CH2MHILL

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March 10, 2015

Mr. Raymond Young
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Subject: Kawailoa Solar Farm Project, Application for a Special Use Permit; Response to Agency Comments (2014/SUP-6)

Dear Mr. Young,

Based on the application for a Special Use Permit for the proposed Kawailoa Solar Farm, the City and County of Honolulu Department of Planning and Permitting (DPP) has requested comments and recommendations from various public agencies, neighborhood boards and the public. This letter is intended to provide responses to the comments received as of 3/9/15, as provided by DPP. Please note that First Wind was acquired by SunEdison in January 2015; these responses are being provided on behalf of SunEdison (d.b.a Kawailoa Solar, LLC).

Letters received from the State of Hawaii Department of Land and Natural Resources (DLNR) Land Division, City and County of Honolulu Department of Environmental Services, Honolulu Police Department, and City and County of Honolulu Department of Transportation Services either indicated that their facilities/services would not be impacted or the agency has no comment; as such, these letters are not further addressed.

Comments received from other agencies are replicated below (according to the comment numbers, as indicated on the attached copies), followed by SunEdisons's response to each.

DLNR Engineering Division

Comment #1:

> *We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone D, an area where flood hazards are undetermined.*

The information provided in the comment letter is consistent with the information provided in the Special Use Permit application. Specifically, Section 3.2 states "The project site is classified as Flood Zone D, which includes areas where flood hazards are undetermined. Several intermittent waterways run alongside the project site; however, these features are located within steep gulches, such that flooding of the project site is not expected."

City and County of Honolulu Fire Department

Comment #1:

In response to your memorandum dated January 16, 2015, regarding the above-mentioned subject, the Honolulu Fire Department requires that the provisions of the Fire Code of the City and County of Honolulu be complied with in respect to photovoltaic systems and fire department access and water supply requirements.

Based on previous discussions with the Honolulu Fire Department for similar projects, it is understood that an access road/turnaround and water supply for fire flow would not be required if no buildings would be constructed within the project site. SunEdison will work with Honolulu Fire Department to meet their requirements for grading and building permits.

DLNR Division of Aquatic Resources

Comment #1:

The BMPs were not included with the application. DAR requests that the BMPs be included in the application so that DAR has the opportunity to review the BMPs prior to the start of the project.

The specific best management practices (BMPs) that are expected to be implemented as part of the proposed solar farm project are detailed in the Preliminary Civil Engineering Report. This report has been shared directly with the DLNR Division of Aquatic Resources, and is attached for your reference.

Comment #2:

This project also includes a sheep grazing component where sheep are able to graze between and under the solar panels. There is no mention of the BMPs that the applicant proposes to implement to mitigate for the negative impacts as a result of the sheep grazing. Additionally, there is no mention of BMPs proposed to mitigate for soil exposure, erosion and resulting soil runoff from reaching the river in the valley below. DAR recommends that BMPs be developed for the grazing portion of the project and requests the opportunity to review these BMPs.

As described in the Special Use Permit application, the area occupied by the solar panels would be made available for compatible agricultural activities at a lease rate that is at least fifty per cent below the fair market rent for comparable properties, consistent with the requirements of HRS 205-4.5(a)(21)(A). Within one year of the start of the commercial operation of the solar farm, SunEdison will establish, or will be actively seeking to establish a compatible agricultural operation, and will seek to have such compatible agricultural operations on the land for the duration of commercial energy generation operations. Specifically, SunEdison plans to lease the project area to a tenant for the pasturage of sheep, which is widely recognized as a compatible use with solar panels. SunEdison would provide the tenant with use of the fencing and roadways and other infrastructure at the project site. However, the tenant would be responsible for all aspects of the agricultural operation, including any required permit approvals and implementation of appropriate BMPs. The ranching tenant will be expected to work with the Natural Resource Conservation Service and develop a Conservation Plan for the ranching activities with the Soil and Water Conservation District.

State of Hawaii Department of Health (DOH) Environmental Planning Office

Comment #1:

EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: http://health.hawaii.gov/epo/home/landuse-planning-review-program/. Projects are required to adhere to all applicable standard comments.

The standard comments provided on EPO's website have been reviewed and the project is expected to be in compliance with the requirements. In particular, Section 4.3 of the Special Use Permit application references potential impacts relating to air quality, water quality and noise, and states that BMPs would be implemented to address those impacts. In addition, the project would comply with all necessary permit requirements prior to construction, including NPDES permit coverage for construction-related stormwater.

Comment #2:

> *We encourage you and project applicants to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: https://eha-cloud.doh.hawaii.gov*

The information contained in the Hawaii Environmental Health Portal has been considered as part of project development, and will be referenced as needed throughout the permitting process.

Comment #3:

> *You may also wish to review the revised Water Quality Standards Maps that have been updated for all islands. The Water Quality Standards Maps can be found at: http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards/.*

The revised Water Quality Standard Maps have been reviewed, and the information will be considered as part of the permitting process, as appropriate.

U.S. Fish and Wildlife Service

Comment #1:

> *The federally endangered Hawaiian hoary bat (Lasiurus cinereus semotus) may forage and roost in the project area. There is no proposed or designated critical habitat located in the area. We offer the following comments to assist the Planning Commission and First Wind [SunEdison]. The Hawaiian hoary bat roosts in both exotic and native woody vegetation and, while foraging, will leave young unattended in "nursery" trees and shrubs when they forage. If trees or shrubs suitable for bat roosting are cleared during the breeding season, there is a risk that young bats could inadvertently be harmed or killed. To minimize impacts to the endangered Hawaiian hoary bat, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed during the bat birthing and pup rearing season (June 1 through September 15). Site clearing should be timed to avoid disturbance to Hawaiian hoary bats in the project area. Additionally, Hawaiian hoary bats have been snagged on barbed wire fencing while flying. We recommend that the solar facility fence design be designed to avoid the use of barbed wire.*

Project staff met with representatives from both the USFWS and the State of Hawaii Department of Forestry and Wildlife (DOFAW) on November 5, 2014 regarding the proposed Waipio Solar Farm project. Additional follow-up was conducted to confirm that the previous discussion also applied to the proposed Kawailoa Solar Farm project. SunEdison has received concurrence from USFWS on this point, and is actively seeking DOFAW's concurrence. Based on these discussions, SunEdison concurs with USFWS' recommendation and agrees to not disturb, remove or trim woody plants greater than 15 feet (4.6 meters) tall during the bat birthing and pup rearing season (June 1 through September 15). In addition, the perimeter fence will not include barbed wire to avoid the potential for bats to be inadvertently snagged.

Comment #2:

We recommend that personnel at the solar site be educated about the potential for birds to be attracted and inadvertently harmed. If monitoring indicates that species are occurring at the photovoltaic system, or additional information about the facility's impacts to native Hawaiian species becomes available, please contact us so we may assist you in avoiding and minimizing impacts.

Operations personnel at the site will be trained to document and report any downed wildlife (i.e., birds and bats) encountered during routine (ca. bi-weekly) site inspections. Training will include recognizing protected species, and establishing standardized protocols for documenting and reporting occurrences of downed wildlife. Protocols will include contacting USFWS and DOFAW if protected species are found to determine appropriate measures for avoiding and minimizing further impacts.

State of Hawaii Office of Planning

Comment #1:

Concerns will remain with regard to the statewide challenge in seeking a balance of maintaining the availability of high quality agricultural lands while promoting renewable energy sources such as solar facilities on lands within the Agricultural District.

SunEdison is committed to the complementary uses of utility scale solar energy generation and local food production on agricultural land, and will make the area occupied by the solar panels available for compatible agricultural activities at a lease rate that is at least fifty per cent below the fair market rent for comparable properties, consistent with the requirements of HRS 205-4.5(a)(21)(A). Within one year of the start of the commercial operation of the solar farm, SunEdison will establish, or will be actively seeking to establish a compatible agricultural operation, and will seek to have such compatible agricultural operations on the land for the duration of commercial energy generation operations.

Comment #2:

OP also has concerns that while "agri-voltaic" projects such as this one are technically feasible, the agricultural aspect of these projects is sometimes not implemented as represented by the applicant, i.e. the number of sheep or other grazing animals co-located within the solar facility is negligible. The proposed project would be located on soils rated ALISH Prime; the proposed solar facility would, therefore, preclude productive agricultural land from being used for agricultural purposes and contributing to the State's goal of assuring the long-term availability of agricultural lands for agricultural use if the pasturage of sheep does not occur.

It is SunEdison's full intention to facilitate a successful sheep ranching operation on the project site, not only for the agricultural benefits, but also for vegetation management around the solar panels. As such, a significant number of sheep will be required to effectively and consistently control the growth of grasses on 384 acres of pasture land, which a nominal number of animals could not accomplish. In addition to making the project site available for compatible agricultural activities at a lease rate below fair market value, SunEdison will provide the tenant with use of the fencing and roadways and other infrastructure at the project site, as needed to support the tenant's efforts to maximize agricultural production. In the case that no lessees can succeed at sheep ranching, alternative agricultural activities would be considered, such as beekeeping, aquaponics, aquaculture or other livestock.

Comment #3:

Similarly, the subject property is under consideration by the LUC to be designated as IAL. OP notes the project area would be leased for the pasturage of sheep, which OP does recognize as a viable agricultural activity if implemented appropriately. OP also notes the proposed project is expected to

have an operational life of approximately 25-30 years, following which the lands may restored to conditions comparable to their existing conditions, such that future agricultural use may occur.

As noted above, SunEdison will establish, or will be actively seeking to establish a compatible agricultural operation within one year of the start of the commercial operation of the solar farm, and will seek to have such compatible agricultural operations on the land for the duration of commercial energy generation operations. At the end of the project's operational life (approximately 25-30 years), the facility may be re-powered with new equipment (under subsequent permits/approvals) or decommissioned. Decommissioning will involve removal of all aboveground structures, and the property will be returned to substantially the same condition as existed prior to the solar farm use, such that future agricultural uses may occur.

Comment #4:

OP supports the State Department of Agriculture's (DOA) comment from a letter dated January 29, 2015 to the Office of Planning regarding Kamehameha Schools' petition to designate IAL that "the DOA would support the IAL designation for the area proposed for the solar energy facility on the Kawailoa lands if the Petitioner commits to using a substantial portion of the energy generated by the solar energy facility directly for agricultural purposes, and/or commits to using a substantial portion of the income derived from the selling of electricity to the utility for agricultural activities within the petitioned area" (p. 7). (Refer to the attached Exhibit A).

It is SunEdison's understanding that Kamehameha Schools intends to use a substantial portion of the income they derive from the solar farm for agricultural activities on the lands designated as IAL.

Comment #5:

Should the Special Permit be granted, OP recommends that the requirements of HRS § 205-4.5(a)(21)(A), (B), and (C), relating to: 1) compatible agricultural activities; 2) proof of financial security for decommissioning; and 3) decommissioning requirements, be included as specific conditions of approval.

SunEdison is in agreement with this comment.

