

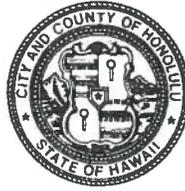
DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: <http://envhonolulu.org>

FILE COPY

DEC 23 2015

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:
RH 16-027

December 10, 2015

Ms. Jessica Wooley, Director
Office of Environmental Quality Control
State of Hawaii, Department of Health
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813

Subject: Final Environmental Assessment – Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Ms. Wooley:

With this letter, the Department of Environmental Services hereby transmits the final environmental assessment and finding of no significant impact (FEA-FONSI) for the Building for Supplemental Environmental Project at H-POWER situated at TMKs (1) 9-1-026-033, 34, 35, in the Ewa District on the island of Oahu for publication in the next available edition of the Environmental Notice.

The Department of Environmental Services has included copies of comments and responses that it received during the 30-day public comment period on the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI).

Enclosed is a completed OEQC Publication Form, one copy of the FEA-FONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Mr. Manuel Lanuevo, P.E., LEED AP, Chief of the Refuse Division at 768-3401.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori M.K. Kahikina".

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

Enclosures

cc: Manuel Lanuevo, ENV-Refuse
Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse

RECEIVED
15 DEC 11 A9:09
OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

DEC 23 2015

**AGENCY ACTION
SECTION 343-5(b), HRS
PUBLICATION FORM**

Project Name: BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER
HRS §343-5 Trigger(s): Use of County lands and funds
Island: Oahu
District: Ewa
TMK: (1)9-1-026-033, 034, 035

Permits: Building permit, Clearing and Grading permit, a Solid Waste Management Permit, and a Storm Water Notice of General Permit Coverage (NGPC) for an industrial activity.

**Proposing/Determination Agency: Department of Environmental Services
1000 Uluohia St. Suite 308
Kapolei, HI 96707**

**Contact:
Manuel S. Lanuevo, PE AP LEED
Chief, Refuse Division
808-768-3406**

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

15 DEC 11 A9:10

RECEIVED

Accepting Authority: N/A (for EIS submittals only)

Consultant: N/A

Status (check one only):

- DEA-AFNSI** Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.
- FEA-FONSI** Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
- FEA-EISPN** Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.
- Act 172-12 EISPN** Submit the proposing agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.
- DEIS** The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqchawaii@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.
- FEIS** The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may

send both the summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.

___ Section 11-200-23
Determination

The accepting authority simultaneously transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the proposing agency. No comment period ensues upon publication in the periodic bulletin.

___ Section 11-200-27
Determination

The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.

___ Withdrawal (explain)

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page):

Pursuant to a Consent Decree between the City and County of Honolulu and the U.S. Environmental Protection Agency, the City agreed to a Supplemental Environmental Project that involves installing a solar PV system at H-POWER. The new building is proposed as part of the PV system, and will be sited on adjacent City-owned parcels. The area within the structure will be made available to support additional activities including but not limited to refrigerant reclamation and recycling, metals processing, storage, and vehicle access. The proposed action will comply with all Federal, State, local laws, regulations, ordinances, rules, permits, licenses, and governmental orders and directives.

Traffic and roadway impacts will be minimal with only slightly increased traffic counts, most of which are already occurring within James Campbell Industrial Park. Minor construction impacts will be temporary and will be mitigated with Best Management Practices. There are no cultural, noise, visual, socioeconomic, solid waste, energy, or human health impacts that were not pre-existing. Existing biological and archaeological sanctuaries on the project site are fenced off and will be protected and maintained during construction and once the facility is operational.

Based on the significance criteria set forth in HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, the proposed action is not anticipated to result in significant environmental impacts. In fact, the proposed action is anticipated to result in significant benefits, including recycling activities and increased renewable energy generation, which supports the State of Hawaii's goals for 100% renewable energy production by 2040.

The determination for the proposed project is a Finding of No Significant Impact (FONSI).

FINAL ENVIRONMENTAL ASSESSMENT

**BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL
PROJECT AT H-POWER**

Campbell Industrial Park, Kapolei, Hawaii

Proposing Agency:

City and County of Honolulu
Department of Environmental Services
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

December 23, 2015

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

HRS 343-5(b) – AGENCY ACTION ENVIRONMENTAL ASSESSMENT CHECKLIST

Name of Action: Building for SEP Project at H-POWER
 Island and Tax Map Key: (1)9-1-026-033, 034, 035
 Proposing Agency: C&C Honolulu, ENV-Refuse

FOR OEQC USE ONLY
Date Received:
Date Published:
Staff reviewer:
Comment Deadline:
Public Library:

PART A: Draft Environmental Assessment (accompanied by Anticipated Finding of No Significant Impact (AFONSI) determination by the proposing agency with 30-day public comment period)

Identification of Section 343-5(a), HRS, trigger(s):

Applicable sections (check all that apply):

- | | |
|---|--|
| <input checked="" type="checkbox"/> Use of state or county lands or funds | <input type="checkbox"/> Use in the Waikiki district |
| <input type="checkbox"/> Use in the conservation district | <input type="checkbox"/> Amendment to county general plan |
| <input type="checkbox"/> Use within shoreline setback area | <input type="checkbox"/> Reclassification of conservation lands to urban |
| <input type="checkbox"/> Use of historic site or district | <input type="checkbox"/> Construction or modification of helicopter facilities |
| <input type="checkbox"/> Waste water facility, waste-to-energy facility, landfill, oil refinery, or power-generating facility | |

Content Requirements (see HAR §11-200-10, items 1 thru 13)

- Notice of determination² letter from the proposing agency requesting publication of its notice of determination of an anticipated finding of no significant impact (AFONSI) based on the attached draft environmental assessment.
- Identification of agencies, citizen groups, and individuals consulted in making the assessment
- General description of the action's technical, economic, social, and environmental characteristics; time frame; funding source
- Summary description of the affected environment, including cultural resources and practices, suitable and adequate regional, location and site maps such as Flood Insurance Rate Maps, Floodway Boundary Maps, or United States Geological Survey topographic maps
- Identification and summary of impacts (direct, indirect and cumulative) to the affected environment described above and proposed mitigation measures
- Alternatives considered
- Discussion of findings and reasons supporting the agency anticipated determination
- List of all required permits and approvals (both discretionary and ministerial at the state, federal, or county levels), if any
- Written comments and responses to comments under the early consultation provisions under HAR 11-200-9(a)(1), and 11-200-9(b)(1)

PART B: Final Environmental Assessment (accompanied by Finding of No Significant Impact (FONSI) determination by the proposing agency with no public comment period)

- Notice of determination³ letter from the proposing agency requesting publication of its notice of determination of a finding of no significant impact (FONSI) based on the attached final environmental assessment.
- Written comments and responses to the comments under the statutorily prescribed public review periods for the draft environmental assessment

FOR OEQC USE ONLY
Date Received:
Date Published:

NOTES ON FORMAT USED TO DEPICT REVISIONS

The following notation has been used to depict substantive differences between this document and the Draft Environmental Assessment:

- Insertions are noted by a double underline;
- Deletions are noted with a ~~strike through~~.

In order to maintain legibility, formatting changes (such as revised headers and footers), updates to the table of contents with new page numbers and cross references, changes to the publication date, revisions to the title page to reflect the fact that the document is a “Final” EA, rather than a “Draft” EA, and other non-substantive changes are not marked.

Table of Contents

Table of Contents..... 4
SUMMARY 5
Summary Project Description..... 9
Section 1 - General Description..... 14
Section 2 – Summary Description of Existing Environment..... 18
Section 3 - Cultural Impacts..... 57
Section 4 – Impacts / Mitigations 63
Section 5 - Alternatives 65
Section 6 – Findings..... 67
Section 7 – List of Permits / Approvals..... 70
Section 8 – Agencies and Organizations Consulted 71
Appendix A – References..... 73
Appendix B – Early Consultation 74
Appendix C – Written Comments and Responses..... 75

Table of Figures and Tables

Figure S1: Conceptual Solar Building Layout Plan 10
Figure S2: Conceptual Solar Building Layout Profile..... 11
Figure S3: Site Layout Plan..... 13
Table 2.2-1: Neighboring JCIP Lots..... 19
Figure 2.1-1: Long-Range Master Plan for the Kapolei Area..... 21
Figure 2.1-2: Department of Hawaiian Homelands..... 22
Figure 2.1-3: USGS Topographic Map..... 23
Figure 2.2-1: Satellite imagery of JCIP area 24
Figure 2.3-1: Emerged and Fringing Reefs of Oahu 26
Figure 2.3-2: Generalized Soils..... 27
Figure 2.4-1: Tsunami Evacuation Zones 30
Figure 2.5-1: Joint Frequency Distribution for Raw Data File 64 M CIP 33
Table 2.5-1: Air Quality Data – Oahu 2006 34
Figure 2.6-1: Water Quality Standards 40
Figure 2.6-2: Surface Water Constraints Map..... 41
Figure 2.6-3: Flood Insurance Rate Map (FIRM) Effective 1/19/2011 42
Figure 2.7-1: Aquifers 46
Figure 2.7-2: Underground Injection Control Areas..... 47
Figure 2.8-1: National Wetlands Inventory 53
Table 2.8-1 Plant Species Observed or Known to Occur 54
Figure 2.8-2: Aerial Photograph (Early 1990’s)..... 56

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

SUMMARY

1. **APPLICANT:** City and County of Honolulu
Department of Environmental Services
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, HI 96707
2. **APPROVING AGENCY** City and County of Honolulu
Department of Environmental Services
1000 Uluohia Street, Suite 308
Kapolei, HI 96707
3. **AGENCY DETERMINATION** FONSI (Finding of No Significant Impact)
4. **CONTACTS**

State of Hawaii

Department of Agriculture
Scott Enright, Chairperson
1428 S. King Street
Honolulu, HI 96814

Department of Accounting & General Services
Douglas Murdock
Kalanimoku Building
1151 Punchbowl St.
Honolulu, HI 96813

Department of Business, Economic Development & Tourism
Mary Alice Evans, Director
P.O. Box 2359 Honolulu, HI 96804

DBEDT – Energy Division
Mark Glick, Administrator
235 S. Beretania, 5th Floor
Honolulu, Hawaii 96813

DBEDT – Office of Planning
Leo R. Asuncion, Acting Director
State Office Tower
235 S. Beretania Street, 6th Floor
Honolulu, HI 96813

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Department of Defense
The Adjutant General, BG. Arthur J. Logan
3949 Diamond Head Road
Honolulu, HI 96816

Department of Education
Kathryn Matayoshi, Superintendent
1390 Miller Street
Honolulu, Hawai'i 96813

Department of Hawaiian Homelands
Jobie Masagatani, Chair
Hale Kalaniana'ole,
91-5420 Kapolei Parkway
Kapolei, HI 96707

Department of Health
Virginia Pressler, M.D.
State of Hawaii- Department of Health
1250 Punch Bowl St # 423 Honolulu, HI 96813-2416

Department of Human Services
Rachael Wong, PhD, Director
1390 Miller Street, Room 209
Honolulu, HI 96813

Department of Labor and Industrial Relations
Leonard Hoshijo, Deputy Director
830 Punchbowl St., Rm. 321
Honolulu, HI 96813

Department of Land and Natural Resources
Carty Chang, P.E.
Kalanimoku Building
1151 Punchbowl Street
Honolulu, HI 96813

DLNR – Historic Preservation Div
Alan Downer, PhD, Administrator
Kakuhihewa Building,
601 Kamokila Blvd., Suite 555,
Kapolei, HI 96707

Department of Transportation
Ford Fuchigami, Director
Aliiimoku Building

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

869 Punchbowl Street
Honolulu, HI 96813

Hawaii Housing Fin. and Dev. Corp.
Craig K. Hirai, Executive Director
677 Queen Street
Honolulu, Hawaii 96813

Office of Hawaiian Affairs
Dr. Kamanao M. Crabbe, PhD
560 N. Nimitz Hwy., Suite 200 Honolulu, HI 96817

UH Environmental Center
Krauss Annex 19
2500 Dole Street
Honolulu, HI 96822

Federal

U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard
Room 3-122, Box 50088
Honolulu, HI 96850

Federal Aviation Administration
Glen A. Martin, Regional Administrator
FAA Western-Pacific Region (AWP-600), Airport Division
P.O. Box 92007
Los Angeles, CA 90009

City and County of Honolulu

Board of Water Supply
Ernie Lau, P.E. Manager and Chief Engineer
630 South Beretania Street Honolulu, HI 96843

Department of Community Services
Gary K. Nakata, Director
715 South King Street, Suite 311
Honolulu, HI 96813

Department of Design and Construction
Robert J. Kroning, Director
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Department of Environmental Services
Lori M.K. Kahikina, Director
1000 Uluohia Street, Suite 308
Kapolei, HI 96707

Department of Facility Maintenance
Ross S. Sasamura, P.E., Director
1000 Uluohia St. Ste 215
Kapolei, HI 96707

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

Department of Parks and Recreation
Michelle K. Nekota, Director
1000 Uluohia Street, Suite 309
Kapolei, Hawaii 96707

Department of Transportation Services
Michael D. Formby, Director
650 South King Street, Third Floor
Honolulu, Hawai'i 96813

Other

Kapolei Public Library
1020 Manawai St
Kapolei, HI 96707

Hawaiian Electric Company
Power Purchase Contracts Administrator
Nathan Yuen
P.O. Box 2750
Honolulu, HI 96840-0001

- | | | |
|----|---------------------------------|-----------------------------|
| 5. | <u>TAX MAP KEY NUMBERS:</u> | (1)9-1-026-033, 034, 035 |
| 6. | <u>PROPERTY OWNER:</u> | City and County of Honolulu |
| 7. | <u>LAND USE CLASSIFICATION:</u> | I-2 Intensive Industrial |
| 8. | <u>SPECIAL DESIGNATION:</u> | None |

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Summary Project Description

Pursuant to a Consent Decree (“CD”) between the City and County of Honolulu (“City”) and the U.S. Environmental Protection Agency (“EPA”), the City agreed to a Supplemental Environmental Project (“SEP”) that involves installing a solar PV system at its waste-to-energy facility, H-POWER (“Facility” or “H-POWER”). A new building (“Solar Building”) is proposed as part of the H-POWER solar PV system (“Project” or “proposed action”). The Solar Building will be sited on City-owned parcels adjacent to H-POWER. An alternatives analysis, included in this EA, was conducted and identifies the preferred alternative. The Solar Building will support the balance of the PV system required for integration into H-POWER. The area within the structure will be made available to support ancillary H-POWER operations and City needs including but not limited to refrigerant reclamation and recycling, metals processing, storage, and vehicle access.

The proposed action will comply with all Federal, State, local laws, regulations, ordinances, rules, permits, licenses, and governmental orders and directives. This includes but is not limited to a building permit, a clearing and grading permit, a Recycling and Recovery Solid Waste Management Permit, and a Storm Water Notice of General Permit Coverage (NGPC) for an industrial activity.

Traffic and roadway impacts will be minimal with only slightly increased traffic counts, most of which are already occurring at H-POWER, Kaomi Loop or within James Campbell Industrial Park (JCIP). Minor construction impacts will be temporary and will be mitigated with Best Management Practices (BMPs). There are no cultural, noise, visual, socioeconomic, solid waste, energy, or human health impacts that were not pre-existing.

