aiea, but plant three each in its place, where is the data suggesting that this out planting will be successful? The importance of preserving an endangered plant in-situ outweighs the out planting of a dozen endangered replacements. The out planted plant may only survive a year or so, and then die, whereas the endangered plant in-situ is already established and with the proper “non disturbance” there is a possibility the plant may provide seeds and data for repopulation.

Also, chapter 2 page 18 states the “Objectives of KM are to .....Cultivate intrinsic respect for the land and natural surroundings, develop an inherent Hawaiian sense of place and nourish a sustaining living environment.” Once again bulldozing the Ko’oko’olau (which many of us use for medicinal purposes- as a tea) and the many plants, and sites will not promote or help anyone “cultivate intrinsic respect for the land and natural surroundings, or help us develop an inherent Hawaiian sense of place.”

Another contradiction is on Chapter 2 page 39 it states “....the estimated overall cost for a new regional hospital is approximately \$300 to \$500 million.” Then again on Chapter 2 page it states “...costs for the construction and development of the hospital will be in the range of \$152 million.”

Aside from those concerns another major concern is Density. The picture KM paints is one that Kona will have a housing shortage. Chapter 2 page 19-20 states “...current & competitive housing opportunities with the market do not satisfy forecasted demands.” I sense an “If you build it, they will come” mentality. Do we really want this high density development here? Do we really want a community that reflects one that is similar to Waikiki, right when people fly

into Kona? Is KM trying to fulfill the so-called future housing shortage by building all the necessary housing for the forecasted shortfall in this one development? KM describes the development area as being 1,138.866 acres (chapter 1 page 1), then on Chapter 5 page 8 it says that there will be ...“297 acres of parks and open space, 150 acres of Dry land Forest”, the DEIS also states they will donate 40 acres to the Hospital, 43 acres for three Schools, 10 acres for the Judiciary Complex, 1 million square feet of various commercial uses, additional acreage for a desalinization plant, a wastewater treatment plant, a Fire station, a Police sub-station (chpt 4 pg. 87), in addition to the buffer areas. Will this leave suitable acreage for the building of 5,000 homes? Unrealistic, high density development is the picture that is being painted here.

An area of concern is the “affordable housing” claim. Chapter 1 page 11 “...traffic-generated noise to the community will be mitigated by adequate setbacks from the highway, in conformance with federal highway standards, sound attenuating walls, total closure and air-conditioning, in addition to the utilization of sound attenuating windows and window fixtures.” Then on Chapter 2 page 20 KM states “Pricing of affordable units at the project will be set in accordance with County or State guidelines to be determined in consultation with government agencies. For illustrative purposes, according to county guidelines in effect as of September 1, 2010, conforming affordable housing prices will include:

- For-sale units priced from \$202,500 to \$366,200 for those offered to families of two to four persons earning 110% to 120% of the median income; and
- One- to two bedroom rental units priced from \$1,307 to \$1,500 per month, including utilities, and offered to households earning 80% to 100% of the median income. “

Can this price range of homes be realistic in view of the homes being totally enclosed with air conditioning, and the utilization of sound attenuating windows and window fixtures, and also the utilization of LEED concepts (Chapter 2 page 60) during the development of KM?

Another area of high importance is of the potential impact of water runoff. We (my family) fish off the shores of Honokohau, Kaloko, as well as O'oma and surrounding areas of Kona. Numerous local families pole fish, spear fish as well as throw net as a means of providing dinner off these shorelines. I am deeply concerned the runoff from this high density development will have on the fish that we consume. How many times have you washed your car in your driveway, now multiply this by the thousands. 5,000 units will have at least 2 cars per household. Runoff from parks maintenance, home landscaping, and other personal uses will not doubt affect the sea life makai of the development.

Mahalo Nui for your consideration.

Aloha,

Michelle Tomas

The development of Kaloko Makai as written in their DEIS is shortsighted and not culturally sensitive. Its calls for the desecration of culturally sensitive areas, the eradication of endangered plants with no data suggesting successful replacement, the relocation of an ancient (chicken skin kine) and very treasured trail. It doesn't have enough input from members of the community that will be directly affected by this development. The density is too high, scale back.