State of Hawaii Department of Agriculture

Comment #1:

Therefore the DOA believes this large-scale project with lands that have been designated as IAL should comply fully with the purpose and intent of Act 55, SLH 2014, Section 1 which is to "...enable the complementary uses of utility scale solar energy generation and local food production..." (emphasis added) on "B" and "C" rated agricultural land. We recommend the City impose a condition to the effect that the applicant and its successors and/or assigns shall have established a sheep pasture operation or other agricultural enterprise on the property in compliance with Act 55, 2014 Session Laws of Hawaii for the duration of the operation of the solar energy generation facility.

SunEdison is committed to the complementary uses of utility scale solar energy generation and local food production on agricultural land, and will make the area occupied by the solar panels available for compatible agricultural activities at a lease rate that is at least fifty per cent below the fair market rent for comparable properties, consistent with the requirements of HRS 205-4.5(a)(21)(A). Within one year of the start of the commercial operation of the solar farm, SunEdison will establish, or will be actively seeking to establish a compatible agricultural operation, and will seek to have such compatible agricultural operations on the land for the duration of commercial energy generation operations.

Comment #2:

The applicant will work with the rancher, as needed, to facilitate watering systems, electrified fencing, pens, and loading facilities (Application, page 8). We believe the applicant's assistance in establishing the aforementioned infrastructure is very important for the sheep ranching operation to succeed.

As described in the Special Use Permit application, SunEdison is committed to working with the tenant to facilitate the infrastructure needed for a successful agricultural operation, including watering systems, electrified fencing, pens, and loading facilities.

State Historic Preservation Division

Comment #1:

Further review of our records indicate that an AIS was conducted in support of the present project. The report was submitted and accepted by SHPD on February 2, 2015 (Log No. 2014.05215, Doc. No. 1502SL02). The AIS further documented previously-recorded Site 50-80-04-7171, and newly recorded Site 50-80-04-7716, both of which are within the makai Collector Line Corridor. These two sites were assessed as significant pursuant to Hawaii Administrative Rules (HAR) §13-284-6 under Criterion "d" (has yielded, or is likely to yield, information important for research on prehistory or history). The project effect recommendation was "no historic properties affected" as both historic properties were sufficiently documented. However, mitigation in the form of archaeological monitoring was recommended to address possible inadvertent finds.

Based on the above information, we concur with an archaeological monitoring program during the construction phases of this project to ensure proper documentation and treatment of any inadvertent finds, including possible additional features related to Sites 7171 and 7716. We request on-site archaeological monitoring of all ground disturbing activities associated with this project ***and request that an archaeological monitoring plan*** *be submitted to our office for review and acceptance pursuant to HAR §13-279-4 prior to any ground disturbing activities.*

As requested by the State Historic Preservation Division (SHPD), an archaeological monitoring plan will be submitted for review and acceptance prior to any ground disturbing activities.

We appreciate your efforts in support of processing the Special Use Permit application for the Kawailoa Solar Farm project. Please contact me if you have any questions regarding the responses provided above, or if you require further information.

Sincerely,

CH2M HILL
Paul Luersen, AICP
Agent for SunEdison

Enclosures: Agency comment letters; Preliminary Civil Engineering Report

cc: Wren Wescoatt, SunEdison (Kawailoa PV, LLC)

From: Luersen, Paul/HNL
To: "Paul.Y.Murakawa@hawaii.gov"
Cc: "Young, Raymond"; "Wren Wescoatt"; Kettley, Lisa/HNL
Subject: Kawailoa Solar Farm SUP Application - BMPs
Date: Tuesday, March 10, 2015 8:02:00 AM
Attachments: First Wind Kawailoa Solar Project Preliminary Civil Considerations - Gro....pdf
Kawailoa_SUP_CommentLetter_DAR.pdf

Aloha Paul,

We are writing in response to the comments your agency provided on the Special Use Permit application for the Kawailoa Solar Farm project (letter dated February 3, 2015; DAR #5065, attached). We are sending this email to you as your name was on the comment letter.

Specifically, DAR requested additional information on the BMPs that would be implemented for the solar farm project, as well as for the agricultural activities that will be conducted onsite. The proposed BMPs for the solar farm project are detailed in the Civil Report, which is attached for your reference.

Specific to the agricultural component, SunEdison plans to lease the project area to a tenant for the pasturage of sheep, as detailed in the application. SunEdison would provide the tenant with use of the fencing and roadways and other infrastructure at the project site. However, the tenant would be responsible for all aspects of the agricultural operation, including any required permit approvals and implementation of appropriate BMPs. The ranching tenant will be expected to work with the National Resource Conservation Service and develop a Conservation Plan for the ranching activities as a member of the Soil and Water Conservation District.

We hope that this information addresses your comments. We would be happy to discuss this matter, if you have further questions.

Thanks,
Paul

Paul Luersen, AICP
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Office 808.440.0201 | Mobile 808.223.7865 | **paul.luersen@ch2m.com**

Kawailoa Solar, LLC
Solar Farm Project
Preliminary Civil Considerations

Kawailoa, Waialua, O'ahu
TMK (1) 6-1-006: 001 (por) and TMK (1) 6-1-005: 001 (por)

PAUL T. MATSUDA
LICENSED PROFESSIONAL ENGINEER
No. 10901-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE
EXPIRATION DATE: 04/30/2016

Prepared for:

First Wind/Kawailoa Solar, LLC
1099 Alakea Street, Suite 2440
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Prepared by:

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Group 70 International, Inc.
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March 9, 2015

GROUP 70
INTERNATIONAL

Kawailoa Solar, LLC – Solar Farm Project
Preliminary Civil Considerations

Project Description

The proposed Kawailoa Solar, LLC Solar Farm Project is located on Kamehameha Schools property on State Land Use Agricultural District lands in Kawailoa, Waialua, Oahu (TMK 6-1-006:001 and TMK 6-1-005:001). The property was historically used for sugar cane cultivation. Currently the property contains a variety of uses including a wind farm, agriculture, conservation and military operations.

The solar farm project is planned to generate approximately 50 MW of power and will be constructed within an approximately 304 acres on two parcels; TMK 6-1-006:001 (2,050 acres) and TMK 6-1-005:001 (1,452 acres). The actual areas of the solar farm will vary depending on existing topography and system design and layout. The solar farm will be co-located with the Kawailoa Wind Farm and will interconnect with the wind farm's existing electrical switchyards and substations.

The solar farm will be comprised of a horizontal single-axis tracking, ground-mounted photovoltaic system. Photovoltaic modules (PV Panels) will be mounted on steel racks which are anchored to the ground on driven piles. The racks will be single-axis tracking, supported by driven piles, tilted in the southerly direction and will track the sun along a single axis from east to west. Groups of racks will be arranged and combined to deliver energy to inverter skids which will also be mounted on driven piles. These inverters will deliver the energy to the existing Mauka and Makai substations and interconnection switchyards, which were constructed as part of the Kawailoa wind farm project. HECO's Mauka switchyard provides for interconnection with the HECO's Waialua-Kuilima 46kV sub-transmission line, and HECO's Makai switchyard provides for interconnection with HECO's existing Waialua-Kahuku 46kV sub-transmission line. The solar farm project needs to interconnect with both sub-transmission lines, as each can only accept a limited amount of generation.

Infrastructure improvements required for the solar farm include: substation, PV panels, combiner boxes, collector lines, inverters and electrical equipment, access driveways, perimeter fencing, security systems, and drainage and vegetation improvements.

Access

Access to the site is provided by a private agricultural road (Ashley Road), which extends from Kamehameha Highway up through the project area, and is maintained as part of the existing wind farm. There is no public access to the site. There are numerous unpaved agricultural roads throughout the property. No public agencies will be required to provide roads or streets for the solar farm project.

Grading and Drainage

In general, the solar farm will be located on the ridgelines where the former tilled sugar cane fields were located. The project area generally slopes mauka to makai down from elevations of 1,280 feet to 200 feet with an average slope of approximately 7%. The project site is in Flood Zone D.

Optimal placement of the PV panels will be on the flatter more gradually sloped areas on the ridgelines and away from the steep ravines that lead to the valleys below. No public agencies will be required to provide drainage improvements to support the solar farm project.

Clearing, grubbing and grading will be needed on the project site for placement of the solar panels, equipment, facilities, access driveways, fence and vegetated buffer. In general, the steeper areas of the project site will be avoided and PV racks will be concentrated in areas of more gradual slopes. The site is moderately sloped with an average slope of less than 7 percent. Site grading associated with the project will be limited to smoothing out localized high or low spots. It is anticipated that the earthwork volumes and related construction costs will be minimized by optimal placement of the PV racks by following the existing grades and elevations. Where possible, the existing agricultural roads will continue to be utilized for access.

Permits and approvals will be required from the State of Hawaii and the City and County of Honolulu (C&C) to allow grading and grubbing of the site including:

- State of Hawaii Department of Health (DOH) - NPDES General Permit for Construction Activities, Notice of Intent (NOI-C)
- City and County of Honolulu - Grading, Grubbing and Stockpiling Permit

The applications for both State and C&C grading and erosion control permits identified above require agency review and approval of Grading and Erosion Control Construction Plans including related Storm Water Pollution Prevention Plans, Erosion Control Calculations, and Drainage Reports.

Stormwater Quantity Management

Since the solar farm is generally located on the ridgelines, the project area is generally not subject to runoff from offsite areas mauka of the site. Existing runoff currently discharges through sheet flow or shallow concentrated flow into swales onto adjacent downstream areas. The existing drainage patterns will not be altered in this project with earthwork limited to leveling for access driveways, equipment pads, and the substation.

Addition of impervious area from concrete equipment pads, control structures, substation and switchyard, and micro-pile/pier foundations will be minimal. Due to the even distribution of impervious area throughout the project site, slight leveling of driveway areas, and use of raised gravel driveways, the increase in impervious area is not anticipated to increase runoff rates. As a result, there will not be a significant pre-development to post-development increase in stormwater flows due to the construction of the project.

Onsite stormwater will be properly directed away from equipment pads and any other structures to minimize erosion. Drainage channels with velocity reduction controls will be constructed in which water will flow to stormwater basin(s) and/or other volume control facilities if required. The volume control facilities will be situated at the proper downstream locations, and will discharge out with non-erosive velocities back into the natural drainage features.

Offsite flows, to the extent there are any, will be diverted around the site or through the site so as to not impact the existing drainage paths as well as the proposed construction. If required,

diversion channels will be constructed with check dams, drop structures or other velocity reducing controls and flow back into the natural drainage features.

Best Management Practices

Both temporary and permanent Best Management Practices (BMPs) are required to be implemented for the project through the grading and erosion control regulations and permits required by the State and C&C agencies. Temporary BMPs are required during construction activities and will remain in place until permanent BMPs can be established. Temporary erosion control measures will be incorporated during the construction period to minimize soil loss and erosion hazards. It is anticipated that the erosion control BMPs to be used on-site may include the following:

- Preservation of natural vegetation
- Minimize area of clearing and grubbing
- Vegetated buffers
- Temporary soil stabilization with grass and/or mulch
- Silt fences/fiber filtration tubes
- Gravel bag berms/check dams
- Stabilized construction entrances
- Sediment traps and basins
- Temporary diversion swales and ditches
- Dust control – water application and/or dust screens

Due to the size of the project, the above temporary BMPs would be implemented in a phased manner through grading increments as required by the regulatory agencies. Details on the grading increments and related BMPs will be shown on the Grading and Erosion Control Plans.