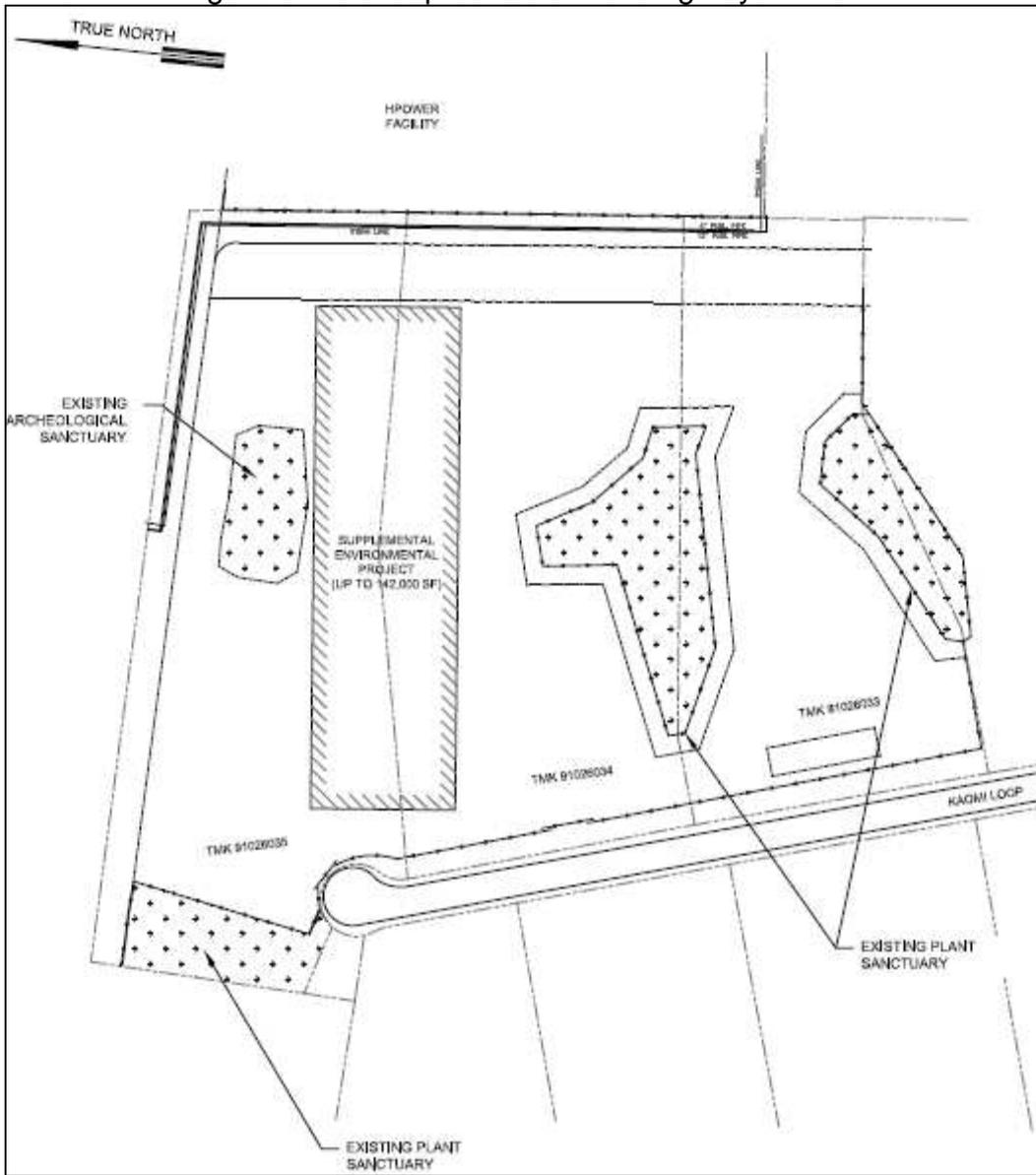
Existing biological and archaeological sanctuaries on the project site are fenced off and will be protected and maintained during construction and once the facility is operational.

Based on the significance criteria set forth in HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, the proposed action is not anticipated to result in significant environmental impacts. In fact, the proposed action is anticipated to result in significant benefits, including recycling activities and increased renewable energy generation, which supports the State of Hawaii’s goals for 100% renewable energy production by 2040.

The determination for the Project is Finding of No Significant Impact (FONSI).

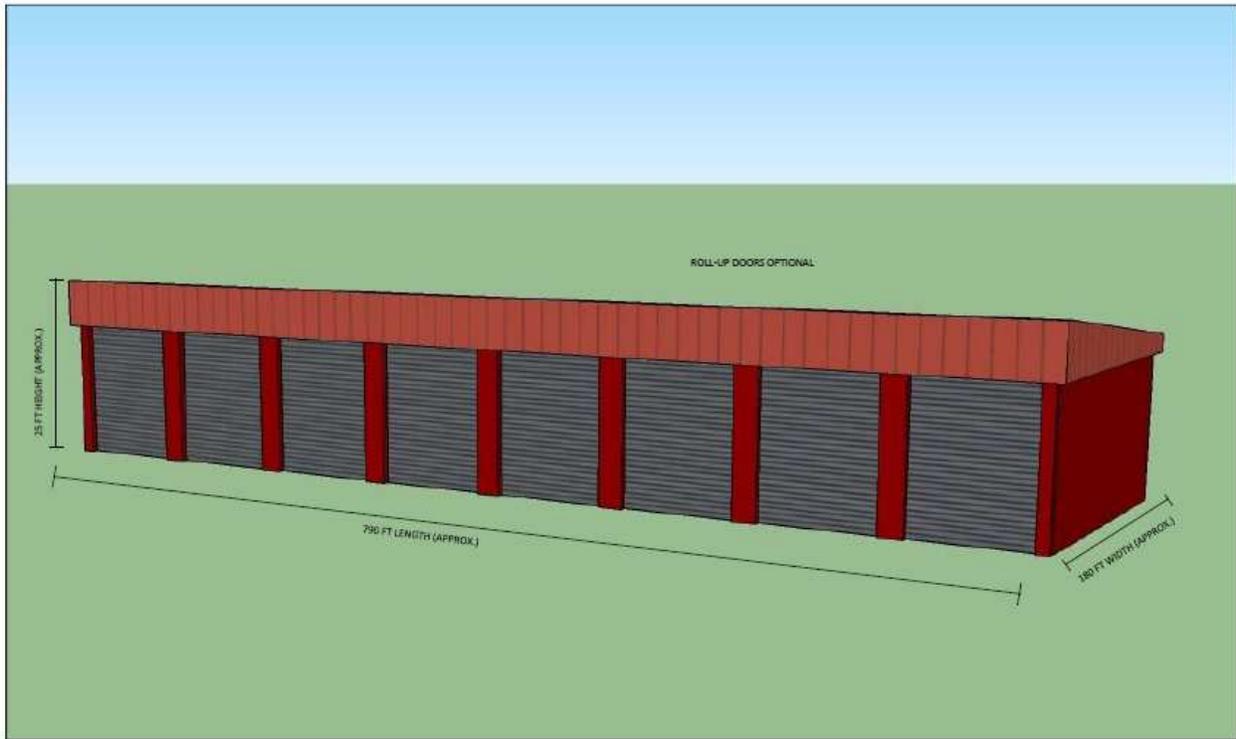
FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Figure S1: Conceptual Solar Building Layout Plan



FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Figure S2: Conceptual Solar Building Layout Profile



NOTES
1. NOT TO SCALE



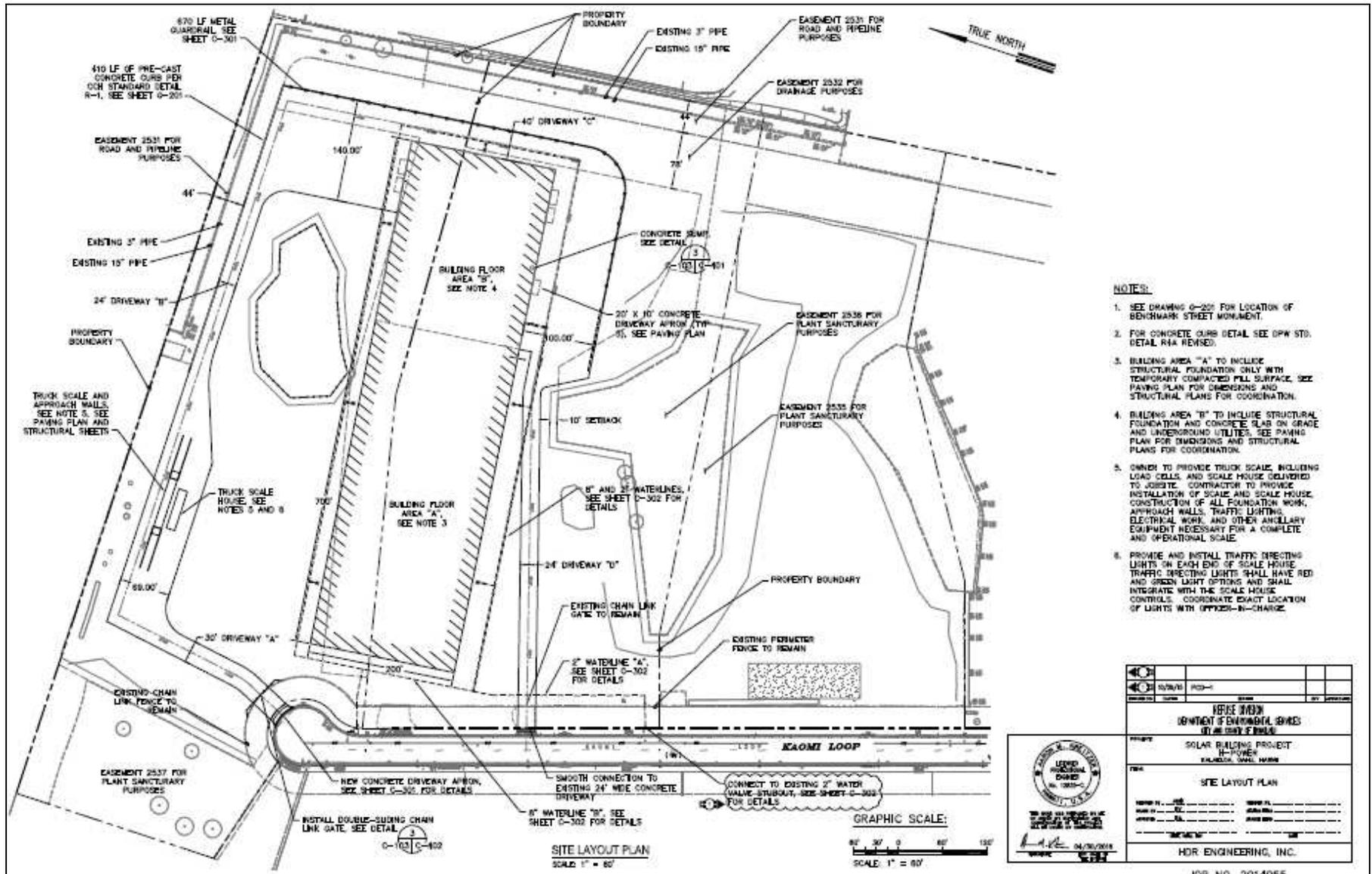
Conceptual Building Layout
H-POWER SUPPLEMENTAL ENVIRONMENTAL PROJECT
City and County of Honolulu, Department of
Environmental Services

DATE
APR 2015
PAGE
2

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Figure S3: Site Layout Plan



Section 1 - General Description

1.1 Technical Characteristics

As referenced above, per the CD, the City shall do a SEP that involves installing a solar PV system at H-POWER. This SEP requires that the total capacity of the PV system will be at least 3.089 Megawatts ("MW") installed direct current (DC) and that at least 15,056 MWh of power will be generated within three years after the completion of the PV system. The City will construct the Solar Building and utilize at least 261,857 square feet of rooftop space for the PV system. Grade level space and building interior space will be used for additional PV equipment and components such as inverters and possibly battery systems. These components are required for a complete system and provide the capability to supply alternating current (AC) power at the required voltage for integration into H-POWER's in-house usage. After the term of the SEP expires, the City plans to continue to utilize the PV system to generate electricity.

H-POWER is a large Municipal Waste Combustor (MWC) designed to manage the municipal solid waste (MSW) for the Island of Oahu. The Facility combusts waste to generate steam, which is then converted into electricity and sold to Hawaiian Electric Company (HECO) for use by Oahu's residents and businesses. A portion of the electricity generated by the waste-to-energy conversion is used internally (in-house) to power the Facility's equipment. This project will offset this in-house power demand.

At full capacity H-POWER consumes about 7 to 8 MW of power for waste processing and associated operations. The City will use the PV-generated power to offset some of H-POWER's in-house power demand, allowing H-POWER to export additional power to HECO. The power produced will also be used to support some of the Solar Building's power needs. Internal metering will be necessary to document the quantity of PV power generated. Power produced by the PV system will be transmitted to the H-POWER Facility via underground power lines.

The City plans to meet the SEP requirements by installing solar panels primarily on the existing H-POWER Facility rooftops. However, there is not sufficient usable space on the existing rooftops for the full generation capacity, and there is not adequate open space on site for installation of remaining panels required. Therefore, the City intends to install additional PV systems and associated equipment atop the Solar Building on City-owned Parcels 33, 34, and 35 (Parcels), which are immediately adjacent to H-POWER. The Solar Building, paved driveway, miscellaneous improvements, and possible future development are shown on the conceptual drawings.

The site is relatively flat with a maximum differential elevation of 2 feet, excluding the existing swales and detention basins. However, mass grading efforts across the project site will be required in order to meet the proposed finish floor elevation for the new Solar Building. The area to be graded is approximately 9.25 acres with approximately 560 cubic yards of excavation required and approximately 14,800 cubic yards of fill required. A majority of the fill volume is for the existing drainage swale that runs west-east and is

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

the proposed location of the building footprint. Other grading activities will include the construction of a new drainage swale and detention basin at the northwestern side of the project site.

Access to the Solar Building will be provided via a paved driveway constructed from Kaomi Loop. Security fencing and a gate will provide controlled access to the site.

The Solar Building will be designed primarily to support the PV system. The structure will be steel framed with metal roof and siding and supported by a concrete slab on grade foundation. As the lowest cost and best use option, the structure will be enclosed, with overhead doorways and man doors. This configuration will enable installation of some of PV related equipment in an enclosed and protected space. Significant open space will be available to support ancillary H-POWER operations and City needs, including but not limited to refrigerant reclamation and recycling, metals processing, vehicle access and storage. Basic utility connections including water, sewer, electrical, and telephone will be provided to the building. Existing infrastructure and utilities are detailed further in Section 2.

Metals processing will include white goods receiving, and refrigerant recovery and recycling. White goods are typically home appliances and include refrigerators, ovens, water heaters, freezers, portable air conditioning units, etc. It is projected that 60,000 units of residential white goods will be received annually (about 3,000 tons per year), half of which contain refrigerants. The white goods will be accepted, sorted, and the refrigerant recovered for recycling by certified technicians. The potential impacts to air quality will be de minimis or negligible because the capture and recovery process will be in accordance with federal EPA regulations related to the Refrigerant Recycling Rule. From a storm water and nuisance perspective, the operations will be enclosed and protected from the elements. Once the white goods are processed, they will be sent to H-POWER for shredding, and the recovered metals shipped for recycling.

The PV panels will be roof mounted for various reasons. Panels that are sufficiently elevated virtually eliminate theft and vandalism or damage from activities conducted in vicinity of a surface PV system. Elevated PV panels also maximize power generation by minimizing the affect of shadows caused by trees, surrounding physical features and future developments. As an example, depending on local wind conditions, water vapor clouds from several water cooling towers (two on the H-POWER site property to the east and one on the AES property to the southeast of the proposed Solar Building) could cause undesirable fluctuations in sun intensity if mounted at ground level. Elevating panels above ground is, therefore, more favorable to achieve reliable and consistent system performance. The slope of the Solar Building roof will improve the angle of the panels to be more closely aligned with the angle of the sun, improving power generation.

The PV system will be installed in two phases. The PV panels will be mounted on metal frames and interconnected to allow transmission of DC current to inverter systems to produce AC power. The AC power will be conditioned and stepped up to the required

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

voltage, and metered and transmitted to the interconnection point(s) in the existing H-POWER electrical system.