In closing I would like to go back to my opening paragraph and reference Chapter 5 page 64 under the heading "Cultural Resources, Objective CR-3 Preservation of Kanaka Maoli culture and Island Values. Ensure that our Kanaka Maoli and island values and cultures are preserved and perpetuated." Why can't we co-exist with our iwi kupuna...why does one have to exist with the desecration of another? Why can't we give the iwi kupuna the respect of not disturbing them? Let them rest in peace. Let them rest in peace. Preserve ALL burials. Once upon a time the feet of our ancestors walked on the water worn stones in the a'a lava fields. The trails are a treasure, a testament of where we came from and how we can teach all the children of Hawaii about how this beautiful culture survived, and how we can all work together for a greater good. The trail can be a focal point for schools to work on maintaining it. It can be a part of a living classroom. This can be a first of its kind development within Kona that incorporates the historic environment within its master plan. ... With the community's support.



7469-01  
July 25, 2013

Ms. Michelle Tomas  
P.O. Box 337  
Kailua Kona, HI 96745

Subject: Draft Environmental Impact Statement (DEIS)  
Kaloko Makai  
Kaloko and Kohanaiki, North Kona, Hawaii  
Tax Map Key: (3) 7-3-09: 017, 025, 026, and 028

Dear Ms. Tomas:

Thank you for your letter dated September 21, 2011. The Petitioner is preparing a Second DEIS to address changes in the proposed project that will be reassessed, as needed, in the forthcoming document. You will be notified of its availability for review and comment pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 Hawaii Administrative Rules (Department of Health).

With regard to your comments on the subject DEIS, we offer the following in response to your comments:

*In going over the very lengthy document I found many inconsistencies within the document that needs clarification. Chapter 4 page 86 states there will be "...279 acres of open space, 58 acres of parks, and preservation of 150-acre Dryland Forest." Then on chapter 5 page 8 it says "There will be approximately 297 acres of parks and open space consisting of 89 acres of open space, 58 acres of parks, and preservation of 150-acre Kaloko Makai Dryland Forest."*

Response: The above referenced inconsistencies have been corrected in the forthcoming Second DEIS.

*Also on Chapter 5 page 64 under the heading Cultural Resources, Objective CR-3 Preservation of Kanaka Maoli Culture and Island Values. Ensure that our Kanaka Maoli and island values and cultures are preserved and perpetuated. Policy CR-3.1: Honor Kanaka Maoli culture and heritage. The Kanaka Maoli culture is the foundation of Hawaii's living culture. We must ensure that the Kanaka Maoli people are supported and that this part of our culture is perpetuated. The success of this endeavor will ensure that the way of the Kanaka Maoli will guide our actions and behaviors in the years ahead.*

*The contradiction is that how can Kaloko Makai preach preservation of the Kanaka Maoli when they specifically say that "Of the 341 sites in the project area, a total of*



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*seventy two (72) sites be preserved." KM (Kaloko Makai) will in effect destroy trails. On paper when you read "trails" that can evoke a thought of perhaps overgrown grass, but in actuality its water worn stones placed carefully one after the other for miles on a lava that once upon a time enabled the Kanaka Maoli of time gone by to walk from their homes in the mountain down to the shore to gather from the shoreline then back home again. These trails, once bulldozed, realigned, and then "changed" to reflect a sidewalk on the side of Hina Lani road is no longer an ancient trail but a very poor substitute for it. In living celebration of the Kanaka Maoli do not destroy which we hold dear and that is our living culture. Do not bulldoze the trail or the endangered plants. Also on the chopping block is the native and endangered Halapepe, the favorite plant of the Goddess Laka (hula). Also the endangered plant Aiea. While KM says they will "take" the plants Halapepe and Aiea, but plant three each in its place, where is the data suggesting that this out planting will be successful? The importance of preserving an endangered plant in-situ outweighs the out planting of a dozen endangered replacements. The out planted plant may only survive a year or so, and then die, whereas the endangered plant in-situ is already established and with the proper "non disturbance" there is a possibility the plant may provide seeds and data for repopulation.*

Response: The project area is indeed rich in archaeological resources. However, because it is well away from the coast and poorly watered, the project site has always been somewhat "rural", with few sites that can be associated with events or broad patterns of history (Criterion A), nor can they be associated with specific persons (Criterion B), or show distinctive characteristics or represent the work of a master (Criterion C).

Seventy two of the sites surveyed are presently recommended to be preserved. While many of these sites-to-be-preserved do have a burial function, many of them have other functions as well. Other types of sites recommended for preservation include trails, ahupuaa walls, ceremonial enclosures and platforms (possible heiau), excellent examples of temporary and permanent habitation complexes, animal husbandry walls, activity areas, water collection features, and petroglyphs. Preservation plans will be developed in consultation with community participants and lineal and cultural descendants.