Permanent erosion control BMPs will also incorporated into the design and are required to close out grading and erosion control permits. Typically permanent BMPs primarily include final stabilization of exposed soils through landscaping or installation of impervious surfaces including pavement and buildings. Additional BMPs are also typically required to provide treatment of stormwater runoff to remove pollutants. However for solar farm projects, the total additional impervious surface is minimal and the PV panels are not pollution generating surfaces.

C&C Civil Engineering Branch (CEB) is responsible for interpreting and approving BMP and drainage system designs. Typically, C&C regulations include minimum thresholds for requirements related to installation of BMPs for stormwater quality based on the project's total disturbed area regardless of the added impervious area or pollutant generation from a project. However for solar farms, CEB has recently allowed the grassed areas under the PV panels to be excluded from the project's calculated disturbed area since grassing is an acceptable permanent BMP. Therefore, the grassed areas underneath the PV panels will not have to comply with the C&C low impact development (LID) requirements. However, any areas within the project area that could be considered disturbed or developed such as a substation, will have to comply with LID requirements as defined below:

- Unless infeasibility criteria, as defined in §1-5.2 of the Water Quality Design Standards, can be met for each type of LID feature, Water Quality Volume (WQV) must be calculated

using the 1" design storm runoff depth and retained on-site through use of permanent BMPs that utilize infiltration or evapotranspiration.

- If infeasibility criteria are met, any portion of the WQV that is not retained must be bio-filtered using permanent erosion control BMPs.

In summary, the project will likely be required to provide onsite treatment of 1" of runoff only for areas that are fully disturbed and developed such as a substation. BMP requirements and applicable drainage criteria and standards will be confirmed with the C&C during design. It is anticipated that permanent BMPs to be utilized on the project for the few fully disturbed and developed areas include the following:

- Permanent soil stabilization with landscaping, pavement, or gravel
- Infiltration trenches
- Dry wells and sumps
- Grass swales and ditches
- Filter strips
- Sediment traps and basins

Fire Hazard

The solar farm project will not unreasonably burden public agencies to provide emergency services for response to fires. Since the solar farm project will not include any "buildings", it is not anticipated that building permits for the project would be subject to fire code compliance. Once the project is built, the chance of naturally occurring or arson related wildfires would be reduced since the property will be secured by perimeter fencing and the tall vegetation that could be fuel for a wildfire will be cleared, then controlled by animal grazing and/or mowing.

PV Panel Maintenance

Once the PV panels are installed, very little maintenance is needed. The PV panels will be cleaned primarily by rain. However, if it is exceptionally dry and the solar plant is experiencing soiling losses (lost energy due to a thin film of dust on the panels), the operations staff would employ a round of panel rinsing, likely no more than once per year. There's no anticipation of having to use solvents or harsh chemicals to clean the PV panels. Water and squeegee is typically all it takes to clean the panels.

Air Quality

There are no direct air emissions from operating the solar farm. Operation and maintenance activities may result in small amounts of fugitive dust or tailpipe emissions from vehicular traffic and landscape maintenance. However, it is not anticipated that the operations at the site would adversely affect air quality.

During construction, there will be short-term impacts in the form of exhaust from increased traffic and fugitive dust generated by the construction activity. Temporary BMPs will be used to mitigate impact from fugitive dust during construction. These BMPs may include dust fences, windbreaks, watering of disturbed areas and other soil management measures. BMPs will be identified and included on the erosion control plans that are required for both C&C and State grading and erosion control permit approvals. Construction activities at the site will comply with the regulations for fugitive dust control in HAR, Section 11-60.1.

DAVID Y. IGE
GOVERNOR OF HAWAII

CARTY S. CHANG
ACTING CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

FIRST DEPUTY

WILLIAM M. TAM
INTERIM DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 22, 2015

MEMORANDUM

TO: PR'

DLNR Agencies:
X Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
X Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

2015 FEB 10 AM 10:59

'15 JAN 26 AM 08:47 ENGINEERING

TO:

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu
LOCATION: Kawailoa, North Shore, Oahu; Tax Map Key: 6-1-005: Portion of 001 and 6-1-006: Portion of 001
APPLICANT: Kawailoa Solar, LLC by its consultant CH2M Hill

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: https://sp01.ld.dlnr.hawaii.gov/LD
2. Login: Username: LD\Visitor Password: 0pa$$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or Jonathan.C.Real@hawaii.gov)

Please submit any comments by February 12, 2015. 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 Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed: Chris Sakahara for
Print Name: Carty S. Chang, Chief Engineer
Date: 2/9/15

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
REF: Special Use Permit Application for Solar Energy Facility, Kawailoa, North Shore Oahu.005

COMMENTS

(X) **We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone D, an area where flood hazards are undetermined.**

( ) 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. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
- ( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
- ( ) Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.
- ( ) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.

( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) 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: _____

_____

( ) Other: _____

_____

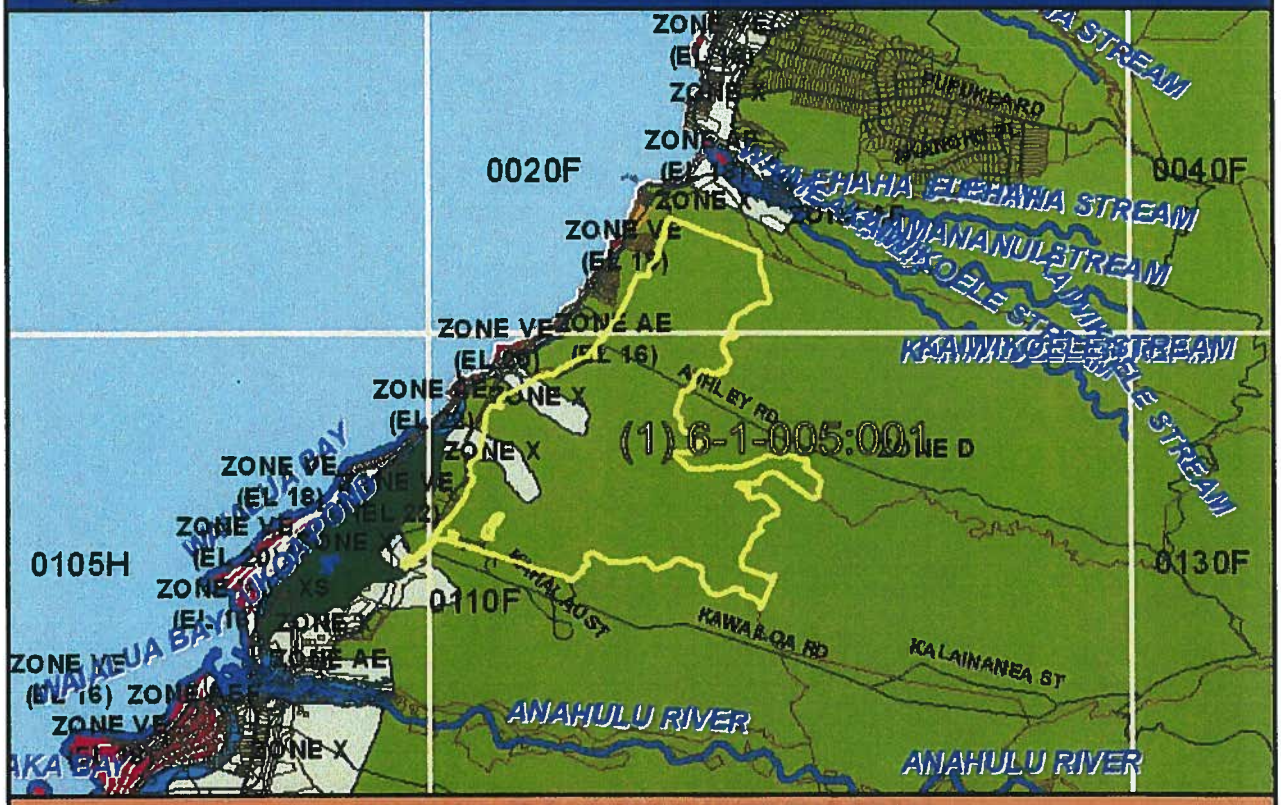
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: Carty Tchang
CARTY S. CHANG, CHIEF ENGINEER

Date: 2/9/15

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

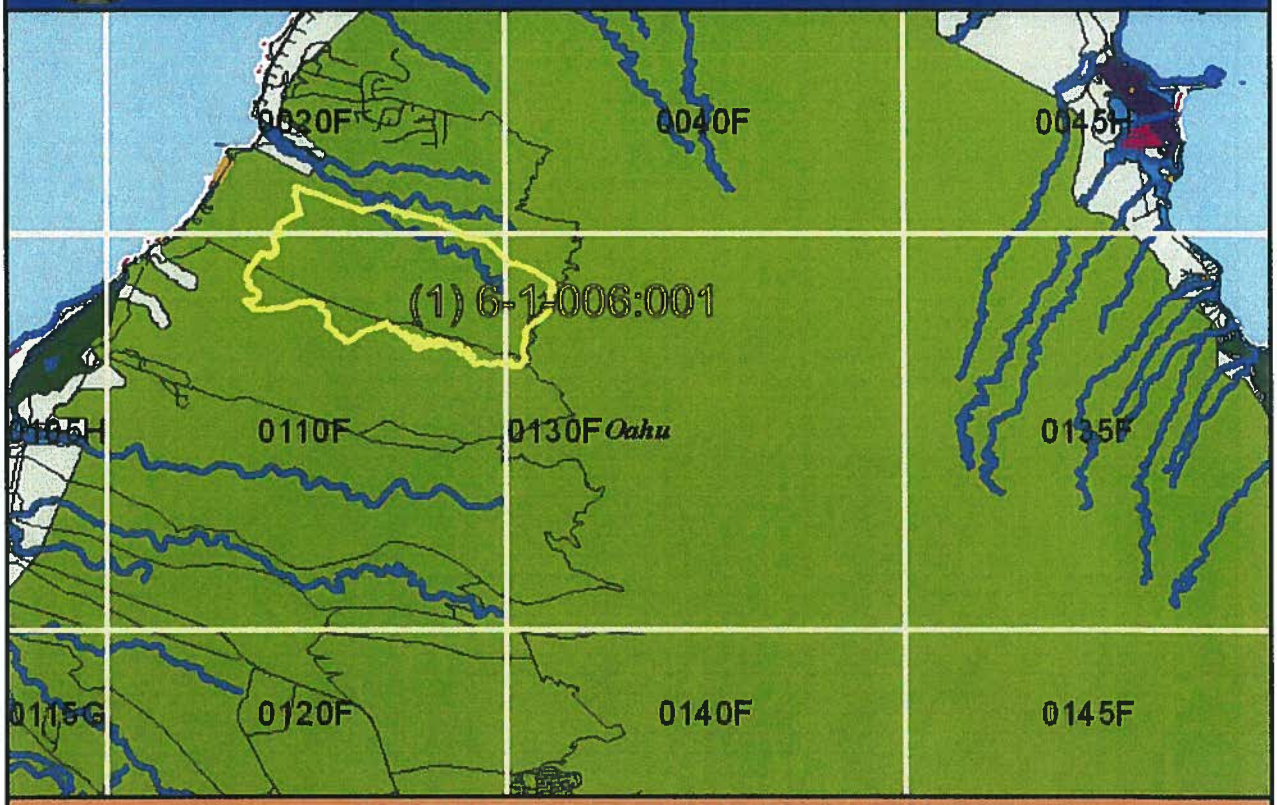
COUNTY:	HONOLULU
TMK NO:	(1) 6-1-005-001
PARCEL ADDRESS:	62-350 KAWAILOA DR WAHIAWA, HI 96786
FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	15003C0105H-JANUARY 19, 2011 15003C0110F-SEPTEMBER 30, 2004 15003C0020F-SEPTEMBER 30, 2004
PARCEL DATA FROM:	APRIL 2014
IMAGERY DATA FROM:	MAY 2006