Several inverter systems will be required to support all PV systems planned for the H-POWER site and the Parcels. Modifications to the H-POWER electrical system will also be required to accommodate the PV systems. The PV power may be generated as 3-phase 480V or possibly 3-phase 13.8kV power. As needed a step-up transformer will be used. Protection equipment or other provisions required by HECO will be provided. The connections will be completed in a manner to allow for continued operation as much of the time as possible when the H-POWER Facility is operating.

1.2 Traffic and Roadways

For this EA, only traffic impacts from the H1 Freeway Exit to the Parcels on Kaomi Loop in JCIP were considered because of the limited scope of the project. The impact of the solar PV system on traffic and roadways from the freeway exit to the Parcels site is minimal.

When the refrigerant reclamation and recycling facility is operational, additional trucks will be using specifically Kaomi Loop for delivery. Because most of the other recyclers are also located in JCIP, the only additional traffic impacts would be from Hanua Street to Kaomi Loop. The post-recovered white goods ready for further processing at H-POWER will also add to traffic. It is anticipated that about ten vehicle trips per day would result from an active refrigerant reclamation and recycling operation.

When maintaining the PV system, in most instances no traffic would be required on a regular basis for the PV systems to function because the equipment will be automatically operated. Periodic monitoring checks and housekeeping will occur but, on average, should require less than two vehicles per day. Operation and maintenance of the PV system will not significantly increase traffic. No increase in activity would be expected over the life of the operation and would not significantly degrade the level of service (LOS).

It would not be expected this LOS would change significantly over the life of the operation and this quantity of vehicles would not significantly degrade the LOS. Moreover, most of the vehicle trips are already occurring at H-POWER, in JCIP or on Kaomi Loop, and will move to this location once construction is completed.

During construction of the Solar Building project, there will be a slight increase in traffic. Construction is anticipated to last about six months with an expected average vehicle count of about twelve vehicles per day.

A secondary beneficial traffic impact of the refrigerant reclamation and recycling and metals processing may be improvements to residential bulky waste collection, including white goods collection, but these benefits have not been quantified.

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

1.3 Funding/Source

The estimated capital budget for the whole SEP project is \$16M, which is planned to be divided into phases.

Section 2 – Summary Description of Existing Environment

2.1 Description of the Property

The Project is proposed to occur on City-owned parcels adjacent to H-POWER. The site consists of 22.6 acres of industrially zoned and developed property situated within the JCIP in Kapolei and is included in the Long Range Master Plan for the Kapolei area. Figure 2.1-1 depicts both the Master Plan and the JCIP. The Parcels' Tax Map Key numbers are #(1)9-1-026:033, 034, and 035. Figure 2.1-3 depicts the site location on a United States Geological Survey (USGS) topographic map and shows the major roadways in the vicinity. Additional detailed information on the site is presented within this EA.

Existing Infrastructure and Utilities:

Water.

There is an existing 1-1/2" underground water irrigation line that is fed from a water meter on the shoulder of Kaomi Loop which runs onto Parcel 34 from the BWS 12" water main. Following the meter, there is a backflow preventer check valve with isolation valves, beyond which the irrigation line appears to be abandoned. No additional water service lines are installed to the site. Fire hydrants and individual property isolation valves are installed along Kaomi Loop in accordance with CCH and BWS standards. New water services both for domestic use and fire protection will be installed as part of the project.

Drainage.

There are no existing onsite storm water drainage infrastructure facilities or systems at the project site. Currently storm water is directed to a series of onsite swales and detention basins and allowed to infiltrate into the ground. An existing 18-inch storm drain pipe is installed in Kaomi Loop that collects and conveys storm water from Kaomi Loop. The project will not install onsite storm drain infrastructure as storm water will be collected onsite and infiltrated. A new drainage swale and detention basin will be constructed to help accommodate the onsite collection and infiltration.

Wastewater.

There are no existing onsite wastewater infrastructure facilities or systems at the project site. Wastewater collection and conveyance infrastructure will be installed with the different phases of the project.

Electrical.

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

There is a HECO 12KV electrical service vault installed on the shoulder of Kaomi Loop that feeds an old electrical transformer box on Parcel 34. There are no wires feeding the electrical transformer box from the service box and the transformer box is not functional. The transformer box will be removed as a new electrical feed and equipment are installed with the project. Otherwise, there are no additional onsite electrical infrastructure facilities or systems at the project site.

Phone & Cable.

There are no existing telephone or cable infrastructure facilities or systems at the project site. Telephone and cable services will not be installed under this phase of the project.

Other.

There is an existing easement through the project site for pipelines, and there are two privately owned above-ground pipes installed within the easement. These include a 3" recycled water pipe and a 15" steam conveyance pipe. The easement runs along the eastern and northern property boundaries. Construction activities will not encroach upon the easements, and no additional mitigation effort is proposed for these pipes.

2.2 Surrounding Land Uses and Zoning

Figure 2.2-1 is an aerial photograph showing the existing industrial nature of the site and the surroundings within 1-mile of the site. As can be seen from the aerial photograph, the surrounding land uses are predominantly industrial in nature. To better illustrate the occupants of neighboring parcels, Table 2.2-1 identifies surrounding land uses and their direction relative to the site.

Table 2.2-1: Neighboring JCIP Lots and their Direction Relative to the Site

Direction Relative to Project Site-Parcel 30	Neighbor
North	Chevron, HECO
South	Island Recycling, Pacific Allied Products
East	H-POWER, AES
West	BEI

The JCIP, and most of the area within 1 mile of the site, is zoned 1-2 Intensive Industrial, as shown on Figure 2.1-1.

The proposed project is consistent with both the existing and proposed Ewa Development Plan (Ewa DP), which may be viewed at the following web page:

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

<http://www.honolulu.gov/Planning/DevelopmentSustainableCommunitiesPlans/EwaPlan.aspx>

The proposed project is also consistent with the Department of Hawaiian Homelands Kapolei Regional Plan (DHHL KRP), which may be viewed at the following web page: <http://dttl.hawaii.gov/po/regional-plans/oahu-regional-plans/>. The section "Infrastructure - Energy" on Page 19 of the DHHL KRP describes DHHL's private and public renewable energy partnerships in the Kapolei/Kalaheo region, including a biomass to biofuels project in JCIP.

The proposed project is consistent with the themes, goals, objectives and policies of the Hawaii State Planning Act, Hawaii Revised Statutes (HRS), Chapter 226, better known as the Hawaii State Plan. With respect to HRS § 226-14, § 226-18 and § 226-108, the building will provide an array of solar panels to provide renewable and sustainable energy, as well as to help reduce greenhouse gas emissions on a life-cycle basis. The project will provide safe and reliable recycling and disposal of solid waste and intends to utilize energy efficient products in the design of the building.

The proposed project will provide renewable energy generation and support H-POWER operations. The Ewa DP, ~~and~~ DHHL KRP and Hawaii State Plan support these efforts.

The proposed project will comply with federal, state, and local permits and approvals. Each of the required permits and approvals is addressed in this EA in Section 7.

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER



Figure 2.1-1: Long-Range Master Plan for the Kapolei Area (http://www.kapolei.com/master_plan.cfm)

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

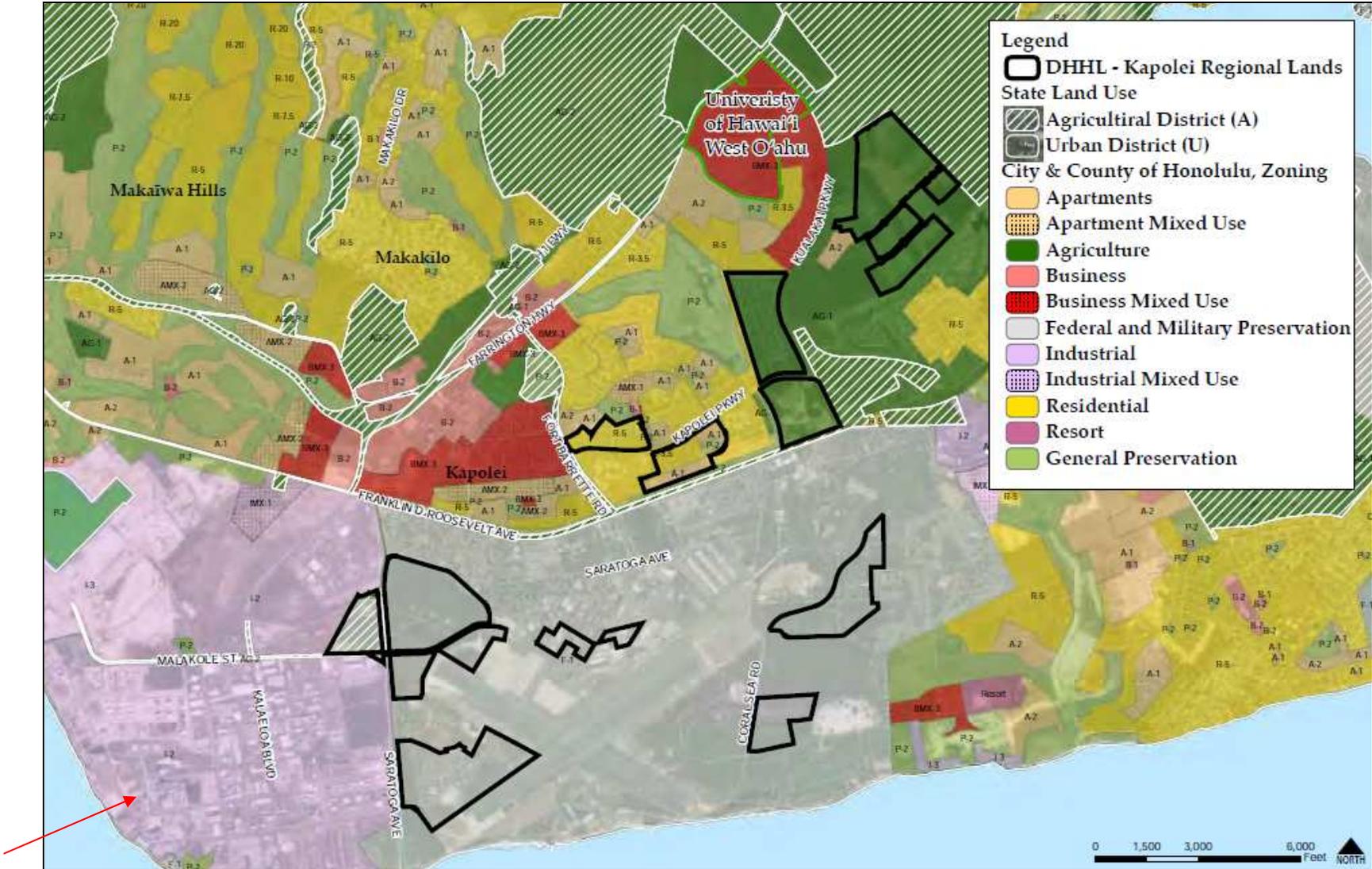


Figure 2.1-2: Department of Hawaiian Homelands Kapolei Regional Lands

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER



Figure 2.1-3: USGS Topographic Map (UTM NAD83, Zone N, 2000)

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER



Figure 2.2-1: Satellite imagery of JCIP area

2.3 Existing Conditions - Geology and Soils

This section discusses the existing geologic environment. Baseline conditions are presented in the context of prior site work that has impacted original conditions on the Parcels.

The Hawaiian Islands are the exposed parts of the Hawaiian Ridge, a large volcanic mountain range extending northwestward across the central Pacific Ocean (USGS 1999). The island of Oahu is the eroded remnant of two volcanoes – the older Waianae Volcano in the west and the larger Koolau Volcano in the east. Clastic sedimentary deposits, which primarily are alluvium derived from erosion of the volcanic rocks, have accumulated on the flanks of the island. In some places, the clastic sediments are interbedded with coralline limestone that formed as reef deposits in shallow marine waters. Oahu has larger areas of sedimentary deposits than any other Hawaiian island and these deposits contain coralline limestone in coastal areas (USGS 1999).

The Parcels are situated within the JCIP in Kapolei, Hawaii. This area is underlain by the Ewa Plain, which is an emerged coral-algae limestone reef formed during the Pleistocene period when the ocean level was at higher elevation (C.E. Maguire 1986). The Ewa Plain extends from sea level at the coastline to approximately 3 to 5 miles inland. Figure 2.3-1, excerpted from a 1986 geotechnical report by C.E. Maguire, presents the extent of the emerged reef deposits on the island of Oahu and specifically in the project area. The following local and site specific information is in large measure excerpted from that 1986 final geotechnical report conducted for H-POWER.

The local geology is typical of mid-Pacific volcanic islands in that the central volcanic core is surrounded and sometimes overlain by a coastal plain of interbedded marine sediments, alluvium, and coral reef formations. In the area of the site, on the basis of a projected dip slope of 5 degrees from the volcanic formation, this overlying coastal plain is estimated to be 600 to 800 feet thick (C.E. Maguire 1986). The coral reef deposits on-site in 1986 (pre-construction of H-POWER) were typical of those found throughout the Barbers Point area. The surficial layer typically consists of corals, calcareous algae, cemented beach sand, and cemented mixtures of coralline sand, gravel and coral fragments often termed “coral rock”. This coral rock often contains cavities of various sizes and at various depths. The ground surface topography is termed “shallow karst” topography marked by small sink holes generally 0.5 to 3.0 feet in diameter and from approximately 3 to 10 feet deep, which have been dissolved out of the limestone by fresh rain water (C.E. Maguire 1986).

Soil throughout the area, and underlying the Parcels, is classified as Coral Outcrop by the United States Department of Agriculture (USDA) Soil

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Conservation Service (USDA SCS 1965). This soils data is mapped on Figure 2.3-2.

Prior to construction of the existing H-POWER facility, vegetation was cleared and grubbed in preparation for a proposed refinery project in 1969. Many of the site sinkholes in the area were loosely filled during the site clearing of 1969. In 1985 H-POWER was constructed in accordance with the site preparation and foundation recommendations developed by the geotechnical consultant employed by C.E. Maguire. Site preparation included initial site subgrade preparation, consisting of clearing, grubbing and stripping of soft silty organic topsoil from the site. Site preparation also consisted of repairing surface cavities and leveling the site. A systematic probing, breakdown and grouting of below surface voids proceeded where cavities were identified. General surface cavity repair was conducted. Proof rolling (with 100 ton vehicles) to detect cavities or weak areas was also conducted in roadways, important equipment areas and footing areas. In areas where excavation was required, heavy equipment was used, but blasting was not permitted due to possible damage to structures supporting coral rock. Thus extensive geologic excavation and the addition of structural fill and construction components have changed much of the native conditions once found on the H-POWER site and increased the site's suitability for construction.