It should be understood that all discussion of site types, functions, and mitigations should not be considered finalized until the AIS is approved by SHPD. A total of 57 trail remnants are described. While many of these are recommended for preservation, many are also recommended for no further work. Notably, many of the trail remnants are relatively short, on the order of 10 m. long. The SHPD has always supported judicious consideration of site preservation, typically on a case-by-case basis.

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The Kaloko Makai development is consistent with the Kona CDP including Policy CR-3.1 Honor Kanaka Maoli Cultural and Heritage.

The Kohanaiki Trail ("Road to the Sea" Trail) bisects the project site and is well defined for most of its alignment until the trail reaches the TMK 7-3-009:017. SCD, with their sub-consultant Cultural Surveys Hawai'i, has been consulting with Na Ala Hele to determine the location of the remaining alignment. The alignment shown in Figure 2-11 is the alignment determined based on consultation with Na Ala Hele.

Treatment of Kohanaiki Trail will follow the agreement established after extensive discussions with the interested community at Kaloko Heights. This is represented by a 10' wide trail pathway (meandering mauka to makai on what is believed to be the historic alignment) with a 10' wide buffer on each side of the trail (30' wide in total). In places where cut and fill are necessary, the elevation of the trail may change, but the general alignment will not be disturbed.

As noted in the DEIS and the forthcoming Second DEIS, "Where the Trail intersects with Hina Lani Drive, Kaloko Makai will realign the remaining lower portion of the Trail from that point to run parallel with and adjoining the Hina Lani Street right-of way down to Queen Ka'ahumanu Highway. Since the integrity of the historic trail is lost at that point, due to the construction of Hina Lani Street, the adjoining industrial subdivision and the water tank, Kaloko Makai will realign the trail and have it run down the southern boundary of the property (fronting Hina Lani,) from the point of intersection with Hina Lani down to Queen Kaahumanu Highway. This alignment gives the users of the trail easy access to cross Queen Kaahumanu or Hina Lani Street at the bottom, as there are crosswalks with crossing signals at that point." This is also noted on the Site Plan map of the project.

Additionally, there are two trails that start at the same point on Hina Lani; one is an old stepping stone trail that leads mauka and the other runs across the dryland forest. These trails are intended to be open for public use. The land use plan for Kaloko Makai includes a school and park at the end of one of the trails so residents within the project will be able to walk to and from school via the trail. The other trail will connect to a public street and will allow people easy access to the trail.

The trail system within the dryland forest will allow it to be accessed by residents and visitors and afford opportunities to educational programs as well.

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As described within the Kaloko Makai Dryland Forest Habitat Conservation Plan (HCP), appropriate signage will be developed to encourage public cooperation and discourage trespassing, vandalism or arson within the Kaloko Makai Dryland Forest Preserve

All archaeological sites that were discovered by Kaloko Makai's archaeologists, CSH, were recorded in Kaloko Makai's AIS and were given a recommendation by CSH ranging from preservation to no further work.

The AIS was submitted to SHPD on October 30, 2008; to date the SHPD has not accepted nor rejected Kaloko Makai's AIS or archaeologists' recommendations.

In regards to the plant species, in the anticipated development discussed in the Draft EIS, only one 'aiea and two hala pepe plants are found outside the dryland forest preserve; the action, then, proposed removal of these plants due to the proposed development. Based on comments during the DEIS process and further evaluation of the project layout, under the development proposal described in the Second Draft EIS, none of the listed endangered plants situated outside the dryland forest preserve will be "taken" in the development and construction of the Kaloko Makai project. It is not anticipated that a Habitat Conservation Plan (HCP) will be prepared.

Instead, Kaloko Makai will leave those plants in place and incorporate a 50-foot buffer around the one 'aiea and two hala pepe and any structure within the project. The plants will be incorporated into landscaping within the 50-foot buffers.

Kaloko Makai will set aside 150-acres in the Kaloko Makai Dryland Forest. Within this preserve, a variety of endangered species will have continued protection and their habitats set aside in perpetuity, enhancing their prospects for survival.

*Also, chapter 2 page 18 states the "Objectives of KM are to .....Cultivate intrinsic respect for the land and natural surroundings, develop an inherent Hawaiian sense of place and nourish a sustaining living environment." Once again bulldozing the Ko'oko'olau (which many of us use for medicinal purposes- as a tea) and the many plants, and sites will not promote or help anyone "cultivate intrinsic respect for the land and natural surroundings, or help us develop an inherent Hawaiian sense of place."*

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Response: Preservation of the natural and archaeological resources (i.e. native dryland forest, ahupua'a wall, historic trails, activity areas, burials, habitation sites, markers, petroglyphs etc as noted in the AIS) found within the project site will be incorporated into the development of the proposed project.