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
City and County of Honolulu	
Mario Siu-Li, CFM	(808) 768-8098
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	HONOLULU
TMK NO:	(1) 6-1-006-001
PARCEL ADDRESS:	
FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	15003C0110F-SEPTEMBER 30, 2004 15003C0020F-SEPTEMBER 30, 2004 15003C0130F - PANEL NOT PRINTED
PARCEL DATA FROM:	APRIL 2014
IMAGERY DATA FROM:	MAY 2006

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
City and County of Honolulu	
Mario Siu-Li, CFM	(808) 768-8098
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

Disclaimer: The Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR from any liability, which may arise from its use.

If this map has been identified as 'PRELIMINARY' or 'UNOFFICIAL', please note that it is being provided for informational purposes and is not to be used for official/legal decisions, regulatory compliance, or flood insurance rating. Contact your county NFIP coordinator for flood zone determinations to be used for compliance with local floodplain management regulations.

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

RECEIVED
'15 FEB -5 P2:14
DEPT OF PLANNING
AND PERMITTING
CITY & COUNTY OF HONOLULU

KIRK CALDWELL
MAYOR

MANUEL P. NEVES
FIRE CHIEF

LIONEL CAMARA JR.
DEPUTY FIRE CHIEF

February 3, 2015

TO: GEORGE ATTA, FAICP, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

FROM: SOCRATES D. BRATAKOS, ASSISTANT CHIEF

SUBJECT: SPECIAL USE PERMIT APPLICATION NO. 2014/SUP-6
SOLAR ENERGY FACILITY
KAWAILOA, NORTH SHORE, OAHU
TAX MAP KEYS: 6-1-005: PORTION OF 001
6-1-006: PORTION OF 001

In response to your memorandum dated January 16, 2015, regarding the above-mentioned subject, the Honolulu Fire Department requires that the provisions of the Fire Code of the City and County of Honolulu be complied with in respect to photovoltaic systems and fire department access and water supply requirements.

Should you have questions, please contact Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or tseelig@honolulu.gov.

SOCRATES D. BRATAKOS
Assistant Chief

SDB/SY:bh

DAVID Y. IGE
GOVERNOR OF HAWAII

CARTY S. CHANG
ACTING CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

FIRST DEPUTY

WILLIAM M. TAM
INTERIM DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 22, 2015

RECEIVED
JAN 23 2015
AQUATIC RESOURCES

DAR #5065

MEMORANDUM

TO: **DLNR Agencies:**
X Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
X Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

JK
PM

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu
LOCATION: Kawailoa, North Shore, Oahu; Tax Map Key: 6-1-005: Portion of 001 and 6-1-006: Portion of 001
APPLICANT: Kawailoa Solar, LLC by its consultant CH2M Hill

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: https://sp01.ld.dlnr.hawaii.gov/LD
2. Login: Username: LD\Visitor Password: 0pa$$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or Jonathan.C.Real@hawaii.gov)

Please submit any comments by February 12, 2015. 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 Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(X) Comments are attached.

Signed: _____
Print Name: _____
Date: 2/6/15

DAVID Y. IGE
GOVERNOR OF HAWAII

CARTY S. CHANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN
INTERIM FIRST DEPUTY

W. ROY HARDY
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

Date: February 3, 2015
DAR # 5065

MEMORANDUM

TO: Carty S. Chang, Interim Chairperson 2/6/15

DATE: _____

FROM: Paul Murakawa, Aquatic Biologist 2/5/15

SUBJECT: Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu: TMK 6-1-005:Portion of 001 and 6-1-006:Portion of 001

Comment	Date Request	Receipt	Referral	Due Date
	1/22/15	1/23/15	1/28/15	2/12/15

Requested by: Russell Y. Tsuji, Land Division Administrator

Summary of Proposed Project

Title: Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu

Project by: Kawailoa Solar, LLC.

Location: In the vicinity of Ashley Road, Kawailoa, North Shore, Oahu: TMK 6-1-005: Portion of 001 and 6-1-006: Portion of 001

Brief Description:

The applicant is seeking a Special Use Permit to create a solar energy facility on 384 acres of land owned by the B.P. Bishop Trust Estate in Kawailoa, Oahu. This project has two components, solar panels and sheep grazing.

Comments:

The Division of Aquatic Resources (DAR) reviewed the application and has the following comments. In the application, it states:

"*Storm water runoff would be appropriately addressed through design features that incorporate best management practices (BMPs) to minimize the quantity and water quality*

impacts of the runoff. Areas that are temporarily disturbed during construction would be vegetated using grass species suitable for soil stabilization and erosion control, as well as for grazing stock."

#1 The BMPs were not included with the application. DAR requests that the BMPs be included in the application so that DAR has the opportunity to review the BMPs prior to the start of the project.

#2 This project also includes a sheep grazing component where sheep are able to graze between and under the solar panels. There is no mention of the BMPs that the applicant proposes to implement to mitigate for the negative impacts as a result of the sheep grazing. Additionally, there is no mention of BMPs proposed to mitigate for soil exposure, erosion and resulting soil runoff from reaching the river in the valley below. DAR recommends that BMPs be developed for the grazing portion of the project and requests the opportunity to review these BMPs.

Thank you for providing DAR the opportunity to review and comment on the proposed project. Should there be any changes to the project plans; DAR requests the opportunity to review and comment on those changes.

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:
EPO 15-011

February 10, 2015

Mr. George I. Atta, FAICP
Director, Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813
Via email only to: rcsyoung@honolulu.gov

Dear Mr. Atta:

SUBJECT: **Application for a Special Use Permit**
Solar Energy Facility, Kawailoa, North Shore, Oahu
TMK: 6-1-005: Portion of 001 and 6-1-006: Portion of 001

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter to our office on January 16, 2015. Thank you for allowing us to review and comment on the proposed project. EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: http://health.hawaii.gov/epo/home/landuse-planning-review-program/. Projects are required to adhere to all applicable standard comments. #1

We encourage you and project applicants to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: https://eha-cloud.doh.hawaii.gov #2

You may also wish to review the revised Water Quality Standards Maps that have been updated for all islands. The Water Quality Standards Maps can be found at: http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards/. #3

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

In Reply Refer To:
2015-TA-0154

Mr. George I. Atta
FAICP, Director
Department of Planning and Permitting
City and County of Hawai'i
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

FEB 17 2015

Subject: Technical Assistance for the Special Use Permit for the Kawailoa Solar Farm Project, O'ahu

Dear Mr. Atta:

The U.S. Fish and Wildlife Service received your letter on January 22, 2015, requesting our comments on the Application for a Special Use Permit for First Wind's (d.b.a. Kawailoa Solar, LLC) proposed development of the Kawailoa Solar Farm Project, a 55 megawatt (MW) solar energy facility on approximately 384.1 acres[2] on the north shore of O'ahu [TMK: (1) 6-1-005:001 (por.) and 6-1-006:001 (por.)]. The proposed solar farm would be co-located with the existing Kawailoa wind farm. By interconnecting to the same electrical switchyards and transmission lines as the existing wind farm, the proposed solar project builds on work that was done to support the wind farm and enables connection to Hawaiian Electric Company, Inc.'s electrical grid without the need for new interconnection infrastructure.

The solar farm would be comprised of a horizontal single-axis tracking, ground-mounted photovoltaic system, designed to maximize the use of the terrain, with the panels facing approximately due south. Each panel would generate power at 1,000 volts and on average, are expected to extend approximately 4 feet 6 inches to 9 feet 6 inches off the ground. Electrical equipment including combiner boxes, collector lines, inverters, weather monitoring stations, and switch gear would be installed in the vicinity of the panels, as needed to increase the electrical voltage and aggregate the generated electricity for transmittal via the collector system. The proposed Kawailoa Solar Farm would produce clean, low-cost renewable energy for the island of O'ahu.

The area was historically part of a large sugar plantation, and is comprised of agricultural fields located atop a series of tablelands interspersed with gulches formed by intermittent drainages. First Wind intends to lease the proposed site for sheep ranching. Except for the transformers,

most of the fenced area would be available to support 100-200 head of sheep on a year-round basis.

We have reviewed the information you provided and pertinent information in our files, including data compiled by the Hawai'i Biodiversity and Mapping Program as it pertains to listed species and designated critical habitat in accordance with section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*). Our data indicate that the endangered Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian gallinule (*Gallinula chloropus sandvicensis*), Hawaiian coot (*Fulica alai*), Hawaiian duck (*Anas wyvilliana*) (collectively referred to as Hawaiian waterbirds), endangered Hawaiian goose (*Branta sandvicensis*), threatened Newell's shearwater (*Puffinus auricularis newelii*), and federally endangered Hawaiian petrel (*Pterodroma sandwichensis*) could transit the area and be impacted by components of your project. The federally endangered Hawaii hoary bat (*Lasiurus cinereus semotus*) may forage and roost in the project area. There is no proposed or designated critical habitat located in the vicinity of the proposed project area. We offer the following comments to assist the Planning Commission and First Wind.

#1 The Hawaiian hoary bat roosts in both exotic and native woody vegetation and, while foraging, will leave young unattended in "nursery" trees and shrubs when they forage. If trees or shrubs suitable for bat roosting are cleared during the breeding season, there is a risk that young bats could inadvertently be harmed or killed. To minimize impacts to the endangered Hawaiian hoary bat, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed during the bat birthing and pup rearing season (June 1 through September 15). Site clearing should be timed to avoid disturbance to Hawaiian hoary bats in the project area. Additionally, Hawaiian hoary bats have been snagged on barbed wire fencing while flying. We recommend that the solar facility fence design be designed to avoid the use of barbed wire.