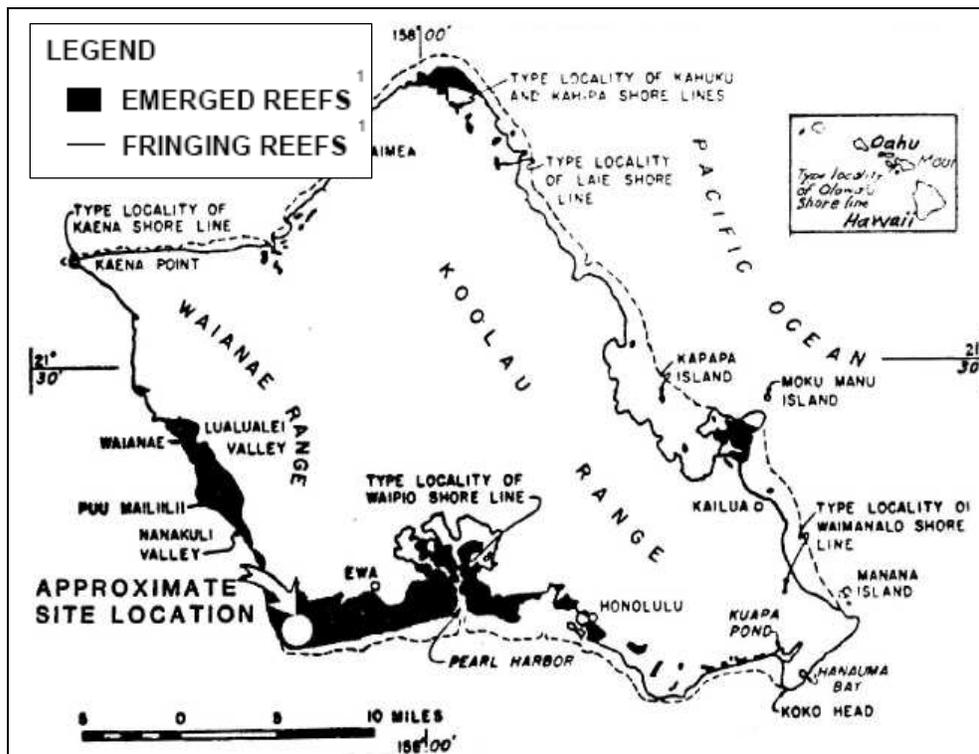
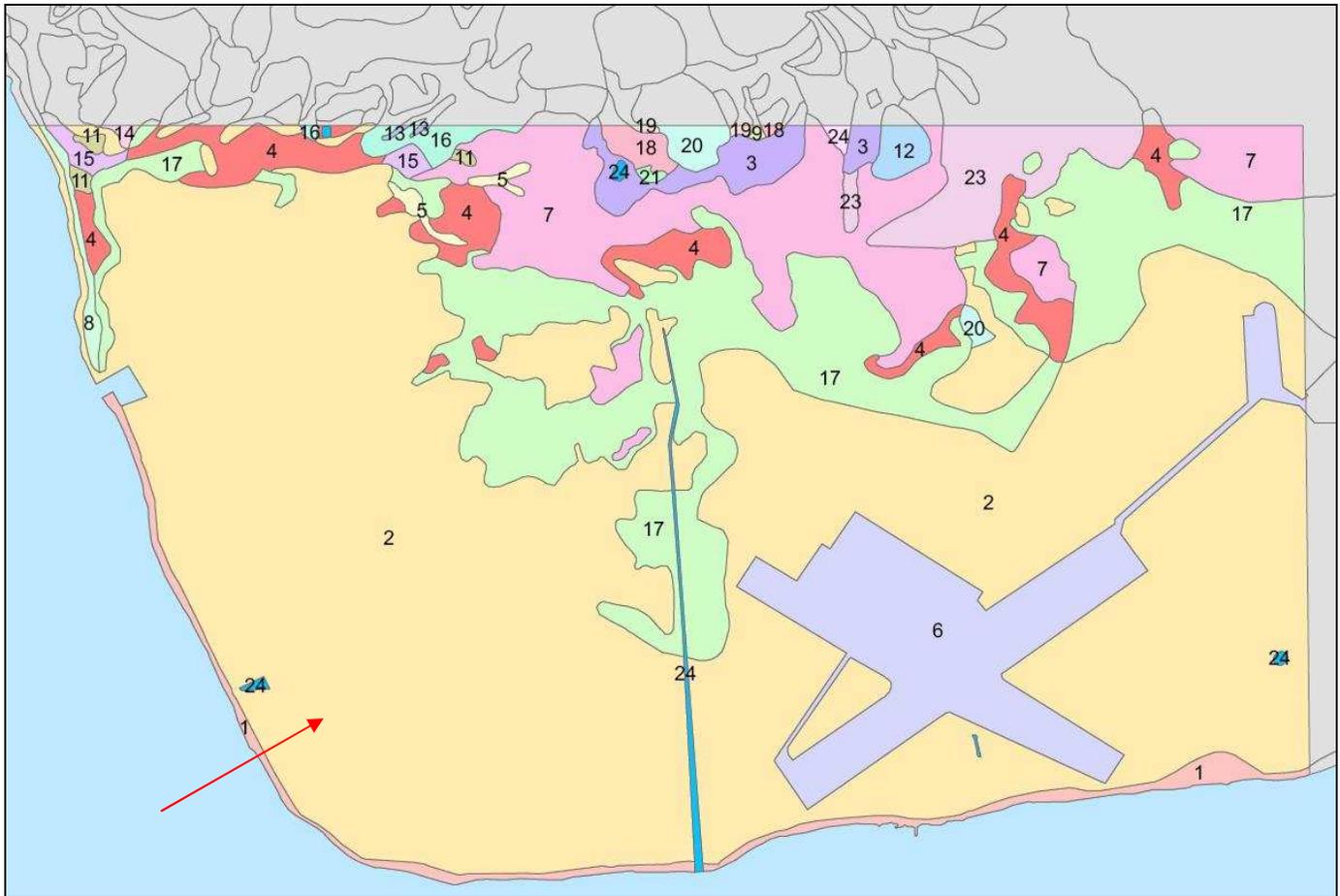


Figure 2.3-1: Emerged and Fringing Reefs of Oahu, ¹From "Geology of the Hawaiian Islands" (Stearns, 1969)

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER



LEGEND

NAME

1	BEACHES	16	LUALUALEI STONY CLAY, 2 TO 6 PERCENT SLOPES
2	CORAL OUTCROP	17	MAMALA STONY SILTY CLAY LOAM, 0 TO 12 PERCENT SLOPES
3	EWA SILTY CLAY LOAM, 3 TO 6 PERCENT SLOPES	18	MOLOKAI SILTY CLAY LOAM, 15 TO 25 PERCENT SLOPES
4	EWA SILTY CLAY LOAM, MODERATELY SHALLOW, 0 TO 2 PERCENT SLOPES	19	MOLOKAI SILTY CLAY LOAM, 7 TO 15 PERCENT SLOPES
5	EWA SILTY CLAY LOAM, MODERATELY SHALLOW, 2 TO 6 PERCENT SLOPES	20	QUARRY
6	FILL LAND, MIXED	21	STONY STEEP LAND
7	HONOULIULI CLAY, 0 TO 2 PERCENT SLOPES	22	WAIALUA SILTY CLAY, 0 TO 3 PERCENT SLOPES
8	JAUCA SAND, 0 TO 15 PERCENT SLOPES	23	WAIALUA STONY SILTY CLAY, 3 TO 8 PERCENT SLOPES
9	KAWAIHAPAI CLAY LOAM, 0 TO 2 PERCENT SLOPES	24	WATER > 40 ACRES
10	KEAAU CLAY, 0 TO 2 PERCENT SLOPES		
11	KEAAU STONY CLAY, 2 TO 6 PERCENT SLOPES		
12	LAHAINA SILTY CLAY, 7 TO 15 PERCENT SLOPES, SEVERELY ERODED		
13	LUALUALEI CLAY, 0 TO 2 PERCENT SLOPES		
14	LUALUALEI EXTREMELY STONY CLAY, 3 TO 35 PERCENT SLOPES		
15	LUALUALEI STONY CLAY, 0 TO 2 PERCENT SLOPES		

Figure 2.3-2: Generalized Soils (Soils Conservation Service, 1996; downloaded from Hawaii DPP, prepared by AMEC, 2008)

2.4 Geologic Hazards

This Section identifies and analyzes the potential geologic hazards within Oahu and more specifically, the JCIP. There are four potential geologic hazards in this region that are evaluated below:

- Subsidence, Settlement and Karst
- Seismic Ground Shaking (earthquake)
- Volcanic Activity
- Tsunami

Subsidence and Settlement

As noted in Section 2.3, Existing Conditions - Geology and Soils, the principal geologic hazard in the region consists of the “shallow karst” topography of this region. It is marked by small sink holes generally 0.5 to 3.0 feet in diameter and from approximately 3 to 10 feet deep, which have been dissolved out of the limestone by fresh rain water. Though previously cleared and grubbed, this shallow karst topography requires special construction measures to ensure the stability of foundations and to increase the load bearing capacity of the local soils. Engineering will ensure that the design and preparation of the site is appropriate and will prepare a geotechnical analysis if necessary.

Seismic Ground Shaking

The proposed action will be constructed in accordance with the construction standards and seismic provisions of the International Building Code (IBC).

The project area has about a 9% chance of a severe earthquake (magnitude 6.0 or greater) in a 50-year interval. This probability was calculated using the online USGS 2002 Earthquake Probability Mapping Tool for zip code 96707. The 2009 Mapping Tool does not include the State of Hawaii.

Volcanic Activity

The island of Oahu was formed by two volcanoes, the Waianae Range on the west side of the island and the Koolau Range on the east. Both of these volcanoes are now extinct. The Waianae Range is approximately 2.95 to 3.8 million years old and the Koolau Range is approximately 1.8 to 2.7 million years old (Keinle and Wood 1990). However, there has been volcanic activity on the island of Oahu since these two volcanoes have gone extinct. The Honolulu Volcanic Series consisted of over 30 separate eruptions ranging from approximately 850,000 to 32,000 years ago (Abbott et. al. 1983). Although there has not been any volcanic activity on the island of Oahu for over 30,000 years, there is a very slight possibility of future volcanic activity on Oahu.

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Tsunami

As quoted from the Honolulu City and County, Department of Emergency Management web site:

Tsunamis (pronounced tsoo-nah'-mee), or seismic sea waves, potentially the most catastrophic of all ocean waves, are generated by tectonic displacement--for example, volcanism, landslides, or earthquakes--of the seafloor, which in turn cause a sudden displacement of the water above and the formation of a small group of water waves having wavelength equal to the water depth (up to several thousand meters) at the point of origin. These waves can travel radially outward for thousands of kilometers while retaining substantial energy. Their speed--characteristic of gravity waves in shallow water and thus equal to the square root of gD , where g is the gravitational constant and D is the depth--is generally about 500 km/h (300 mph), and their periods range from 5 to 60 minutes. In the open ocean their amplitude is usually less than 1 m (3.3 ft); thus tsunamis often go unnoticed by ships at sea. In very shallow water, however, they undergo the same type of increase in amplitude as swell approaching a beach. The resultant waves can be devastating to low-lying coastal areas; the 37-m (120-ft.) waves from the 1883 Krakatoa eruption, for example, killed 36,000 people.

The characteristics of tsunamis as they approach shore are greatly affected by wave refraction over the local bathymetry. Tsunami-producing earthquakes usually exceed 6.5 on the Richter scale, and most tsunamis occur in the Pacific Ocean because of the seismic activity around its perimeter. A tsunami warning system for the Pacific Ocean has been established; it consists of strategically placed seismic stations and a communications network. (Department of Emergency Management, 2009)

Figure 2.4-1 depicts the Department of Emergency Management's Tsunami Evacuation Zone for Kahe Point to Ewa Beach. The evacuation zone includes the Parcels. In the event of a tsunami, evacuation and response procedures will be followed, as detailed in the emergency response plans maintained by H-POWER and the Refuse Division.

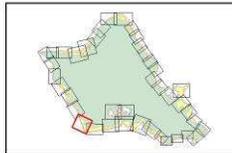
FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER



Kahe Pt to Ewa Beach (map17_inset1)

DRAFT MAP

Note: Data represented on this map is not intended to replace site survey.
 Copyright City & County of Honolulu
 All Rights Reserved 2014
 Date Prepared: Sept. 29, 2014



Symbol	Description
[Color swatch]	Side Zone
[Color swatch]	Evacuation Zone
[Color swatch]	Exposure Zone
[Symbol]	Highway
[Symbol]	Water
[Symbol]	State and Federal Road
[Symbol]	Water
[Symbol]	Sea Level
[Symbol]	Other

Figure 2.4-1: Tsunami Evacuation Zones.
http://www.honolulu.gov/rep/site/dem/17-1_Kahe_Pt_to_Ewa_Beach_DRAFT.jpg

2.5 Climate and Air Quality

This section discusses the existing climate and air quality of the Parcels and the potential impacts of the proposed action.

According to the National Weather Service (NWS) Forecast Office in Honolulu, the climate of Hawaii is characterized by mild temperatures throughout the year, moderate humidity, persistence of northeasterly trade winds, infrequent severe storms but significant differences in rainfall amounts within short distances. When the northeasterly trade winds are weak, onshore, thermally driven sea breeze flows can develop on the normally leeward shores of Oahu. The resulting southerly winds are referred to as “Kona winds”.

The presence of mountains is important as they can obstruct and deflect the prevailing winds directions, and produce local drainage flows at night and upslope flows during the day. The importance of these local flows diminishes rapidly with distance from significant terrain objects. Due to the distance from the mountains, the wind conditions in the vicinity of the JCIP are dominated by the northeast trade winds and to a lesser extent, the southwest Kona winds.

Wind Direction and Speed

From October 1, 1992 through September 30, 1993 a meteorological tower within JCIP gathered the hourly weather data at several levels. Figure 2.5-1 illustrates the windrose generated from the data collected during this period. Figure 2.5-1 illustrates that the prevailing wind is dominated by the northeasterly trade winds. In addition, these data also show that the average wind speed is approximately 3.78 m/s at 10 meters.

Rainfall

The rainfall recorded at the JCIP meteorological tower from October 1, 1992 through September 30, 1993 was 13.5 inches. The average rainfall recorded at the Honolulu NWS station over the 30-year period from 1971-2000 is 18.29 inches.

Temperature

The mean monthly temperature recorded at the JCIP station between October 1992 and September 1993 ranged from 70.16 degrees Fahrenheit to 78.3 degrees Fahrenheit, with an average of 74.6 degrees Fahrenheit. This compares well with the average monthly temperature recorded at the Honolulu NWS station between the 30-year period from 1961-1990, which is 77.2 degrees Fahrenheit.

Air Quality

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

The area in the vicinity of JCIP is in attainment with the National Ambient Air Quality Standards (NAAQS) and the State Ambient Air Quality Standards (SAAQS) for the criteria air pollutants. Table 2.5-1 summarizes the maximum measured ambient air concentrations of criteria pollutants on Oahu ambient air monitoring stations in 2006. Table 2.5-1 shows that, in general, the air quality on Oahu is excellent.

Impacts and Mitigation

Temporary construction impacts, most notably any dust generated from construction equipment, will be mitigated by the use of dust control measures, i.e. water trucks. The building is not anticipated to have any long-term significant impacts to air quality. In fact, the building is anticipated to have long-term benefits to air quality on a life-cycle basis, due to renewable energy generation from the solar panels and the associated emissions savings.

Refrigerant reclamation and recycling and metals processing are not anticipated to be a significant source of air emissions. The conditions set forth in the Refrigerant Recovery Rule, Section 608 of the 1990 Clean Air Act, will be implemented at the facility. Any air quality impacts will be de minimis as the regulation requires the following:

- Maximize recovery and recycling of ozone-depleting substances (both chlorofluorocarbons [CFCs] and hydrochlorofluorocarbons [HCFCs] and their blends) during the servicing and disposal of air-conditioning and refrigeration equipment.
- Certify refrigerant recycling and recovery equipment, technicians, and refrigerant reclaimers. The technician training program emphasizes the requirements set forth in the rule, and prohibitions to prevent deterioration of air quality.
- Require persons servicing or disposing of air-conditioning and refrigeration equipment to certify to EPA that they have acquired refrigerant recovery and/or recycling equipment and are complying with the requirements of the rule.
- Establish safe disposal requirements to ensure removal of refrigerants from goods that enter the waste stream with the charge intact (e.g., motor vehicle air conditioners, home refrigerators, and room air conditioners).

With all of the above measures in place, air quality will not be impacted from the white goods receiving.