Further discussion is included in the forthcoming Second DEIS.

Existing ko'oko'olau within the Preserve will be managed through the designation of the 150-acre Kaloko Makai Dryland Forest Preserve.

*Another contradiction is on Chapter 2 page 39 it states "....the estimated overall cost for a new regional hospital is approximately \$300 to \$500 million." Then again on Chapter 2 page it states "...costs for the construction and development of the hospital will be in the range of \$152 million."*

Response: These inconsistencies have been corrected in the forthcoming Second DEIS.

*Aside from those concerns another major concern is Density. The picture KM paints is one that Kona will have a housing shortage. Chapter 2 page 19-20 states "...current & competitive housing opportunities with the market do not satisfy forecasted demands." I sense an "If you build it, they will come" mentality. Do we really want this high density development here? Do we really want a community that reflects one that is similar to Waikiki, right when people fly into Kona? Is KM trying to fulfill the so-called future housing shortage by building all the necessary housing for the forecasted shortfall in this one development? KM describes the development area as being 1,138,866 acres (chapter 1 page 1), then on Chapter 3 page 8 it says that there will be "...297 acres of parks and open space, 150 acres of Dry land Forest", the DEIS also states they will donate 40 acres to the Hospital, 43 acres for three Schools, 10 acres for the Judiciary Complex, 1 million square feet of various commercial uses, additional acreage for a desalination plant, a wastewater treatment plant, a Fire station, a Police sub-station (chapter 4 pg. 87), in addition to the buffer areas. Will this leave suitable acreage for the building of 5,000 homes? Unrealistic, high density development is the picture that is being painted here.*

Response: As stated in the DEIS, Mikiko Corporation prepared a Market Assessment for Kaloko Makai. The report is included in its entirety as Appendix A. The report states, "Kaloko Makai is located within proximity to regions that will continue to be the focus of further development as the Island's population grows, and has the potential to be a major cornerstone of residential, commercial, and light industrial growth as a center of community, commercial, and economic activity." An updated Market Assessment by

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Mikiko Corporation will be include and referenced in the forthcoming Second DEIS.

Kaloko Makai is planned to respond to the market and demographic trends as well as the community needs. The Kaloko Makai development is consistent with the Kona CDP which calls for a range of densities.

The Kona CDP allows Kaloko Makai to be designated a Regional Center TOD, since the proposal includes land reserved for a regional hospital. Nevertheless, heeding the community's desire for a lower density development, the Petitioner has decided to develop a Neighborhood TOD, (which it is designated on the Official Kona Land Use Map of the Kona CDP.) This change is reflected in the forthcoming Second DEIS.

Please note that one of the alternatives described in Chapter 7 of the DEIS and forthcoming Second DEIS is the development of a "Maximum Density TOD." This alternative assumes the existing Kaloko Makai layout (Figure 2-11.) including the GB, T3, T4, T5 and SD1 transects, and the Traditional Neighborhood Design component in the mauka-south portion of the property, are allocated units to each "T" transect according to the maximum allowable density permitted in the Kona CDP.

The maximum densities for the three primary development transects of the Kona CDP are as follows: T3 - Sub-Urban Zone, 6-units/acre; T4 - General Urban Zone, 12-units/acre; T5 - Urban Center Zone, 30-units per acre. This equates to approximately 11,400 residential units (however, Kaloko Makai is proposing a total of 5,000-units, less than half the total allowable unit count).

In addition, as supported by the market analysis and consistent with the Kona CDP, 600,000 square feet of Commercial (Office/Retail); 120-room Lodge and Business Center; 75-acres of SD-1 and 150-acre Dryland Forest Preserve will make up the balance of the development.

Thus, the current proposed development is far below the Maximum Density TOD alternative that allows approximately 11,400 residential units.