Please note that some photovoltaic systems on the continental United States are resulting in impacts to migratory waterfowl and shorebirds. This source of mortality has been described previously (McCrary et. al. 1986), and recent impacts are being observed at solar facilities in California, including the Desert Sunlight Solar Farm and Genesis Solar Energy Project. Birds have been inadvertently attracted to these sites due to solar panels' resemblance to water and their proximity to important migratory flyways (Donnelly-Shores 2013 and Clarke 2013). Once attracted, collisions with the solar arrays have resulted in injuries and mortalities; once grounded, birds are also subject to predation (Kagan et. al. 2014). While attraction to solar arrays has not yet been documented in Hawai'i, the State harbors a significant diversity of waterbird and shorebird species. We recommend that personnel at the solar site be educated about the potential for birds to be attracted and inadvertently harmed. If monitoring indicates that species are occurring at the photovoltaic system, or additional information about the facility's impacts to native Hawaiian species becomes available, please contact us so we may assist you in avoiding and minimizing impacts. #2

We hope this information assists the Planning Commission with their approval process. We appreciate your efforts to conserve listed species. If you have questions about our comments,

please contact Jiny Kim, Island Team Biologist; O'ahu, Kaua'i, North Western Hawaiian Islands, and American Samoa Geographic Team (phone: 808-792-9400, fax: 808-792-9581).

Sincerely,

Aaron Nadig
Island Team Manager
O'ahu, Kaua'i, North Western Hawaiian Islands,
and American Samoa

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
ACTING DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http://planning.hawaii.gov/

Ref. No. P-14652

February 17, 2015

Mr. George I. Atta, Director
Department of Planning and Permitting
City and County of Honolulu
650 S. King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Mr. Atta:

Subject: Kawailoa Solar Farm
Project No.: 2014/SUP-6
Tax Map Keys: 6-1-006:001 and 6-1-005:001
Location: Kawailoa, Oahu, Hawaii

Thank you for the opportunity to review the subject application for a Special Use Permit to establish a 50-megawatt (MW) solar photovoltaic (PV) system in Kawailoa, Oahu. The proposed project would consist of solar panels and appurtenant facilities on approximately 384.1 acres of land located within the State Agricultural District and in the City and County of Honolulu AG-1 Restricted Agriculture zone. The PV system would be comprised of a horizontal single-axis tracking, ground-mounted PV system and would connect to existing Hawaiian Electric Company, Inc. (HECO) switchyards. In combination with the solar energy facility, the Applicant intends to lease the project area for the pasturage of sheep. The project would be located on approximately 332.3 acres (87%) of Class B land and 37.9 acres (10%) of Class C land, as rated by the Land Study Bureau (LSB) productivity rating system. Under the Agricultural Lands of Importance to the State of Hawaii (ALISH) system, the soils on the property are classified as Prime. The project area also includes approximately 1.9 acres (0.5%) of existing roadway on Class A land, and would involve installation of approximately 550 linear feet of underground electrical line beneath the roadway.

The Office of Planning (OP) notes the landowner of the subject property, Kamehameha Schools, has petitioned the Land Use Commission (LUC) to designate the subject project area, as well as 8,787 acres of the adjacent land in Kawailoa, as Important Agricultural Land (IAL). The LUC is expected to decide on the petition at a hearing on February 18, 2015. OP further notes that neither the subject application for the solar energy facility nor the petition to designate IAL state whether the power generated by the solar farm will be used for on-site agricultural activities. Instead, the application for the solar energy facility states that "the proposed project involves installation of a…solar energy facility to provide…renewable power to HECO for

integration into their electrical distribution system for delivery to customers on the island of Oahu" (p. 4).

The guidelines for Special Permits are contained within Hawaii Administrative Rules (HAR) § 15-15-95 which allow certain "unusual and reasonable" uses within Agricultural and Rural Districts other than those for which the district is classified. HAR § 15-15-95 lists six (6) guidelines for determining whether a proposed use is "unusual and reasonable." The following assesses the proposed project relative to the Special Permit guidelines:

1. **The use shall not be contrary to the objectives sought to be accomplished by Chapters 205 and 205A, HRS, and the rules of the Commission.**

   Hawaii Revised Statutes (HRS) Chapter 205 seeks to protect agricultural lands and ensure their continued availability for agricultural use. It provides that the Agricultural District shall include lands with a high capacity for agricultural production, grazing, or other agricultural uses. Chapter 205 also recognizes, however, that some lands in the Agricultural District may not be suitable for the uses permitted in the Agricultural District and, therefore, other uses may be allowed with a Special Permit.

   Pursuant to HRS §§ 205-2 and 205-4.5, as amended by Act 55 and Act 52, solar energy facilities may be permitted on land with Class B or C soils. More specifically, HRS §§ 205-2 and 205-4.5 state the following:

   - HRS § 205-2(6)(A) and (B): Solar energy facilities may be permitted on land with soil classified by the LSB as overall (master) productivity rating class B, C, D, or E. Solar energy facilities placed within land rated Class B or C, however, shall not occupy more than ten percent of the acreage of the parcel, or 20 acres of land, whichever is lesser, unless a special use permit is granted.

     Under this statute, the proposed project requires a Special Permit as it would occupy approximately 332.2 acres (greater than 20 acres) of Class B soils and 37.9 acres of Class C soils.

   - HRS § 205-4.5(a)(3): Within the Agricultural District, the raising of livestock, including poultry, bees, fish, or other animal or aquatic life that are propagated for economic or personal use are permitted.

     Under this statute, the proposed pasturage of sheep, in combination with the solar energy facility, is an allowable use.

- HRS § 205-4.5(a)(2l)(A),(B) and (C): Solar energy facilities on land rated Class B or C for which a special use permit is granted are permitted provided that:

  (A) The area occupied by the solar energy facilities is also made available for compatible agricultural activities at a lease rate that is at least fifty per cent below the fair market rent for comparable properties;
  (B) Proof of financial security to decommission the facility is provided to the satisfaction of the appropriate county planning commission prior to date of commencement of commercial generation; and
  (C) Solar energy facilities shall be decommissioned at the owner's expense and according to certain requirements.

  The Applicant represents that each of the above criteria would be met upon approval of the Special Permit or prior to beginning commercial operation.

Regarding the objectives of HRS Chapter 205A, the application sufficiently addresses the project's compliance with applicable Coastal Zone Management (CZM) program objectives and policies and it appears that the proposed use is not contrary to the objectives of the program.

Additionally, an archaeological inventory survey (AIS) has been provided. The results of the survey indicate that there are two historic sites that could potentially be affected by the project. The application states that a draft report has been submitted to the State Historic Preservation Division (SHPD) for their review and concurrence. It further states that **no ground-altering activities will occur prior to obtaining approval of the AIS from SHPD**.

2. **The desired use would not adversely affect surrounding property.**

According to the application, the proposed project is not anticipated to directly or indirectly affect adjacent uses. With the exception of the existing Kawailoa wind farm, the areas immediately surrounding the project site are undeveloped, but they support a variety of uses, including agriculture, conservation, and military operations. The existing 69-megawatt (MW) Kawailoa wind farm consists of 30 2.3 MW wind turbines, some of which are located within the vicinity of the proposed solar farm. (Refer to Applicant's Figure 4).

Construction of the solar facilities would result in short-term impacts that are temporary, intermittent, and localized. Long-term impacts related to operations and maintenance, including glare, noise, ambient temperature, and electric and magnetic fields would be minimal.

As noted above, the landowner of the subject property has petitioned the LUC to designate the subject project area, as well as 8,787 acres of the surrounding property, as IAL. Pursuant to HRS § 205-42, in order to achieve the objectives for the identification of important agricultural lands, the State shall:

(1) Promote agricultural development and land use planning that delineates blocks of productive agricultural land and areas of agricultural activity for protection from the encroachment of nonagricultural uses; and
(2) Establish incentives that promote:
    (A) Agricultural viability;
    (B) Sustained growth of the agriculture industry; and
    (C) The long-term agricultural use and protection of these productive agricultural lands.

OP finds that the existing wind turbines and the proposed solar energy facility, alone, do not further the State's objective for the identification of IAL because they are non-agricultural activities that do not promote agricultural development, nor do they promote the incentives listed above. OP notes the project area would also be leased for the pasturage of sheep, which OP does recognize as a viable agricultural activity if implemented appropriately.

3. **The use would not unreasonably burden public agencies to provide streets, sewers, water, drainage, schools, fire, and police resources.**

According to the application, the proposed project would not require infrastructure support from public agencies due to the following:

- Access to the site is provided by a private agricultural road (Ashley Road), which extends from Kamehameha Highway through the project area, and is maintained as part of the existing wind farm. There is no public access to the site.
- No permanent wastewater facilities would be required.
- Small amounts of water would be required for occasional cleaning of the solar panels and to support co-located ranching operations. Water would be available either from rainwater catchment equipment, onsite irrigation ponds, or transported in via truck. No hook-up to the municipal water system is planned.
- Drainage across the site currently exists in the form of surface runoff based on the natural topography; the proposed project would not significantly alter the existing drainage patterns.
- It would be unlikely to use fire or police protection services.

4. **Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established.**

   OP recognizes the State interest in reducing our islands' dependency on fossil fuels and increasing efficiency measures, with a goal to generate 40 percent clean energy by 2030. OP also recognizes the State interest in conserving the State's agricultural land resource base and assuring the long-term availability of agricultural lands for agricultural use. OP acknowledges the proposed project seeks to balance these interests by providing both renewable energy generation and agricultural production at below-market value rent.

5. **The land upon which the proposed use is sought is unsuited for the uses permitted within the district.**

   The land upon which the proposed use is sought is suited for the uses permitted within the district. As noted above, the project would be located on approximately 332.3 acres (87%) of Class B land, as rated by the LSB productivity rating system. The project area also includes approximately 1.9 acres (0.5%) of existing roadway on Class A land. Under the ALISH system, the soils on the subject property are classified as Prime.

Having reviewed the application and applied the available information to the applicable Special Permit guidelines, OP supports the intent of the proposed project to provide renewable energy for the island of Oahu and offers the following comments:

#1

- Concerns will remain with regard to the statewide challenge in seeking a balance of maintaining the availability of high quality agricultural lands while promoting renewable energy sources such as solar facilities on lands within the Agricultural District.

#2

- OP also has concerns that while "agri-voltaic" projects such as this one are technically feasible, the agricultural aspect of these projects is sometimes not implemented as represented by the applicant, i.e. the number of sheep or other grazing animals co-located within the solar facility is negligible. The proposed project would be located on soils rated ALISH Prime; the proposed solar facility would, therefore, preclude productive agricultural land from being used for agricultural purposes and contributing to the State's goal of assuring the long-term availability of agricultural lands for agricultural use if the pasturage of sheep does not occur.

#3

- Similarly, the subject property is under consideration by the LUC to be designated as IAL. OP notes the project area would be leased for the pasturage of sheep, which OP does recognize as a viable agricultural activity if implemented appropriately. OP also notes the proposed project is expected to have an operational life of approximately 25-30 years, following which the lands may restored to conditions comparable to their existing conditions, such that future agricultural use may occur.