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

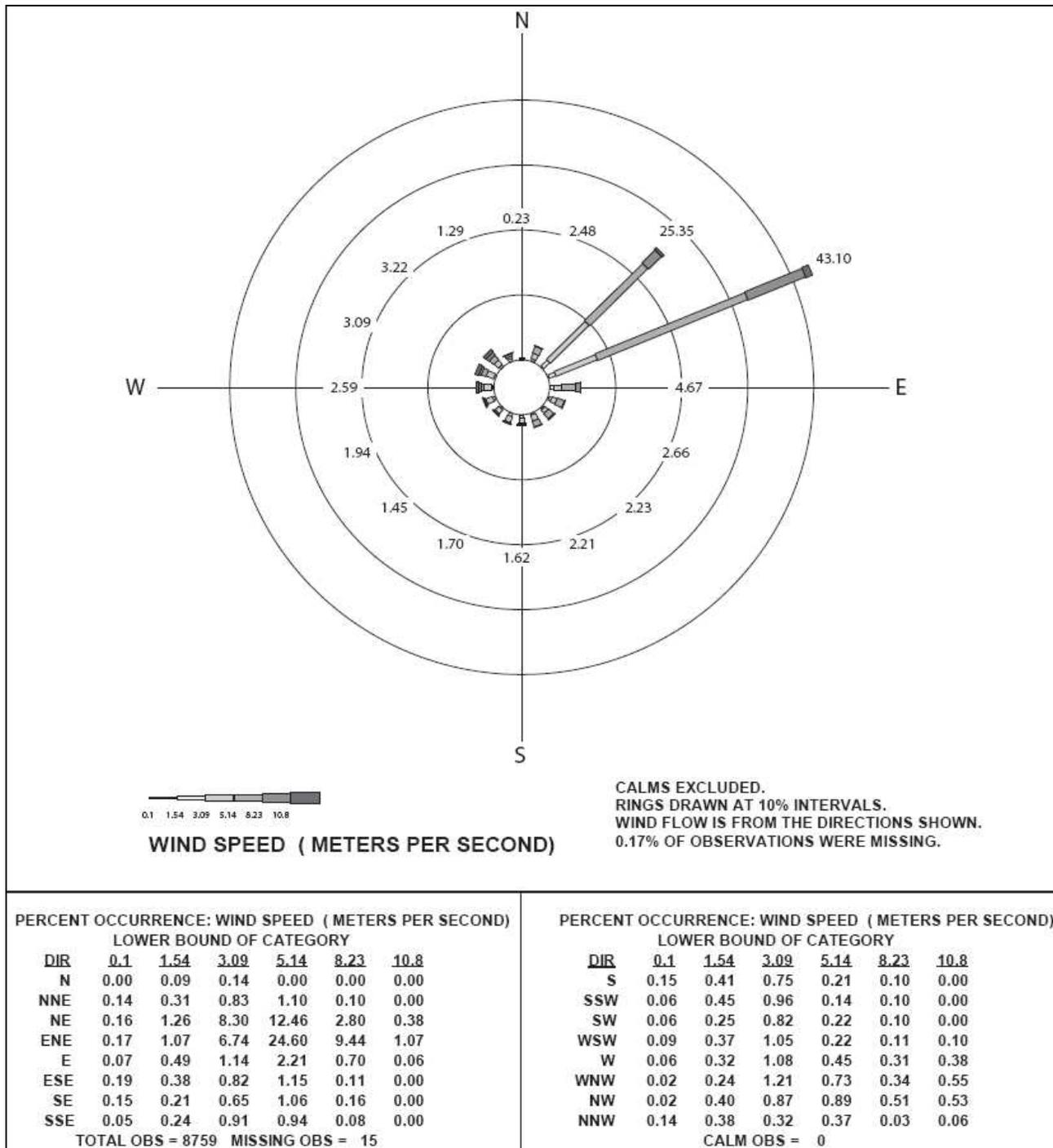


Figure 2.5-1: Joint Frequency Distribution for Raw Data File 64 M CIP (Prepared by AMEC, 2008)

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Table 2.5-1: Air Quality Data – Oahu 2006 (prepared by AMEC)

Pollutant	Averaging Period	Maximum Concentration (ug/m ³)	Lesser of NAAQS/ SAAQS (ug/m ³)	% of Standard	HDOH Monitoring Station
SO ₂	3-Hr	62	1,300	5%	Makaiwa
SO ₂	24-Hr	17	365	5%	Makaiwa
SO ₂	Annual	5	80	6%	Kapolei
PM ₁₀	24-Hr	59	150	39%	Kapolei
PM ₁₀	Annual ⁽¹⁾	16	50	32%	Kapolei
PM _{2.5}	24-Hr	9	35	26%	Kapolei ⁽²⁾
PM _{2.5}	Annual	4	15	27%	Kapolei
NO ₂	Annual	9	70	13%	Kapolei
CO	1-Hr	1596	5,000	32%	Kapolei
CO	8-Hr	1183	10,000	12%	Kapolei
O ₃	8Hr	83	157	53%	Sand Island
Lead	quarterly	NA ⁽³⁾	1.5 ⁽⁴⁾	NA	NA

⁽¹⁾ The annual NAAQS has been revoked by USEPA.

⁽²⁾ Maximum 24-hr concentration was flagged by HDOH as being elevated due to New Year's fireworks. Second highest value is shown.

⁽³⁾ Ambient air monitoring for lead in Hawaii was discontinued in October 1997 with USEPA approval.

⁽⁴⁾ USEPA signed the final rule to lower the lead NAAQS to 0.15 ug/m³ on a rolling 3-month basis on October 15, 2008. However, the final rule is not effective until 60 days after publication in the Federal Register.

2.6 Surface Water

Baseline Surface Water Conditions

Surface waters for the Island of Oahu are classified by water quality standards established under Hawaii Administrative Rules, Title 11, Chapter 54 (HAR 11-54). The regulations categorize all State waters as either marine or inland. It is also important to note that “State Waters”, as defined by section 342D-1, HRS, exclude “...drainage ditches, ponds, and reservoirs required as part of a water pollution control system...” Figure 2.6-1 provides a broad overview map of the Water Quality Standards for the island. As can be seen from Figure 2.6-1, the Parcels are located within the defined hydrographic area IV and have an Inland (Water) Classification of Class 2. Class 1 waters are more heavily restricted, and it is the objective that Class 1 waters remain in their natural state as nearly as possible. The objective of Class 2 waters is defined as follows: “The objective of Class 2 waters is to protect their use for recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation. The uses to be protected in this class of waters are all uses compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters” (HAR 11-54-3).

Figure 2.6-1 also depicts the Marine Classifications and shows that the Parcels are located most proximate to Class A marine waters. Class AA marine waters are more heavily restricted, and it is the objective that these waters remain in their natural pristine state as nearly as possible. The objective of Class A waters is defined as follows: “It is the objective of Class A waters that their use for recreational purposes and aesthetic enjoyment be protected. Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters” (HAR 11-54-3).

As noted earlier (Section 2.3), the Parcels are located on what is commonly referred to as the Ewa Plain, an emerged coral-algae reef formed during the Pleistocene period when the ocean was at a higher level. The Ewa Plain today is one of the driest areas on Oahu, so dry that it has commonly been characterized as “barren” and “desolate” and even referred to as a desert (Pacific Consultant Services Inc (PCSI), 2008). Site specific water resources are addressed below.

Proposed Action Site Surface Waters

Other than the Pacific Ocean, the nearest surface waters are industrial holding ponds and industrial park drainage canals. These consist of: (1) A drainage canal abutting the southeast corner of the H-POWER site that extends south to the Pacific Ocean; (2) drainage canals that exist proximate to the Kaomi Loop bend, that drain to the Pacific Ocean; and (3) nearby holding ponds situated on

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

the industrial Chevron property. The proposed action will not be adjoining storm water retention areas or other controls with the H-POWER site. Each of these surface waters can be seen on the previously provided Figure 2.1-3.

Refrigerant reclamation and recycling and metals processing will take place indoors as described in Section 1 “General Description” to minimize exposure to the elements and for good housekeeping practice. H-POWER personnel are trained in Spill Prevention Countermeasure and Control (SPCC) annually which increases their awareness on the necessity to be careful in handling liquid materials around the proposed action.

The following section presents the system of pollution prevention measures that will be utilized to (1) minimize pollutants in the project’s stormwater discharges, (2) assure compliance with the terms and conditions of both construction and environmental permits, and (3) attenuate peak stormwater runoff discharge rates.

Both structural and non-structural controls will be outlined. A brief summary of the engineering controls and BMPs that will be implemented during construction, and some left upon completion, is provided below.

A Notice of Intent (NOI) for coverage under the General Permit will be submitted for construction activities. This NOI will also include a construction site best management practices plan, timetables and nature of the activities proposed, and calculated storm water runoff quantities for the affected area(s). The contents of the NOI will satisfy the requirements for the General Permit and will describe the measures that will minimize discharge of pollutants via storm water.

Details with regard to erosion and sediment control measures undertaken during construction will be included in the Construction Storm Water Pollution Control Plan (SWPCP) which will be prepared prior to construction. This document will outline the measures that will be followed to ensure minimal impact on water quality throughout the construction effort. To prevent sedimentation and erosion, BMPs will be implemented specific to storm water management during construction. For example, one of the first steps in the construction process will be the installation of siltation barriers around the limit of work. The barriers will act as a boundary for the limit of work, minimizing intrusion into areas outside the construction zone. In addition, the barriers will collect sediment that may be transported from the construction area and will prevent sediment from leaving the site. The sedimentation barriers and absorbent material will remain in place throughout the construction effort. Routine inspections will be undertaken to ensure that the integrity of all BMP efforts are maintained. These measures will remain in place until the site is stabilized.

Contractors will be trained on storm water requirements, and the BMPs that must be followed. Monitoring and possibly sampling will be conducted by a third party contractor managed by H-POWER.

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Post-Development Storm Water Management

A SWPCP and a Storm Water Monitoring Plan (SWMP) will be required for the operations associated with this site and will comply with storm water quality standards, and the terms of the NPDES Storm Water GUP. Once construction is finished and site stabilization is completed, the temporary construction siltation barriers will be removed. Permanent storm water controls will be constructed, to include swales, retention ponds, and oil water separators for the scales. The Solar Building is in close proximity to the ocean, therefore the controls installed will help with a zero discharge classification.

Designated Surface Water Resource Areas

A review of known or designated surface water features and coastal constraints was conducted, to determine proximity to potential resources of concern. These included coastal constraints as well as designated floodplains. Figure 2.6-2 depicts these designated areas with respect to the Parcels.

Coastal Constraint Areas

Surface water constraints on Oahu are shown on Figure 2.6-2 and are regulated by a variety of state and local agencies. The following is a brief summary of these designated coastal resource areas proximate to the Parcels.

Coastal Zone

The entire Island of Oahu is classified as within the Coastal Zone, as footnoted on Figure 2.6-2, with the exception of regulatory exemptions for federally owned lands. Though not mapped, the Parcels are within the Coastal Zone. The Hawaii Coastal Zone Management Program (CZMP) (under the Department of Business, Economic Development & Tourism's Office of Planning) conducts CZMP federal consistency review for certain types of projects. Federal consistency review is not a requirement, as this project does not involve activities conducted by federal agencies, does not require any federal license or permit subject to CZM Program review and will not be receiving federal funds.

This project is consistent with the CZM objectives and policies specified within HRS §205A-2, as there are no anticipated impacts to any of the recreational resources, historical resources, scenic/open space resources, coastal ecosystem, economic use, beach and marine resources.

Special Management Area (SMA)

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

The SMA is a key aspect of the CZMP. Administered by DPP, no development can occur in the SMA unless the DPP first issues a permit. Development is defined to include most uses, activities and operations on land and in the water. The SMA originally encompassed all lands extending not less than 100 yards inland from the shoreline, though in some areas, the SMAs extend several miles inland to cover areas in which coastal resources are likely to be directly affected by development activities.

As mapped on Figures S1 and 2.6-2, the project footprint is not within the SMA. A portion of Parcel 35 contains an SMA, but it fenced off, will be protected, and will not be encroached.

Shoreline Setback Line

The Parcels are not within the Designated Shoreline Setback line, or the Shoreline Buffer Zone Line (Figure 2.6-2). The Designated Shoreline Setback and Buffer Zone Lines are each situated west of Kaomi Loop. The City and County of Honolulu Department of Planning and Permitting (DPP) regulates activities within the Shoreline Setback Line.

Tsunami Evacuation Zone

As described in Section 2.4, tsunamis pose a risk to many coastal areas on Oahu. Figure 2.4-1, shown previously, depicts the evacuation zone identified for this area of Oahu. The evacuation zones, developed by the National Oceanic and Atmospheric Administration (NOAA) in partnership with the State of Hawaii's Civil Defense, do include the Parcels. In the event of a tsunami, evacuation and response procedures will be followed, as detailed in the emergency response plans maintained by H-POWER and the Refuse Division.

Floodplains

The Parcels are located outside of designated Special Flood Areas. Figure 2.6-2 depicts mapped Flood Area (DPP, 2004). A review of the most recent Federal Emergency Management Area (FEMA) Flood Insurance Rate Map (FIRM) was also conducted (FEMA 2008). ~~The FIRM maps were not available in hard copy or electronic format. However, no change from the DPP electronic map data was observed in the project area.~~ A copy of the January 19, 2011 2004 FIRM is provided in Figure 2.6-3 and is the most recent FIRM as of the publication date of this EA. The Parcels are outside of the designated Flood Hazard Zones. As shown on Figure 2.6-2 and confirmed on the FIRM map, the closest designated Flood Hazard Area is situated west of Kaomi Loop along the coast and is designated Zone AE, which is a flood insurance rate zone that correspond to the 1-percent annual chance floodplains that are determined in the Flood Insurance Study; mandatory flood insurance purchase requirements apply. According to the FIRM map, the Parcels are located in Flood Zone D, which is a zone where

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

flood hazards are undetermined, but possible. The Flood Insurance Program does not have any regulations for developments within Flood Zone D.