*An area of concern is the "affordable housing" claim. Chapter 1 page 11 "...traffic-generated noise to the community will be mitigated by adequate setbacks from the highway, in conformance with federal highway standards, sound attenuating walls, total closure and air conditioning, in addition to the utilization of sound attenuating windows and window fixtures." Then on Chapter 2 page 20 KM states "Pricing of affordable units at the project will be set in accordance with County or State*





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*guidelines to be determined in consultation with government agencies. For illustrative purposes, according to county guidelines in effect as of September 1, 2010, conforming affordable housing prices will include:*

- *For-sale units priced from \$202,500 to \$366,200 for those offered to families of two to four persons earning 110% to 120% of the median income; and*
- *One- to two bedroom rental units priced from \$1,307 to \$1,500 per month, including utilities, and offered to households earning 80% to 100% of the median income. "*

*Can this price range of homes be realistic in view of the homes being totally enclosed with air conditioning, and the utilization of sound attenuating windows and window fixtures, and also the utilization of LEED concepts (Chapter 2 page 60) during the development of KM?*

Response: As stated in the DEIS and forthcoming Second DEIS, Kaloko Makai would consist of homes ranging from traditional single-family residences to mixed-use, mid- and higher-density multifamily units. The exact mix of units by type will be determined upon finalizing agreements with government agencies and during the years of build-out, as market conditions and preferences are determined.

The County sets the guidelines for affordable housing prices and the Petitioner will follow these guidelines as required by law. The prices reflected in the DEIS and the forthcoming Second DEIS are for illustrative purposes. Pricing of affordable units at the project will be set in accordance with County or State guidelines to be determined in consultation with government agencies.

*Another area of high importance is of the potential impact of water runoff. We (my family) fish off the shores of Honokohau, Kaloko, as well as O'oma and surrounding areas of Kona. Numerous local families pole fish, spear fish as well as throw net as a means of providing dinner off these shorelines. I am deeply concerned the runoff from this high density development will have on the fish that we consume. How many times have you washed your car in your driveway, now multiply this by the thousands. 5,000 units will have at least 2 cars per household. Runoff from parks maintenance, home landscaping, and other personal uses will not doubt affect the sea life makai of the development.*

Response: The design concept for the drainage system is to eliminate surface runoff from leaving the site. Natural areas, pits, and dry wells will collect runoff and allow it to infiltrate rather than leave the site as surface water. The passage of such runoff from the ground surface to the groundwater below, through the unsaturated (vadose) zone, provides natural filtration and



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adsorption. Surface runoff from most of the developed areas in Kailua-Kona is handled in a similar manner without identifiable adverse impacts to groundwater or the Makai environment.

*The development of Kaloko Makai as written in their DEIS is shortsighted and not culturally sensitive. Its calls for the desecration of culturally sensitive areas, the eradication of endangered plants with no data suggesting successful replacement, the relocation of an ancient (chicken skin kine) and very treasured trail. It doesn't have enough input from members of the community that will be directly affected by this development. The density is too high, scale back.*

Response: Please see previous responses related to cultural sites, endangered plants, trails and density.

*In closing I would like to go back to my opening paragraph and reference Chapter 5 page 64 under the heading "Cultural Resources, Objective CR-3 Preservation of Kanaka Maoli culture and Island Values. Ensure that our Kanaka Maoli and island values and cultures are preserved and perpetuated." Why can't we co-exist with our iwi kupuna...why does one have to exist with the desecration of another? Why can't we give the iwi kupuna the respect of not disturbing them? Let them rest in peace. Let them rest in peace. Preserve ALL burials. Once upon a time the feet of our ancestors walked on the water worn stones in the a'a lava fields. The trails are a treasure, a testament of where we came from and how we can teach all the children of Hawaii about how this beautiful culture survived, and how we can all work together for a greater good. The trail can be a focal point for schools to work on maintaining it. It can be a part of a living classroom. This can be a first of its kind development within Kona that incorporates the historic environment within its master plan....With the community's support.*

Response: As stated in the DEIS and forthcoming Second DEIS, there are a total of sixty-five (65) confirmed burials at more than thirty sites (55% of these are located in parcel 26.) All of the confirmed and suspected burials will be preserved in perpetuity pursuant to a burial treatment plan prepared in consultation with recognized descendants and the Hawai'i Island Burial Council. The other preservation sites will be treated in accordance with a preservation plan submitted to and approved by State Historic Preservation Division (SHPD) prior to final subdivision approval.

Treatment of Kohanaiki Trail will follow the agreement established after extensive discussions with the interested community at Kaloko Heights. Additionally, the trail system within the dryland forest will allow it to be

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accessed by residents and visitors and afford the opportunity to conduct educational programs, as well.

Your letter, along with this response, will be reproduced and included in the forthcoming Second DEIS. We appreciate your participation in the EIS review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Matsukawa", with a long horizontal flourish extending to the right.

Earl Matsukawa, AICP  
Project Manager

cc: Mr. Jay Nakamura, Stanford Carr Development  
Mr. Daniel Orodener, State Land Use Commission



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