#4

- OP supports the State Department of Agriculture's (DOA) comment from a letter dated January 29, 2015 to the Office of Planning regarding Kamehameha Schools' petition to designate IAL that "the DOA would support the IAL designation for the area proposed for the solar energy facility on the Kawailoa lands if the Petitioner commits to using a substantial portion of the energy generated by the solar energy facility directly for agricultural purposes, and/or commits to using a substantial portion of the income derived from the selling of electricity to the utility for agricultural activities within the petitioned area" (p. 7). (Refer to the attached Exhibit A).

#5

- Should the Special Permit be granted, OP recommends that the requirements of HRS § 205-4.5(a)(21)(A), (B), and (C), relating to: 1) compatible agricultural activities; 2) proof of financial security for decommissioning; and 3) decommissioning requirements, be included as specific conditions of approval.

If you have any questions, please contact Katie Mineo of our Land Use Division at (808) 587-2883.

Sincerely,

Leo R. Asuncion
Acting Director

Attachment

c: Land Use Commission

Exhibit A

DAVID Y. IGE
Governor

SHAN S. TSUTSUI
Lt. Governor

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

PHYLLIS SHIMABUKURO-GEISER
Deputy to the Chairperson

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

January 29, 2015

Mr. Daniel Orodenker
Executive Officer
Land Use Commission
235 South Beretania Street, Suite 406
Honolulu, Hawaii 96813

Dear Mr. Orodenker:

Subject: Docket No. DR14-52
Petition for Declaratory Order to Designate Important Agricultural Lands in Kawailoa and Punaluu, Oahu
Tax Map Keys: Kawailoa (9,171.161 acres): 6-1-05: 1(Por.); 6-1-06: 1(Por.); 6-1-07: 1; 6-2-09: 1(Por.); 6-2-10: 1(Por.); 6-2-11: 1(Por.); 6-2-11: 21. Punaluu (420.887 acres): 5-3-01: 41 (Por.); 5-3-03: 1 (Por.); 5-3-04: 5; 5-3-04: 7; 5-3-04- 13; 5-3-04: 18(Por.); 5-3-04: 19; 5-3-07: 23(Por.)
Total Area: 9,592.048 acres

Thank you for the opportunity to comment on this important petition. The Department of Agriculture (DOA) expresses its appreciation to the petitioner for their interest in and effort to identify potential Important Agricultural Lands (IAL). We note that the petitioner is not seeking a reclassification of land pursuant to Section 205-45(b), Hawaii Revised Statutes (HRS) in conjunction with this petition to designate IAL. The petitioner is also voluntarily waiving all rights to claim any credits due pursuant to Section 205-45(h), HRS (Petition, page 23). This is the third IAL petition involving agricultural lands on the island of Oahu and the ninth IAL petition statewide.

In the following, we provide responses to the petitioner's statements as to how the petitioned area meets the eight criteria for identifying IAL (Section 205-44, HRS).

Island Fresh

Land Currently Used for Agricultural Production

Past agricultural production
According to the Agricultural Land Assessment (ALA) found in Appendix G of the petition, the lands of Kawailoa were used for taro and other various agricultural crops in the 1800's. (ALA, p. 2). Starting in the mid-1800's, sugar cultivation was the primary agricultural crop that was being cultivated by Castle and Cooke and later managed by Waialua Sugar Company. Upon further review by Department staff, sugarcane appears to have been planted throughout Kawailoa with the exception of the middle section where pineapple also appeared to be cultivated.

Punaluu was also used for taro and other various agricultural crops in the 1800's. (ALA, p. 3). Sugar cultivation was the primary agricultural crop in early 1900's to 1970. Upon further review by Department staff, sugarcane appears to have been planted throughout Punaluu. Taro and pineapple were also produced in smaller quantities. (ALA, p. 3).

Current Agricultural Production
According to the petition, only around 11% of the land in Kawailoa is currently in agricultural production. Approximately 722 acres (7.8%) of land is utilized for diversified agriculture and include seed corn, banana, taro, papaya, mango, and hydroponic lettuce. (ALA, p. 4). The location of current diversified agricultural production appears to be on the lower half of Kawailoa (ALA, Figure 1A). Other agricultural uses include approximately 60-80 head of cattle on 297 acres (3%), and 0.7 acres of koa windbreak (Petition, Exhibit H). The livestock use appears to be in the middle of the Kawailoa area abutting Anahulu Valley (ALA, Figure 1A). All current agricultural uses appear to be on lands that are near existing irrigation infrastructure (ALA, Figure 6A). Approximately 30 wind turbines for electrical generation occupy a portion of the property above 600 feet elevation (Petition, Exhibit H).

According to the petition, around 36% of the land in Punaluu is currently in agricultural production (ALA, p. 5). Approximately 120 acres (29%) of land is utilized for diversified agriculture and include banana, papaya, mango, cucumber, mixed vegetable, taro, and cacao. There also exists approximately 22 acres (5%) of livestock, 11 acres (3%) of aquaculture, and several nurseries. Additional research by Department staff determined that the location of the existing agricultural uses indicated in ALA Figure 1B is generally consistent with the location of past sugarcane cultivation on the land.

Future agricultural production
For Kawailoa, diversified agriculture will remain the primary focus. (ALA, p. 4). The mauka unirrigated lands are designated for multiple uses consisting of livestock, orchard, forestry and renewable energy (Petition, p. 9). These planned future uses appear to be in consonance with the Moku O Waialua North Shore Plan (Exhibit C, p. 2).

Petitioner plans to increase renewable energy development by increasing the amount of wind turbines on the land, and is considering a 50MW facility on 500 acres of land which includes sheep grazing. (ALA, p. 4). The DOA notes that according to the Moku O Waialua North Shore Plan, alternative energy development is designated to be located in the eastern region of Kawailoa (Exhibit C, p. 2). Petitioner also plans to increase the availability of lands to farmers and provide long term leases (ALA, p. 4).

For Punaluu, diversified agriculture will remain the primary focus (see ALA, Figure 2B). The petitioner's "Punaluu Ahupuaa Plan" (Petition, Exhibit D) states that 175 acres of agricultural use will be added to what we presume to be the existing 133 acres of diversified agriculture, livestock, and aquaculture. This will bring the total area in agriculture to 308 acres, or 73 percent of the petitioned area. Petitioner also plans renovate the agricultural water system in the area, develop an overall agriculture production and land conservation plan, establish longer term leases with tenants, and construct a central agricultural baseyard facility (ALA, p. 5). These planned future uses appear to be in consonance with the Punaluu Ahupuaa Plan (Petition, Exhibit D).

Land with soil qualities and growing conditions that support agricultural production of food, fiber, or fuel- and energy-producing crops

According to the Land Study Bureau's Detailed Land Classification (LSB) for the Island of Oahu, 3,034.663 acres (33.3%) in Kawailoa is rated "A", 1,632.211 acres (17.8%) is rated "B", 1,134.423 acres (12.4%) is rated "C", 241.536 acres (2.6%) is rated "D", and 3,054.79 acres (33.3%) is rated "E" (see ALA, Figure 3A). Additional research by Department staff indicates that the majority of "C", "D", and "E" rated lands in Kawailoa would not improve in rating if irrigation was available. Soil rockiness and/or unfavorable slope severely limits agricultural use of these lands.

According to the LSB, 39.44 acres (9.4%) in Punaluu is rated "B", 146.313 acres (34.7%) is rated "C", 51.859 acres (12.3%) is rated "D", and 183.257 acres (43.5%) is rated "E" (see ALA, Figure 3B). Additional research by Department staff indicates that the majority of "D" and "E" rated lands in Punaluu would not improve if irrigation was available. The majority of "C" rated lands in Punaluu is already irrigated.

Lands identified under agricultural productivity ratings systems, such as the Agricultural Lands of Importance to the State of Hawaii (ALISH) system adopted by the Board of Agriculture on January 28, 1977

According to the Agricultural Lands of Importance to the State of Hawaii (ALISH) classification system, the Kawailoa site is comprised of 5,852.319 acres (63.8%) in "Prime", 198.572 acres (2.2%) is in "Other Important", and 3,120.27 acres (34%) is not classified according to ALISH (see ALA, Figure 5A). The lands in Kawailoa that are not in ALISH are generally consistent with the lands designated as "E" by the LSB.

For the Punaluu site, 25.243 acres (6%) is in "Prime", 262.547 acres (62.4%) is in "Other Important", and 133.097 (31.6%) is not classified according to ALISH (see ALA, Figure 5B). Some of lands in Punaluu that are not in ALISH are not consistent with the lands designated as "E" by the LSB.

Land types associated with traditional native Hawaiian agricultural uses, such as taro cultivation, or unique agricultural crops and uses, such as coffee, vineyards, aquaculture, and energy production

The Kawailoa and Punaluu areas have been historically associated with traditional native Hawaiian agricultural uses. In Kawailoa, archaeological surveys indicate that traditional native Hawaiian agricultural uses were limited to the lower lands and gulches, while the upper table lands did not exhibit any traditional sites (Petition, p. 14). Historic native Hawaiian uses included taro pond fields, water courses/ditches, and dry planting fields for cultivation of taro, awa, hala, ipu, kukui, koa, banana, sugarcane, sweet potato, and wauke (Petition, p. 14).

In Punaluu, archaeological surveys and cultural impact assessments indicated that traditional native Hawaiian uses were prevalent in (Petition, p. 15). Historic native Hawaiian uses include taro pond fields, water courses/ditches, and dry planting fields for cultivation of taro, awa, hala, ipu, kukui, koa, banana, noni, olona, sweet potato, and wauke (Petition, p. 15). Approximately 11 acres (Petition, Exhibit I) is currently being used to cultivate taro, and approximately 11 acres is in aquaculture (ALA, p. 5).

Lands with sufficient quantities of water to support viable agricultural production

Along with good quality soil, a reliable and sufficient supply of irrigation water is critical for maximal agricultural production. Irrigation water should be available in a quantity that meets the maximum daily demand over a sustained period of time which usually occurs during the summer months. Information on the location and total acreage of irrigated lands, the existing and estimated future irrigation water demands, and the available amount of water for irrigation per day is necessary to determine whether or not lands have sufficient quantities of water to support viable agricultural production.

The existing irrigation system services all of the southern portion (Opae'ula) of the Kawailoa area, but only services approximately 2/5ths of the makai half of the northern portion (Kawailoa). The irrigation system in Kawailoa connects Waimea River, Ka'alaea Stream, Kawailoa Stream, Laniakea Stream, and Anahulu River with ditches, pipelines and reservoirs (see ALA, Figure 6A). Petitioner plans to maintain and fix aging irrigation infrastructure and has recently expended over $13 million to improve agricultural water resources for current and planned future irrigation needs (ALA, p. 7). Kawailoa receives between 35 to 80 inches of rain per year (see ALA, Figure 6A).

The petition states that the proposed IAL lands in Punaluu are primarily irrigated by the Punaluu Stream and ditches that are connected to the stream. Petitioner has upgraded the existing water system by piping over 5,000 linear feet of the former Punaluu irrigation ditch (ALA, p. 8). Petitioner states that from 2009 to 2014, approximately $1.5 million has been invested in upgrading the irrigation system in Punaluu, and plans to invest another $5 million for stream restoration work (ALA, p. 8). Punaluu receives between 65 to 120 inches of rain per year.