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

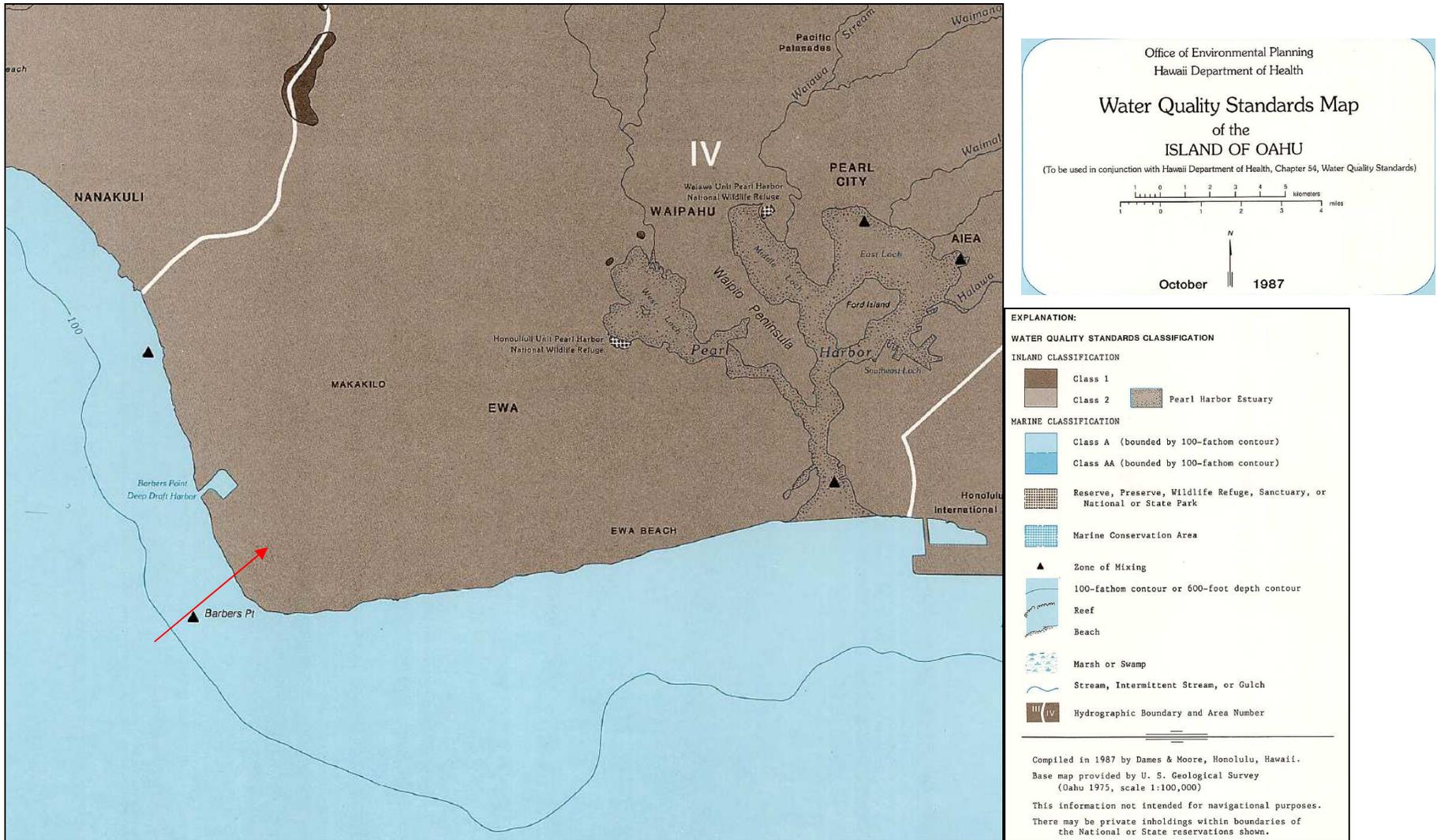


Figure 2.6-1: Water Quality Standards (State Department of Health, Clean Water Branch)

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

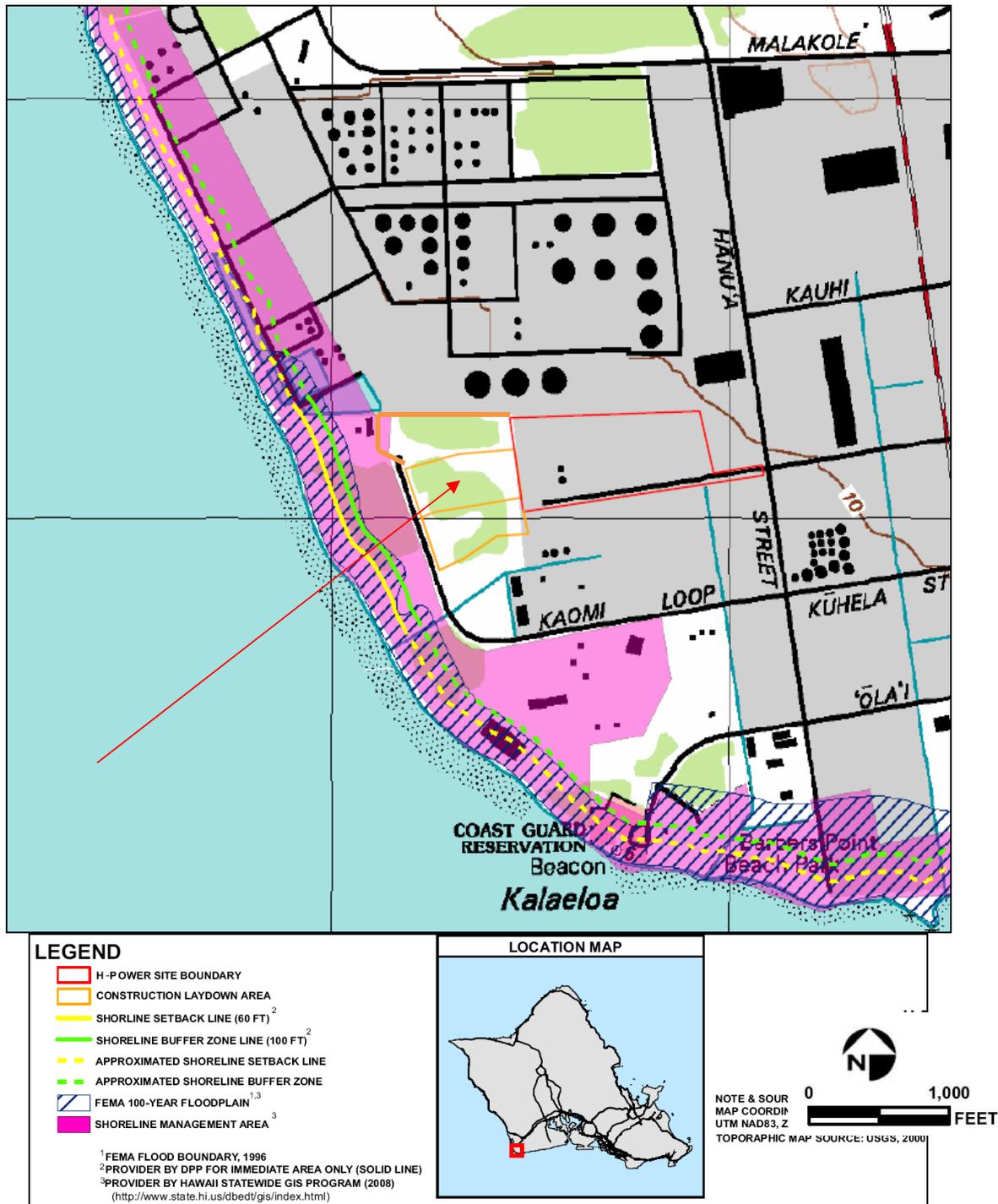


Figure 2.6-2: Surface Water Constraints Map (Prepared by AMEC, 2008)

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

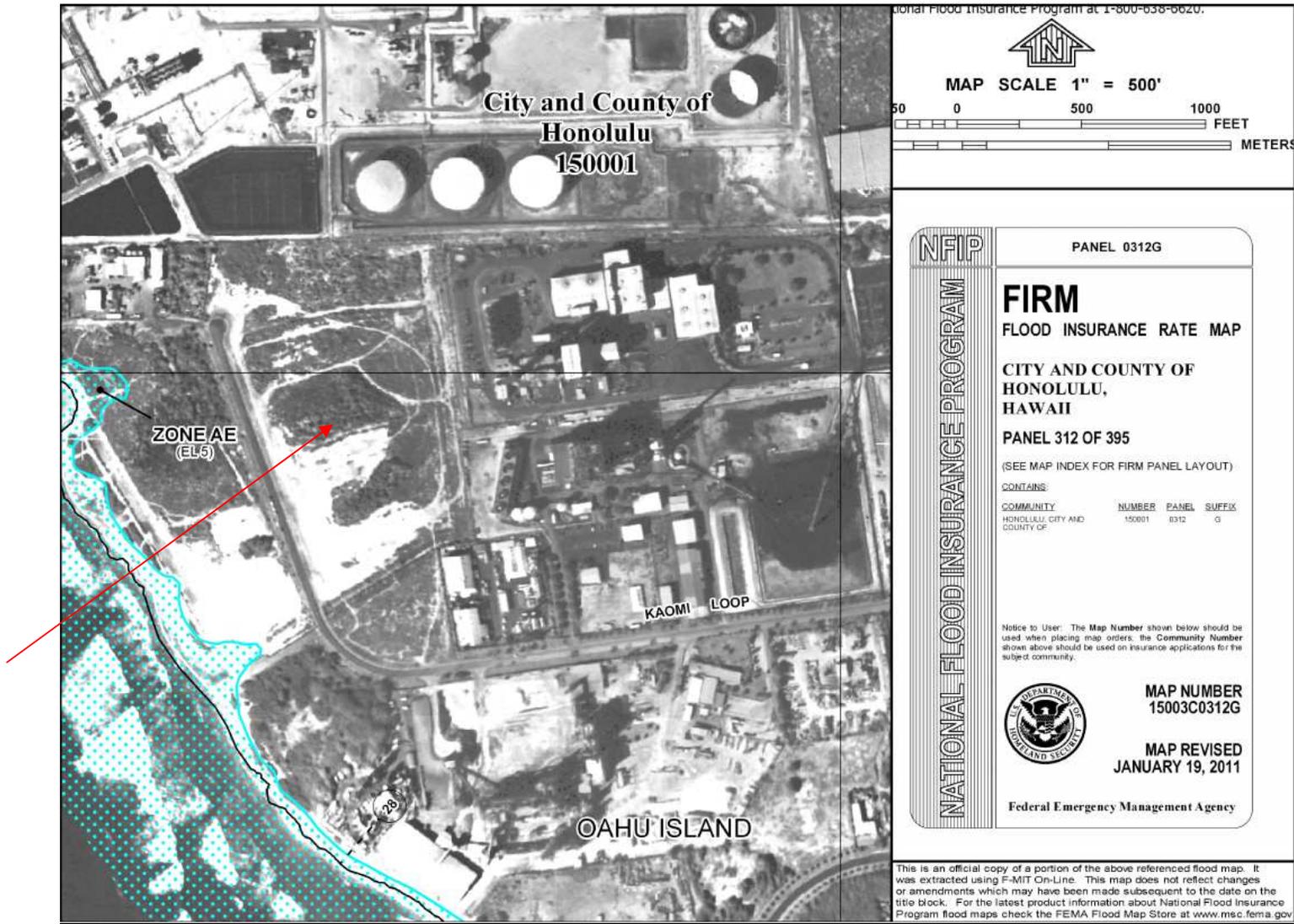


Figure 2.6-3: Flood Insurance Rate Map (FIRM) Effective 1/19/2011

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

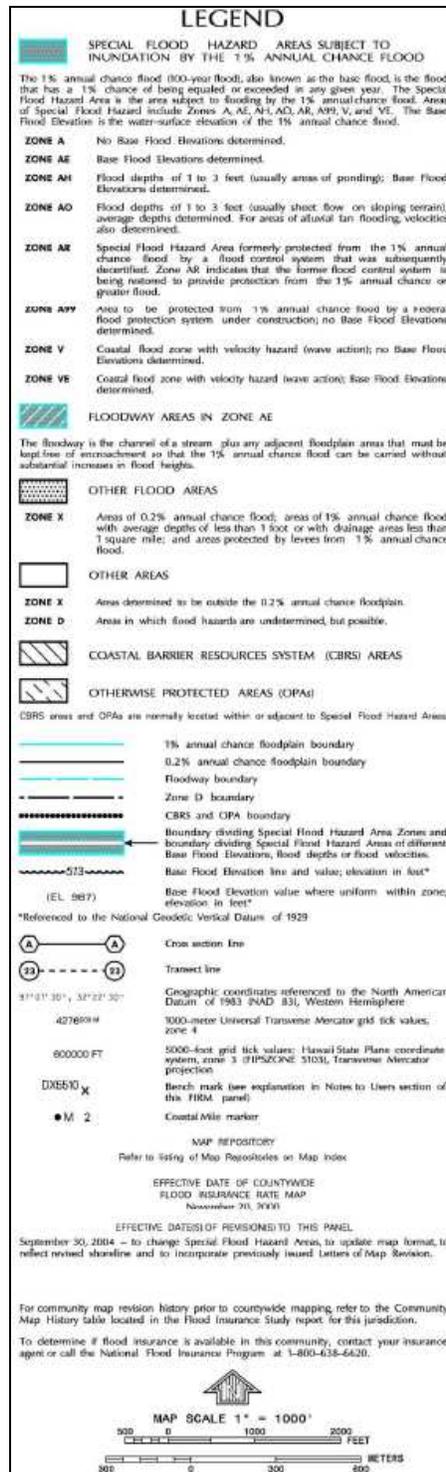


Figure 2.6-3 Legend

2.7 Groundwater

Baseline Conditions

Groundwater is a key resource for the island of Oahu. Of the total freshwater used on Oahu, 326 million gallons per day (Mgal/d) is from ground water and 71 Mgal/d is from surface water. Most of the groundwater on the island of Oahu is derived from extensive volcanic aquifers of thin-bedded basalts in central and southern Oahu. These aquifers are unconfined and though often at great depth (600-1,000 ft) are essentially “surficial” aquifers and therefore vulnerable to contamination (USGS 1998). As a result, water resource protection and management is important on Oahu.

The Parcels are located within the Ewa (Limestone) Caprock Aquifer. The Ewa limestone aquifer is a brackish to saline groundwater body that exists as a thin basal lens in the permeable coralline reef deposits that comprise the Ewa Plain. Figure 2.7-1 depicts aquifers, the Ewa Caprock zone, and the Parcels.

Consistent with the goals of protecting water resources, groundwater governance in Hawaii is split into two distinct aspects: (1) Groundwater withdrawals and (2) injection wells. Groundwater withdrawals, stream diversions and water use are regulated under the State Water Code and its implementing rules. The Commission on Water Resource Management (CWRM), Department of Land and Natural Resources (DLNR) manages the designation and regulation of Water Management Areas, water withdrawals and well construction activities. Groundwater injection wells, or Underground Injection Control Wells, are typically used for disposal of cooling waters, and are governed by rules administered by Hawaii Department of Health (HDOH), Safe Drinking Water Branch.

The permitting of underground injection wells on Oahu is also affected by the location of the wells. Figure 2.7-2 shows that in coastal regions where waters can be saline at depth, the underlying aquifers may not be considered a drinking water source and though permit limitations are imposed, wells may be permitted.

Construction Impacts & Mitigation

Potential effects of the construction of the proposed building upon groundwater resources are very limited. Construction activities will not involve the use of substantial amounts of chemicals or other potential contaminants. The only potential for impact to groundwater would be from accidental release of fuel or lubricants from construction vehicles or equipment. Spill kits with oil absorbent pads and mats will be available at the construction site, and portable secondary containment for oil-filled equipment. It is not anticipated that significant groundwater impacts would result from construction operations. All construction activities will occur in compliance with the project construction SWPCP.

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Operational Impacts & Mitigation

Water service for the building will be needed for restroom facilities. Additional water needed for recycling operations occurring within the building is expected to be minimal.