The DOA notes that for both the Kawailoa and Punaluu areas, the petitioner may need to petition the Commission on Water Resource Management to amend the interim instream flow standard for any new or expanded diversions of surface water.

Land whose designation as Important Agricultural Lands is consistent with general, development, and community plans of the County

The petition area is fully within the State Agricultural District. The Kawailoa area is zoned as AG-1 (Restricted Agriculture) by the City and County of Honolulu, and the Punaluu area is zoned as AG-2 (General Agriculture). The Kawailoa area is primarily designated as Agricultural in the North Shore Sustainable Communities Plan, except for the streams and fringes of the streams which are designated as Preservation. The Punaluu area is largely designated as "Agricultural" in the Koolau Loa Sustainable Communities Plan, except for the streams and fringes of streams which is in Preservation. The Punaluu lands appears to abut the Urban District on the makai edges of the petition area.

Land that contributes to maintaining a critical land mass important to agricultural operating productivity

The Kawailoa/Opaeula area (9,171.161 acres) has a history of sugarcane and pineapple cultivation on the lands that were level enough to support agricultural activity. The lower two-fifths of Kawailoa contains nearly all the "A" and "B" rated land and is relatively unbroken by gulches. Similarly, the makai two-thirds of Opaeula possesses all the "A" and "B" rated lands and is relatively unbroken by gulches. The upper reaches of both Kawailoa and Opaeula appear to have more land area in gulches which makes it difficult for agricultural use in both areas above the ditch system. Further, the Kawailoa area is entirely separated from the Opaeula area by Opaeula Gulch. We note what appears to be a large number of kuleana properties within the Gulch. With the exception of Drum Road on the mauka edge of both areas, there are no roadways connecting Kawailoa and Opaeula.

The petitioner's "North Shore Plan – Paalaa to Kapaeloa" states that the upper reaches of Kawailoa and Opaeula are to be used for "Establish alternative energy uses" such as solar energy, wind, and hydro-power (Petition, Exhibit C), and leaves the lower lands for diversified agriculture. There are 30 wind turbine operating in upper Kawailoa, on

plateaus between the gulches. Given the agricultural history and the land use plan for Kawailoa/Opaeula, the "critical land mass" criterion would clearly apply to the lower elevations where the petitioner identifies "Diversified Agriculture" as the primary use of the land (Petition, Exhibit C).

The Punaluu area (420.887 acres) appears to have been the eastern terminus of the former Kahuku Plantation Company. Unlike the Kawailoa/Opaeula site, Punaluu has a substantial acreage classified as Preservation along the branches of the Punaluu Stream, according to the Koolauloa Sustainable Communities Plan (Petition, Exhibit G, Figure 7B). The property also abuts the Urban District along the makai edge (Petition, Exhibit G, Figure 8B). The current agricultural operations (Petition, Exhibit G, Figure 1B) is largely verified by recent satellite imagery. There appears to be agricultural activity in lands adjacent and to the northwest of the Punaluu site. There is a relatively steep area along the southern boundary that forms an arc.

The petitioner's "Punaluu Ahupuaa Plan" (Petition, Exhibit D) states that 175 acres of agricultural use will be added to what we presume to be the existing 133 acres of diversified agriculture, livestock, and aquaculture. This will bring the total area in agriculture to 308 acres, or 73 percent of the petitioned area. The Punaluu stream is fundamental to the agricultural activities in the area and is appropriate to be included in the petition. Given the agricultural history and the agricultural land use plan for the Punaluu site, the "critical land mass" criterion would to most of the petitioned area.

Land with or near support infrastructure conducive to agricultural productivity, such as transportation to markets, water, or power

Kawailoa is near Kamehameha Highway and Haleiwa Village. In the future, petitioner plans to increase the residential and commercial areas in Haleiwa Village. (Petition, Exhibit C). The service area for the existing irrigation system in the northern Kawailoa area (Kawailoa) appears to be limited to approximately 2/5ths of the makai half of the proposed designation.

CONCLUSION

The DOA supports the majority of the petitioner's request to have 9,592 acres of agricultural land in the Kawailoa/Opaeula and Punaluu areas designated as Important Agricultural Land.

In the Kawailoa/Opaeula site, the petitioner's plan for the eastern part of the property is to undertake alternative energy uses such as wind, hydro, and solar energy. Specifically, the petitioner states that 500 acres will be set aside for a 50MW solar energy facility with compatible sheep grazing. This area is also the most poorly suited to agricultural use because of the numerous gulches, poorer soil quality, and lack of

supplemental irrigation water supply. Further, we do not recall any other request for IAL designation that included acreage for a utility-scale solar energy facility.

Notwithstanding our concerns, if the petitioner confirms and commits to using a substantial portion of the energy generated by the proposed solar energy facility directly for agricultural purposes, and/or confirms and commits to using a substantial portion of the income derived from the selling of electricity to the utility for agricultural activities within the petitioned area, the Department would support IAL designation for the area proposed for the solar energy facility as described in the petition (Exhibit C, "Plan Map and Projects").

Also for the Kawailoa/Opaeula site, the petitioner should provide the Commission with information showing that the irrigation water system and improvements will provide a quantity of irrigation water sufficient to maintain plant and animal health during dry periods.

In the Punaluu site, there appears to be abundant irrigation water supply, fairly productive soils, and 120 acres of existing diversified agricultural activities. We note from Exhibit I of the petition that there is existing agricultural activity on some of the LSB "E" rated land that is also not classified by the Agricultural Lands of Importance to the State of Hawaii. There appears to be agricultural land to the north of the petitioned area that are in crop production. The Department believes that the Punaluu site, in its entirety, should be designated as IAL.

Sincerely,

Scott E. Enright, Chairperson
Board of Agriculture

c: Office of Planning

DAVID Y. IGE
Governor

SHAN S. TSUTSUI
Lt. Governor

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

PHYLLIS SHIMABUKURO-GEISER
Deputy to the Chairperson

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

February 19, 2015

Mr. George I. Atta, FAICP
Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street 7th Floor
Honolulu, Hawaii 96813

Dear Mr. Atta:

Subject: Application for Special Use Permit (2014/SUP-6)
First Wind (d.b.a. Kawailoa Solar, LLC)
Solar Energy Facility, Kawailoa, North Shore, Oahu
Tax Map Key: 6-1-005:001(por.) and 6-1-006:001(por.)
Total Area: 384.1 acres

The Department of Agriculture (DOA) has reviewed the subject application and offers the following comments and a recommendation.

Background

A solar energy facility is proposed for a 384.1-acre site that is entirely within the State Agricultural District and outside the City's Urban Community Boundary (North Shore Sustainable Communities Plan, May 2011, Land Use Map). The project site has Land Study Bureau (LSB) Overall Productivity Ratings of "B" (332.3 acres), "C" (37.9 acres), and "E" (12 acres) (Detailed Land Classification – Island of Oahu, Land Study Bureau, December 1972). Department staff did a cursory review of the project site using the original LSB maps (22, 23). They determined that the Overall Productivity Ratings of B21 and B121 both would have improved to "A" with very good productivity potential for most agricultural uses if irrigation was available at the time of the study. The potential productivity of the "C" and "D" rated lands further mauka do not improve with irrigation.

For the "B" and "C" rated lands, the proposed facility in combination with a compatible agricultural activity may be permitted by special permit, pursuant to Act 55, Session Laws of Hawaii (SLH) 2014, now codified as Section 205-4.5(a)(21), HRS. The compatible agricultural activity contemplated is raising of sheep. The project will also include 550 linear feet of underground electrical lines on 1.9 acres of "A" rated soils of

which is entirely comprised of an existing roadway. At the end of the solar energy facility's operational life, the facility may be re-powered with new equipment, subject to permitting, or decommissioned and the land area returned to its pre-solar energy facility state (Application, page 5).

Recommendation
The DOA strongly supports existing farming operations and those seeking to start new farming enterprises. The DOA also supports solar energy operations in combination with compatible local food production on "B" and "C" rated agricultural land as provided for in Act 55, SLH 2014. "B" rated agricultural lands are a scarce and valuable resource with good capacity to contribute substantially to food self-sufficiency. Notwithstanding the law, the Department encourages proponents of utility-scale solar energy facilities to consider sites on "D" and "E" rated agricultural land that does not have acreage limitations or special use permit requirements.

The DOA notes that the landowner of the project site, Kamehameha Schools (KS), has just received approval by the Land Use Commission (LUC) to have the entire project site and surrounding agricultural land designated as Important Agricultural Lands (IAL) (Docket No. DR14-52). Representatives of KS indicated that they will use the revenue generated from the proposed solar farm facility to make improvements in support of agriculture development at Kawailoa, which is in accordance with their agricultural plan for the area. We also understand that the photovoltaic modules will be installed four to seven feet off the ground and be spaced apart to allow sunlight through.

This is the first Special Use Permit (SUP) application on the 100,000+ acres of IAL designated agricultural lands in the State. State law provides for a SUP to allow solar energy facilities in excess of what is allowed in Section 205-4.5(a)(20) (10 percent of the acreage of the parcel or 20 acres whichever is less). The permissible uses on IAL in State law are the same as those currently allowed on non-IAL agricultural land. Nevertheless, utility-scale solar energy facilities on agricultural land designated as IAL appears inconsistent with the IAL objective of maintaining "...a strategic agricultural land resource base that can support a diversity of agricultural activities and opportunities that expand agricultural income and job opportunities and increase agricultural self-sufficiency for current and future generations." (Section 205-42(b), HRS) Additionally, IAL designation indicates that the project site is well suited for intensive agricultural production, which appears to be contrary to one of the LUC's guidelines in determining an "unusual and reasonable use" – that the land upon which the proposed use is sought is unsuited for the uses permitted within the (Agricultural) district.

#1 Therefore, the DOA believes this large-scale project with lands that have been designated as IAL should comply fully with the purpose and intent of Act 55, SLH 2014, Section 1 which is to "...enable the complementary uses of utility scale solar energy generation and local food production..." (emphasis added) on "B" and "C" rated agricultural land. We recommend the City impose a condition to the effect that the

#1 applicant and its successors and/or assigns shall have established a sheep pasture operation or other agricultural enterprise on the property in compliance with Act 55, 2014 Session Laws of Hawaii for the duration of the operation of the solar energy generation facility.

Demand for sheep and lambs

The DOA reviewed the statewide sheep and lamb statistics as found in the 2012 Census of Agriculture. From 2007 to 2012, there were decreases in the total number of farms, the total number of sheep and lambs, the total number of sheep and lambs sold, and the number of small (1-24 head) sheep farms. The number of farms selling sheep and lambs was stable.

The 2007 to 2012 statistics for sheep and lamb farms on Oahu show that the island represents a very small fraction of the statewide numbers. However, there have been increases in nearly every category. The total number of sheep and lambs sold is an indication of demand, and sales increased from 13 in 2007 to 75 in 2012. However, this represents less than 2 percent of the total statewide sales of sheep and lamb. This small number of sales is surprising as 67 percent of Hawaii's de facto population (residents and visitors) in 2013 are on Oahu.

We also note there have been no sheep farms on Oahu with more than 100 sheep since 2007. There were 5 farms with a total of 266 sheep in 2012, or an average of 53 sheep per farm.

Proposed sheep operation

The lease rent to be charged to a local ranching business will be about $10.00 per acre/year, or about 50 percent below the fair market rent for similar agricultural properties (Application, Attachment 5). The lease of 5 years or longer would commence after the solar farm is operational and will allow the tenant the use of the property's perimeter fencing, roadways, and other infrastructure (Application, pages 7-8). The applicant will work with the rancher, as needed, to facilitate watering systems, electrified fencing, pens, and loading facilities (Application, page 8). #2 We believe the applicant's assistance in establishing the aforementioned infrastructure is very important for the sheep ranching operation to succeed.

The project site is said to possess adequate forage to support 100-200 head of sheep (Application, page 7). If the envisioned sheep pasture operation takes full advantage of the carrying capacity of the property, this would result in a 50 percent increase over Oahu's 2012 sheep population (2012 Census of Agriculture, Sheep and Lambs, Oahu). We note that the sheep operation analysis and recommendations are identical to that made for the Waiawa solar energy facility (2014/SUP-3). The subject Kawailoa project and the Waiawa proposal together would double the sheep population on Oahu.

Kualoa Ranch has signed a letter of intent with the applicant to pasture sheep on the property (Application, Attachment 5). Kualoa Ranch has a 4,000 acre ranch on windward Oahu and manages around 500 head of cattle. The Ranch does not manage any sheep; however, Kualoa Ranch has stated that their management team has experience with sheep (Phone call with Mr. David Morgan on February 13, 2015).

The key to selling local lamb meat is quality and supply (Application, Attachment 5, page 3). It appears that a large sheep pasture operation would be more likely to provide a consistent quality and supply that retailers and restaurants prefer. We agree with the summary in Attachment 5 (page 9-10) that "[c]areful planning in advance, establishing goals for the entire enterprise as well as those that will be keeping the sheep, a clear understanding what inputs are available, the costs of the infrastructure and inputs in the expected outcomes are all necessary for this enterprise to succeed."

Other agricultural operations
If the sheep operation is not successful, other agricultural activities compatible with a solar farm will be considered such as beekeeping, aquaponics, aquaculture, or other livestock (Application, page 8). With the exception of beekeeping, the other agricultural options will require a reliable and sufficient supply of clean water.

Water supply
The water supply for the project site will be by rainwater catchment, onsite irrigation ponds, or delivered by water truck (Application, page 8). Water delivery may become costly during dry periods. Adult sheep require up to 4 gallons of fresh water per day, so a 200-head sheep operation may require up to 800 gallons per day and distributed throughout the grazing area. Larger livestock may require more water. Aquaponic systems appear to require the least amount of water for replenishment. An aquaculture pond requires a million gallons per acre to fill and another million gallons per year to replace water lost due to evaporation and seepage (Model Aquaculture Recirculation System, Engineering and Operations Manual; National Council for Agricultural Education; Alexandria, Virginia; 1995, page 5).

Thank you for the opportunity to provide our input. Should you have any questions, please contact Earl Yamamoto at 973-9466 or email at earl.j.yamamoto@hawaii.gov.

Sincerely,

Scott E. Enright
Chairperson, Board of Agriculture

c: Office of Planning

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

February 25, 2015

Russell Y. Tsujii, Land Administer
Land Division
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

LOG NO: 2015.00284
DOC NO: 1502GC09
Archaeology

Mr. George I. Atta, Director
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, HI 96813

Dear Mr. Sirs:

SUBJECT: **Chapter 6E-42 Historic Preservation Review**
Application for a Special Use Permit-Solar Energy Facility (2014/SUP-6)
Kawailoa Ahupua'a, Waialua District, Island of O'ahu
TMK: (1) 6-1-005:001 portion, (1) 6-1-006:001 portion

Thank you for the opportunity to review and comment on the subject application for a special use permit to develop a 50 MW solar farm on approximately 304 acres of 3,492 acres owned by Kamehameha Schools. The proposed solar farm will be co-located with the existing Kawailoa wind farm. We received this application on January 26, 2015, along with a link to the Department of Land and Natural Resources, Land Division website for the permit submittal documentation. The applicant, First Wind, indicates the proposed solar farm will include a series of ground-mounted single axis photovoltaic panels, various electrical distribution systems, two on-site *Mauka* and *Makai* substations, connectors to existing switchyards, and a series of interior service roads.

A review of our records indicate that an archaeological inventory survey (AIS) was conducted adjacent to and within portions of the proposed solar farm project area (Rechtman et al. 2012). The AIS report identifies seventeen archaeological sites dating to the historic period within the project area. The sites were likely associated with WWII military communication and fire control networks (Sites 50-80-14-7155 through 7158), and plantation-era activities (Sites 50-80-14-7157 and 7159 through 7171). The SHPD Architecture Branch determined that reasonable and adequate information was collected during the AIS to warrant a determination of no further work; however project proponents recommended and conducted archaeological monitoring (Log No. 2012.0600, Doc. No. 1203RS17, 1112NN05). An archaeological monitoring report was submitted and accepted by SHPD on June 24, 2013 (Log No. 2012.3352, Doc. No. 1305NN19). The archaeological monitoring work resulted in the identification and documentation of an historic refuse pit dating to the mid-twentieth century. No other historic properties were encountered, and no further work was recommended (Log No. 2012.3352, Doc. No. 1305NN19).

#1 Further review of our records indicate that an AIS was conducted in support of the present project. The report was submitted and accepted by SHPD on February 2, 2015 (Log No. 2014.05215, Doc. No. 1502SL02). The AIS further documented previously-recorded Site 50-80-04-7171, and newly recorded Site 50-80-04-7716, both of which are within the *makai* Collector Line Corridor. These two sites were assessed as significant pursuant to Hawaii

Administrative Rules (HAR) §13-284-6 under Criterion "d" (has yielded, or is likely to yield, information important for research on prehistory or history). The project effect recommendation was "no historic properties affected" as both historic properties were sufficiently documented. However, mitigation in the form of archaeological monitoring was recommended to address possible inadvertent finds.

#1 Based on the above information, we concur with an archaeological monitoring program during the construction phases of this project to ensure proper documentation and treatment of any inadvertent finds, including possible additional features related to Sites 7171 and 7716. We request on-site archaeological monitoring of all ground disturbing activities associated with this project and **request that an archaeological monitoring plan** be submitted to our office for review and acceptance pursuant to HAR §13-279-4 prior to any ground disturbing activities.

Please contact me at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov if you have any questions regarding this letter.

Aloha,

Susan A. Lebo

Susan A. Lebo, PhD
Oahu Lead Archaeologist
Acting Archaeological Branch Chief

cc: Steve Molmen, DLNR Land Division (Steve.L.Molmen@hawaii.gov)
Raymond Young, City and County of Honolulu, DPP (rcsyoung@honolulu.gov)

DAVID Y. IGE
GOVERNOR OF HAWAII

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LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 22, 2015

MEMORANDUM

TO: **DLNR Agencies:**
X Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
X Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu
LOCATION: Kawailoa, North Shore, Oahu; Tax Map Key: 6-1-005: Portion of 001 and 6-1-006: Portion of 001
APPLICANT: Kawailoa Solar, LLC by its consultant CH2M Hill

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: https://sp01.ld.dlnr.hawaii.gov/LD
2. Login: Username: LD\Visitor Password: 0pa$$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or Jonathan.C.Real@hawaii.gov)

Please submit any comments by February 12, 2015. 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 Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: _____
Print Name: Timmy Chee
Date: 1/27/2015

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

KIRK CALDWELL
MAYOR

LORI M.K. KAHIKINA, P.E.
DIRECTOR

TIMOTHY A. HOUGHTON
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO
PRO 15-010

January 30, 2015

MEMORANDUM

TO: George I. Atta, FAICP, LEED AP, CEI, Director
Department of Planning and Permitting

Ross Tanimoto

FROM: Lori M.K. Kahikina, P.E., Director

SUBJECT: Application for a Special Use Permit
Solar Energy Facility, Kawailoa, North Shore, Oahu
Tax Map Key: 6-1-005: Portion of 001 and 6-1-006: Portion of 001

We have reviewed the subject document as transmitted to us by your memo dated January 16, 2015, reference number 2014/SUP-6 (RY). Based on our review, we do not foresee any significant impacts to our facilities or services from this project.

Should you have any questions, please call Marisol Olaes, Civil Engineer at 768-3467.

File No.: 2014/SUP-6

DEPARTMENT OF PLANNING AND PERMITTING
SUMMARY DESCRIPTION

APPLICANT	:	Kawailoa Solar, LLC
LANDOWNER	:	B. P. Bishop Trust Estate
REQUEST	:	A Special Use Permit to establish a solar energy facility on lands classified by the Land Study Bureau as Class A, B, and C, pursuant to Sections 205-2 and 205-4.5, Hawaii Revised Statutes
LOCATION	:	In the vicinity of Ashley Road, approximately 6,000 feet south of Waimea Beach Park and 4 miles northeast of Haleiwa Town, at Kawailoa, North Shore, Oahu, Hawaii
TAX MAP KEY	:	6-1-005: Portion of 1 and 6-1-006: Portion of 1
LAND AREA	:	Approximately 384.1 Acres
NORTH SHORE SUSTAINABLE COMMUNITIES PLAN LAND USE MAP	:	Agriculture
STATE LAND USE DISTRICT	:	Agricultural
EXISTING USE	:	Open space
SURROUNDING LAND USE	:	Wind turbine renewable energy generation system, open space, diversified agriculture, military training and preservation lands

RECEIVED
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DEPT OF PLANNING AND PERMITTING
CITY & COUNTY OF HONOLULU

DEPARTMENT:

Honolulu Police Department

COMMENTS:

Thank you for the opportunity to review and comment on the subject application.

This project should have no significant impact on the services or operations of the Honolulu Police Department.

If there are any questions, please call Major Kerry Inouye of District 2 (Wahiawa) at 723-8703.

2-2-15
By Date
MARK TSUYEMURA, Management Analyst
Office of the Chief

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHAEL D. FORMBY
DIRECTOR

MARK N. GARRITY, AICP
DEPUTY DIRECTOR

TP1/15-595784R

February 13, 2015

MEMORANDUM

TO: George I. Atta, FAICP, Director
Department of Planning and Permitting

FROM: Michael D. Formby, Director
Department of Transportation Services (DTS)

SUBJECT: Application for a Special Use Permit, Solar Energy Facility, Kawailoa, North Shore, Oahu, Project Number 2014/SUP-6, TMK: 6-1-005: Portion of 001 and 6-1-006: Portion of 001

This responds to your correspondence of January 16, 2015, regarding the subject project. Based on our review, we have no comments to offer at this time. However, the DTS recommends that prior to the start of the project, the affected Neighborhood Board, residents, and businesses should be regularly apprised of the status of the project and implementation actions.

Thank you for the opportunity to review this matter. Should you have any further questions on the matter, you may contact Virginia Sosh of my staff at 768-5461.