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

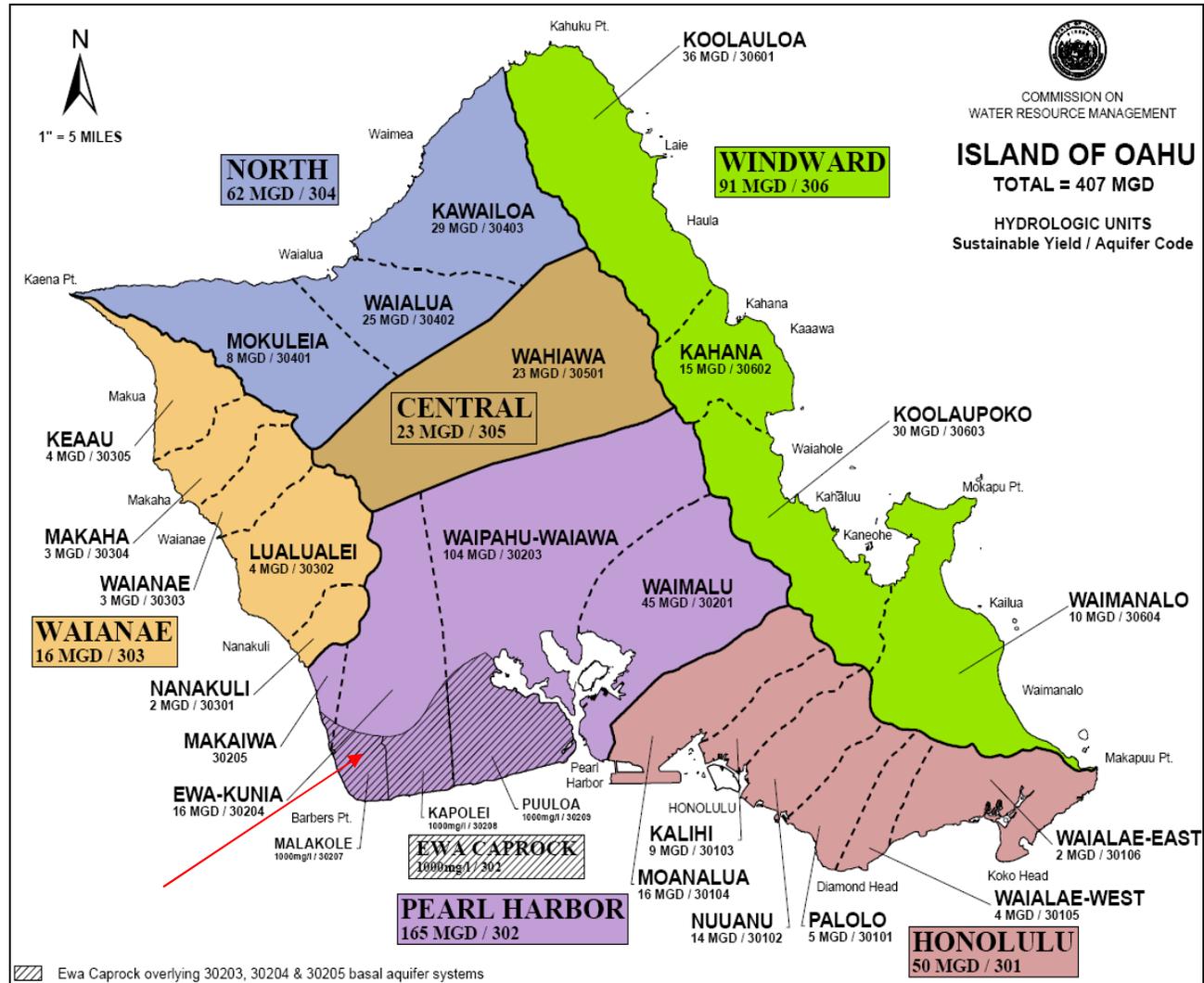


Figure 2.7-1: Aquifers

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

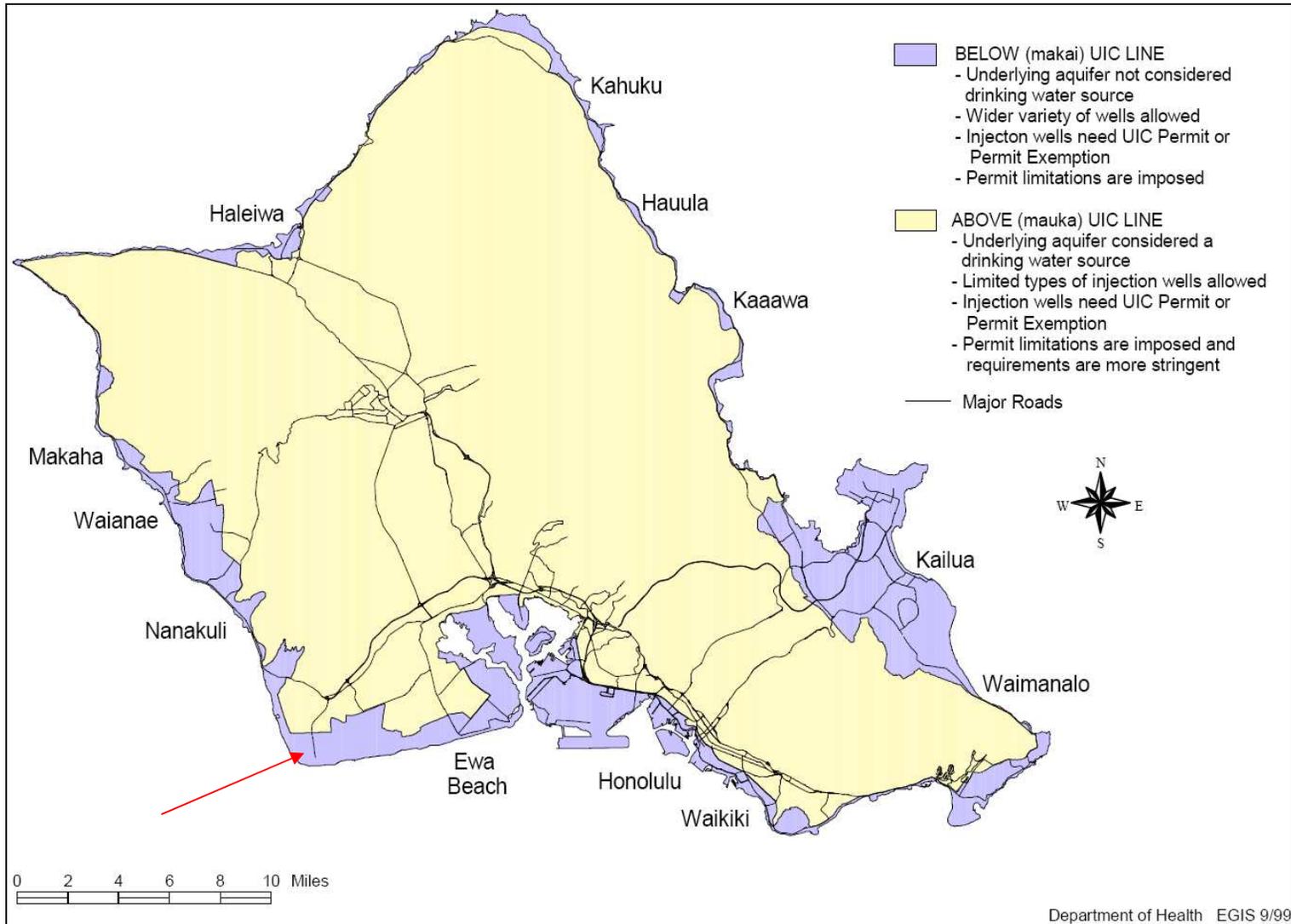


Figure 2.7-2: Underground Injection Control Areas

2.8 Biological Resources

This section discusses the existing biologic environment in and around the Parcels. This section is an excerpt from the H-POWER Expansion EIS, where the two southernmost parcels (TMK 9-1-026:033, 9-1-026:034) and were evaluated for construction laydown and equipment storage activities associated with the Third Boiler Expansion Project. The proposed action will take place on Parcels 33, 34, and 35. Although the biological analysis did not include Parcel 35, it is with our sound judgment that similar results would be seen with Parcel 35. We will be using excerpts from the EIS and Biological report, to supplement the research completed this year. Baseline conditions, including resource areas of concern and special status species, are identified and the potential impacts of the proposed action are presented. Mitigation measures, such as Storm Water controls and use of buffer areas, are evaluated.

Existing Conditions - Biological Resources

The Parcels are located in what is commonly referred to as the Ewa Plain. The Ewa plain is characterized as:

A semi-arid region of intense sunshine, warm trade winds, and sparse rainfall. At the western end of the plain these conditions are all the more accentuated. Except for a few coastal marshlands and other favored localities, the vegetation is typically xeric and, where undisturbed by modern developments, is dominated by hardy exotics (Davis 1990a).

Figure 2.8-1 depicts National Wetland Inventory (NWI) data for the region surrounding the Parcels. ~~As shown on that figure, no onsite resources are identified.~~ A freshwater emergent wetland (PEM1A) was identified by comments received by Department of Planning and Permitting, however, upon additional consultation it was determined that this area does not meet the requirements for a freshwater emergent wetland.

An initial biological resource site reconnaissance survey of Parcels 30, 33, and 34 was conducted by an AMEC biologist during November 9 – 11, 2004. A confirmation biological survey was conducted by an AMEC biologist on August 27, 2008 to update the findings of the initial survey for the H-POWER Expansion EIS. Findings from the August 2008 survey were in agreement with the findings from the November 2004 survey. A list of plant species observed is presented in Table 2.8-1.

Survey Methodology

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

The methodology for the November 2004 survey included a pedestrian survey of the H-POWER facility perimeter and open lawn areas and transects through Parcels 33-34. Due to limited site access, perimeter-only survey of a fenced enclosure (endangered plant preservation area) within Parcels 33 and 34 was also conducted in the November 2004 survey.

The methodology for the August 2008 survey was modified from the 2004 survey since the vegetation throughout the Parcels had become more dense (over 12 feet tall in the fenced enclosures and typically at least four feet tall outside the enclosures). Bordering access roads and transects were also surveyed in open areas around the perimeter. Dense surrounding vegetation provided only limited access to the fenced enclosures within the Parcels. When openings in the vegetation permitted, the perimeter of the fenced enclosure was surveyed.

Figure 2.8-2 depicts the extent of development in the early 1990's.

Flora

The surrounding area and adjacent properties consist of introduced and ornamental vegetation, including Bermuda grass (*Cynodon dactylon*), monkey pod trees (*Samanea saman*), autograph trees (*Clusia rosea*), *Hibiscus sp.*, and milo trees (*Thespesia populnea*). Other plant species included coconut trees (*Cocos nucifera*), beach naupaka (*Scaevola sericea*), and yellow oleander (*Cascabela thevetia*).

Fauna

Animals currently found in the area include feral cats and a variety of other non-native species wildlife such as mongoose, mice, and rats. Bird species observed included: zebra doves (*Geopelia striata*), spotted doves (*Streptopelia chinensis*), sharp-tailed sandpipers (*Calidris acuminata*), mynah birds (*Acridotheres tristis*), feral chickens (*Gallus gallus*), red vented bulbuls (*Pycnonotus cafer*), common waxbills (*Estrilda astrild*), and cattle egrets (*Bubulcus ibis*). These animal species are transient over much of the 24.6 acres of the facility. Additionally, the ornamental trees and bushes may serve as nesting sites for various bird species.

Special Status Species

Flora and Invertebrate Fauna

On October 8, 2004, the U.S. Fish and Wildlife Service (USFWS) replied to a letter requesting a list of rare, threatened, or endangered species, and significant natural communities that may be affected by the proposed H-POWER Expansion. The USFWS list included one endangered plant, *Achyranthes splendens var. rotundata*, as occurring in the Parcels (USFWS 2004a). This species is a low shrub varying in height from 1½ to 6½ feet. Three locations

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

within the Parcels have been fenced and are currently and will continue to be protected as plant preservation areas. Due to limited site access, only the perimeters of the three fenced enclosures were surveyed during the November 2004 biological site reconnaissance. When the dense surrounding vegetation occasionally permitted access, the perimeters of the fenced enclosures were surveyed in August 2008.

The enclosures within the Parcels are maintained annually. Maintenance consists of clearing invasive species and protecting native or endangered species. According to Mr. Shad Kane, the enclosures within the Parcels shelter the last naturally occurring populations of the endangered plant, *Achyranthes splendens* var. *rotundata*. Mr. Kane is actively involved in community affairs in the Ewa area and has managed the plant sanctuaries on Parcels 32-33 and 33-34 for the City. He was hired by the City to assist in the preparation of a habitat preservation plan and the establishment of “wild sites” for the endangered species contained within the sanctuaries. Mr. Kane also shared his observation that condensation from precipitation and runoff that collects in the sinkholes within the plant preservation enclosures appears to support the *Achyranthes* populations, especially during the drier summer months.

Additionally, prior communication on July 20, 2004 with USFWS (USFWS 2004b) indicated that the endangered plant *Chamaesyce skottsbergii* var. *skottsbergii* is known from the surrounding area. The July 2004 correspondence also indicated that an invertebrate species of concern, *Lyropupa perlonga*, is thought to be present in an area adjacent to the project site, though a specific location was not identified, and no individuals of this species were observed during the November 2004 and August 2008 site reconnaissance surveys.

Vertebrate Fauna

The shoreline, estuarine, and freshwater areas associated with Pearl Harbor are known habitat for four species of endemic waterfowl which are listed by both Federal Government and by the State of Hawaii as endangered species: the Hawaiian moorhen (*Gallinula chloropus sandvicensis*), the Hawaiian coot (*Fulica americana alai*) the Hawaiian duck (*Anas wyvilliana*) and the Hawaiian stilt (*Himantopus mexicanus knudseni*) [50 CFR Part 17]. Previous sightings of three of these four species (Hawaiian coot, Hawaiian moorhen and Hawaiian stilt) have been documented in the vicinity of the project area (USFWS 2004a). Population levels of these endangered waterfowl have been severely reduced primarily because of the loss of wetland habitat. Other threats to these species include predation by introduced mammals, invasion of wetlands by alien plants and fish, hybridization, disease, and possibly environmental contaminants (USFWS 1994). No endangered waterfowl species were observed during the November 2004 and August 2008 site reconnaissance surveys.

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Two additional species of birds, listed as threatened or endangered by the State of Hawaii, but not listed by the Federal Government, are found in the vicinity of Pearl Harbor. These two species include the state-threatened white tern (*Gygis alba rothschildi*), a diminutive, arboreal nesting seabird which can be seen around Pearl Harbor, and the state-endangered Hawaiian owl (*Asio flammeus sandwichensis*) an endemic race of the crepuscular, ground-nesting shorteared owl). Neither of these species were encountered during the November 2004 and August 2008 site reconnaissance surveys.

Impacts and Mitigation

Correspondence with USFWS, included in Appendix C, identified the following precautionary measures that will be implemented to prevent possible impacts to biological resources:

1. Predator control methods for the protection of potential Hawaiian seabirds that may be attracted to the project area, and informational signage to prevent feeding of endangered birds and feral animals.
2. Surveillance for potential avian botulism outbreaks. In the event of an outbreak, we will respond by removing carcasses and conducting post-outbreak waterbird monitoring.
3. Biological surveying for Hawaiian waterbirds, Hawaiian geese, and any nesting activity at the proposed project site prior to project initiation. If any nests or broods are documented, they will be reported within 48 hours and a 100-ft buffer will be established and maintained around all active nests and broods until fledging. Notification will be made prior to project initiation and results of biological surveys will be provided.
4. Additional biological monitoring will be conducted to ensure that Hawaiian waterbirds, Hawaiian geese, and their nests are not adversely impacted during construction. If a listed Hawaiian waterbird is observed within the project site, or flies into the site while activities are occurring (within 100 ft) all potentially disruptive activities will be stopped until the animal(s) voluntarily leave the area.
5. To minimize impacts to the endangered Hawaiian hoary bat, woody plants greater than 15 feet tall will not be disturbed, trimmed, or removed between June 1 and September 15, and any fences constructed will be designed to avoid the use of barbed wire.
6. The project will minimize night-time lighting to that necessary for safety and security, and lighting will not project horizontally as to minimize attraction of seabirds. If the seabirds are attracted to the facility and end up grounded, contact will be made to the State Division of Forestry and Wildlife and/or a permitted seabird rehabilitation facility (i.e. Sea Life Park, Hawaii Wildlife Center, or other facility) for instructions.

Though not likely to occur due to the existing dryland habitat and industrial nature of the site location, construction workers are to be trained to suspend

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

construction activities if transient bird species of concern are encountered at or near the site. A biologist will conduct the initial training and provide a short information packet so that workers are familiar with (1) the endangered Hawaiian coot or alae keokeo (*Fulica alai*), (2) the Hawaiian gallinule or alae ula (*Gallinule chloropus sandvicensis*), and (3) the black-necked stilt or aeo (*Himantopus mexicanus knudsenii*). Workers will be instructed to notify their supervisor who will contact an on-call biologist for confirmation. If confirmed, the biologist will contact the Pacific Islands Fish and Wildlife Office. In the event that the on-call biologist is unavailable the construction supervisor will be provided with the contact information and will be instructed to contact the Pacific Islands Fish and Wildlife Office directly.

The lack of wetland habitat onsite minimizes the potential for impacts to waterfowl species due to lack of proper habitat. Silt fencing and petroleum abatement measures will surround the construction areas.

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER



Figure 2.8-1: National Wetlands Inventory (September 17, 2015) Prepared by AMEC, (2008)

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Table 2.8-1 Plant Species Observed or Known to Occur on Parcels 30 and 33-34
 (November 2004 Biological Reconnaissance Survey)

Plant Species	Common Names	Family	Status
<i>Asystasia gangetica</i>	Chinese violet	Acanthaceae	non-native
<i>Sesuvium portulacastrum</i>	akulikuli; sea purslane	Aizoaceae	indigenous; common
<i>Achyranthes splendens var. rotundata</i>	--	Amaranthaceae	endemic; endangered
<i>Amaranthus spinosus</i>	spiny amaranth	Amaranthaceae	non-native
<i>Amaranthus viridis</i>	slender amaranth	Amaranthaceae	non-native
<i>Cascabela thevetia</i>	yellow oleander; be-still tree	Apocynaceae	non-native
<i>Schefflera actinophylla</i>	octopus tree	Araliaceae	non-native
<i>Cocos nucifera</i>	coconut tree; niu	Arecaceae	non-native
<i>Bidens alba</i>	beggar's tick	Asteraceae	non-native
<i>Pluchea indica</i>	Indian pluchea; Indian fleabane	Asteraceae	non-native
<i>Pluchea symphytifolia</i>	sourbush	Asteraceae	non-native
<i>Tridax procumbens</i>	coat buttons	Asteraceae	non-native
<i>Verbesina encelioides</i>	golden crown-beard	Asteraceae	non-native
<i>Batis maritima</i>	pickleweed; salt wort	Bataceae	non-native
<i>Heliotropium curassavicum</i>	seaside heliotrope; kipukai; nena	Boraginaceae	indigenous; common
<i>Heliotropium procumbens</i>	--	Boraginaceae	non-native
<i>Opuntia ficus-indica</i>	prickly pear cactus; panini	Cactaceae	non-native
<i>Capparis sandwichiana</i>	maiapilo; pilo; pua pilo	Capparaceae	endemic, vulnerable
<i>Atriplex semibaccata</i>	Australian saltbush	Chenopodiaceae	non-native
<i>Clusia rosea</i>	autograph tree	Clusiaceae	non-native
<i>Ipomea cairica</i>	ivy-leaved morning glory; koali ai	Convolvulaceae	non-native
<i>Momordica charantia</i>	balsam pear; bitter melon	Cucurbitaceae	non-native
<i>Chamaesyce hirta</i>	garden spurge	Euphorbiaceae	non-native
<i>Acacia farnesiana</i>	klu	Fabaceae	non-native
<i>Alysicarpus vaginalis</i>	alysicarpus	Fabaceae	non-native
<i>Desmanthus virgatus</i>	slender mimosa; virgate mimosa	Fabaceae	non-native
<i>Leucaena leucocephala</i>	haole koa; koa haole; wild tamarind	Fabaceae	non-native
<i>Mimosa pudica</i>	sensitive plant; sleeping grass	Fabaceae	non-native
<i>Prosopis pallida</i>	kiawe; mesquite	Fabaceae	non-native
<i>Samanea saman</i>	monkeypod tree	Fabaceae	non-native

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Table 2.8-1 Plant Species Observed or Known to Occur on Parcels 30 and 33-34
 (November 2004 Biological Reconnaissance Survey)

Plant Species	Common Names	Family	Status
<i>Scaevola sericea</i>	beach naupaka; naupaka kahakai	Goodeniaceae	non-native
<i>Abutilon grandifolium</i>	hairy abutilon	Malvaceae	non-native
<i>Sida fallax</i>	ilima	Malvaceae	indigenous, common
<i>Myoporum sandwicense</i>	naio; naeo; naieo; bastard sandalwood	Myoporaceae	indigenous; common
<i>Boerhavia coccinea</i>	--	Nyctaginaceae	non-native
<i>Oxalis corniculata</i>	wood sorrel; 'ihi' ai	Oxalidaceae	non-native
<i>Passiflora foetida</i>	love-in-a-mist; wild passionfruit; pohapoha	Passifloraceae	non-native
<i>Brachiaria subquadripata</i>	--	Poaceae	non-native
<i>Cenchrus ciliaris</i>	buffel grass	Poaceae	non-native
<i>Chloris barbata</i>	swollen finger grass; mau'u lei	Poaceae	non-native
<i>Cynodon dactylon</i>	Bermuda grass; manienie	Poaceae	non-native
<i>Dactyloctenium aegyptium</i>	beach wiregrass	Poaceae	non-native
<i>Eleusine indica</i>	goose grass; manienie ali'i	Poaceae	non-native
<i>Sporobolus diander</i>	Indian dropseed	Poaceae	non-native
<i>Lycopersicon pimpinellifolium</i>	cherry tomato	Solanaceae	non-native
<i>Nicotiana glauca</i>	tree tobacco; Indian tobacco; makahala	Solanaceae	non-native
<i>Waltheria indica</i>	uhaloa	Sterculiaceae	indigenous; common

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER



Figure 2.8-2: Aerial Photograph (Early 1990's)

Section 3 - Cultural Impacts

ASSESSMENT OF THE EXISTING HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATIVE MEASURES

This chapter describes the existing human environment in the area of the proposed action that would potentially be affected. Because the human environment can be regional in nature, regional issues are addressed where necessary to establish an appropriate perspective on the human environment.

This section also assesses the environmental consequences to the human environment that may result from the proposed action. Potential temporary and permanent impacts are described and evaluated and mitigation measures that would eliminate and/or reduce potential adverse impacts are identified.

3.1 Archaeological and Cultural Resources

Pacific Consulting Services, Inc. (PCSI) undertook an archaeological and cultural impact assessment study in support of the H-POWER Expansion Project in 2008. PCSI, a Honolulu-based consulting firm offering professional archaeology services, evaluated the H-POWER site, and the adjacent parcels, 9-1-026:033 and 9-1-026:034, consisting of vacant land for construction laydown and equipment storage activities associated with the Third Boiler Expansion Project. The proposed action will take place on Parcels 33, 34, and 35. Although the PCSI analysis did not include Parcel 35, it is with our sound judgment that similar results would be seen with Parcel 35. We will be using excerpts from the PCSI report, to supplement the research completed this year. The PCSI analysis includes an evaluation of baseline (existing) and potentially existing resources, as well as an assessment of the effect that the H-POWER Expansion Project might have upon archaeological or cultural resources. The section below summarizes the results of that study that are applicable to the proposed action. Standards and guidelines for archaeological and cultural resource assessments are presented, baseline conditions described, anticipated impacts are evaluated and the potential for mitigation discussed.

Standards and Guidelines for Archaeological and Cultural Resource Assessments

Various local and Federal Agencies have established guidelines and standards for assessing archaeological and cultural impacts. The applicable guidelines and standards are summarized below:

National Historic Preservation Act

The National Historic Preservation Act (NHPA) was passed in 1966 which, in the words of the Act, the Federal Government's role would be to "provide leadership" for preservation, "contribute to" and "give maximum encouragement" to preservation, and

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

"foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony."

To achieve this, NHPA and related legislation sought a partnership among the Federal Government and the States that would capitalize on the strengths of each. The Federal experience in studying, managing, and using historic resources, would provide funding assistance, basic technical knowledge and tools, and a broad national perspective on America's heritage.

The States, through State Historic Preservation Officers appointed by the Governor of each State, would provide matching funds, a designated State office, and a statewide preservation program tailored to State and local needs and designed to support and promote State and local historic preservation interests and priorities. In Hawaii the State Historic Preservation Office is referred to as the State Historic Preservation Division (SHPD).

State Historic Preservation Division

The Hawaii SHPD issued draft guidelines for the preparation of archaeological studies in December 2002 and the requirements for certain archaeological assessments are described in Chapters 13-275 and 13-276 of the Hawaii Administrative Rules. Section 13-275 (a) 5(A) states that:

An archaeological assessment shall include the information on the property and the survey methodology as set forth in subsections 13-276-5(a) and (c), as well as a brief background section discussing the former land use and types of sites that might have been previously present.

The archaeological assessment that was undertaken follows the draft guidelines issued by SHPD and the Hawaii Administrative Rules.

State Office of Environmental Quality Control

The State OEQC publishes Guidelines for Assessing Cultural Impact, which are designed to comply with the requirements of Chapter 343 HRS as amended in 2000 and approved by the Governor as Act 50 that same year. The archaeological assessment that was undertaken follows these guidelines.

3.2 Study Methodology and Scope

The study methodology and scope of the work conducted included the following:

- Archival background research on the culture history and previous land uses of the project area;
- Literature review of previous archaeological studies within and surrounding the proposed action site

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

- Verbal and written consultation with the Office of Hawaiian Affairs (OHA);
- Interviews with community members recommended by the State Historic Preservation Division; and
- Reconnaissance survey of parcels 30 and 33-34 to determine the presence/absence of cultural resources

An archaeological reconnaissance survey and follow-up test excavations of possible historic sites of Parcel 30 were undertaken as part of the environmental review process for H-POWER in 1983-84 (Ahlo and Hommon 1983; Hommon and Ahlo 1984). No historic properties were found at that time. Human remains were found during construction of H-POWER, in 1986.

The results of the site reconnaissance of parcels 30, 33, and 34 and cultural resource investigations form the basis of the summary of existing conditions that follows in Section 3.3 below.

3.3 Existing Conditions - Archeological and Cultural Resources

In discussing existing conditions for archaeological and cultural resources, it is important to understand that much of the evaluation must focus on resource potential and oral history. Though some information about identified resources does exist, often, existing conditions are defined on the basis of resources suspected to have existed or on the basis of those potentially remaining at a given location. The project area is located on what is commonly known today as the Ewa Plain, a vast expanse of land that is part of an emerged Pleistocene age coral reef that was subsequently covered to varying depths with a mantle of marine sediments, alluvium and a shallow calcareous soil mantle, except for a few places on or near the shoreline where the reef surface is still exposed. The surface of the reef is pock-marked with solution cavities or “sinkholes” of widely varying sizes. The soil survey map for Oahu shows the project area as coral outcrop (Foote et al. 1972)

Archaeological Resources

As noted above, Parcel 30 - the H-POWER site – is heavily industrialized and has undergone extensive ground disturbance at depth during construction of the original H-POWER facility. The proposed project site has been cleared and grubbed previously for construction laydown use for the H-POWER Third Boiler Expansion Project. The fact that human remains were found during construction of the original facility in 1986 indicates that however remote, there is a possibility that more burials may exist nearby. The proposed action site will be monitored by a qualified archaeologist during all ground disturbing activities.

A brief reconnaissance of the proposed location of the H-POWER Expansion Project was conducted on August 13, 2008. This location, immediately east (mauka) of the existing H-POWER plant, includes the plant’s existing parking lot and adjacent

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

landscaped lawn areas. While the karst landscape of the Ewa Plain no longer exists in the H-POWER Expansion Project site, Burial Site 6684 is located nearby.

In late 2010, the H-POWER Expansion Project needed an additional construction laydown area adjacent to parcel 34, and because it was known that Parcel 35 had undergone extensive clearing and grading in the past (McCoy and Clark 2008), an agreement was reached between SHPD, Parsons (the general contractor for the H-POWER Expansion Project), and PCSI to allow for additional clearing and grading of portions of Parcel 35 for additional laydown space concurrent with test excavations in selected sinkholes for an Archaeological Inventory Survey (AIS). A work plan was developed and approved by SHPD for the AIS of Parcel 35.

Paleontological materials, consisting of avifaunal remains, were encountered in all of the test excavations. The sinkholes yielded a small but significant sample of paleontological bird bone. To a limited extent, it resembles previously recovered faunal collections (e.g., those recovered during archaeological investigations for the Barbers Point Deep Draft Harbor) in that Petrels/Shearwaters predominate in the identified bone. It is likely that future studies in these sinkholes may provide much more information and a more accurate picture of what bird species were formerly present and whether or not human settlement of the area coincided with the bird populations that once lived in the area.

Due to the presence of the Medium mammal bone in Layer II in Sinkhole 9 that is probably cultural in origin, this sinkhole has been determined to be a historic site. It was recommended that Sinkhole 9 – SIHP No. 50-80-12-7417 – be deemed significant under Criteria “D” and “E,” and that the concentrations of sinkholes on Parcel 35 be preserved. A preservation plan has been developed that includes limited archaeological data recovery, provisions for protecting the sites, and developing a program of public access and education around these important features of Ewa’s past. The sites will be protected by a perimeter fence. A 5 meter (15 feet) buffer is provided within the fenceline.

Cultural Resources

The cultural impact assessment for the H-POWER Expansion Project involved: (1) a literature search prior to the archaeological field assessment to determine the presence/absence of Traditional Cultural Properties; (2) verbal and written consultation with the Office of Hawaiian Affairs (OHA), and (3) field interviews with two individuals from the Kapeolei area, Ms. Lynette (“Auntie Nettie”) Tiffany and Mr. Shad Kane, who were recommended by Muffet Jourdane (Assistant Oahu Archaeologist) and Nathan Napoka (History and Culture Branch Chief) of the State Historic Preservation Division (SHPD). Auntie Nettie, who is employed by the Estate of James Campbell, is the supervisor (kahu) for Lanikuhonua. She is also a member of the Oahu Island Burial Council.

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

The site visit with Auntie Nettie and Shad Kane took place on November 16, 2004. After an initial meeting which included an overview of the proposed project and examination of the aerial photographs showing recent changes to the project area, Mr. Rodney Smith (Covanta) accompanied PCSI to the site of the re-interred burial.

Following a brief discussion about the burial, Mr. Kane took PCSI into the plant sanctuary on Parcels 33-34, which contains *Achyranthes splendens* var. *rotundata*, *naio* (*Myoporum sandwicense*) and various other plants. Mr. Kane noted the presence of an endemic shrimp ('ōpae'ula) in the brackish water located in the sinkholes within the enclosure. According to Mr. Kane, the sinkholes fill up with water after heavy rains. There are two species of 'ōpae'ula (*Halocaridina rubra* and *Metabetaeus lohena*). It is unclear which of the two species occur in these particular sinkholes. The 'ōpae'ula was used in traditional times as bait for 'ōpelu fishing (Pukui and Elbert 1986:291). Mr. Kane expressed a concern that the 'ōpae'ula population could be adversely affected by contaminants entering the water table, depending on what kinds of equipment and supplies will be temporarily placed in the laydown area. Both Mr. Kane and Auntie Nettie emphasized the importance of preserving more sinkholes in the Kalaeloa area and other areas because of the native plants, human remains, and other evidence of past human uses that are often found in and around them. The sinkholes, which once numbered in the thousands and formed part of a vast natural and cultural landscape in the Kalaeloa area, are now restricted to a small number of undeveloped or undisturbed properties. The sinkholes contained within the two plant enclosures and in the kiawe thicket in Parcel 35 represent some of the last remaining examples of this landscape in the local area. Auntie Nettie and Mr. Kane also expressed a concern that more attention be given to protecting the shoreline area across the road from the Parcels.

No information on beliefs, cultural practices, or culturally important places within the boundaries of the proposed project area or adjacent areas was provided, except for a story Auntie Nettie related about her mother, Leilani Fernandez, exchanging dried fish and salted meat for 'ōkole hao, a liquor made from ti plants, that was made by a man who lived somewhere nearby. No response was received from OHA to a letter dated October 14, 2004 requesting information on traditional Hawaiian beliefs, cultural practices, and culturally significant sites (now commonly referred to in the Cultural Resource Management (CRM) literature as Traditional Cultural Properties) in or near the proposed project area. A second letter was sent to OHA on August 13, 2008 requesting information concerning traditional cultural practices and places. OHA's response, dated September 4, 2008, requested that burials and plant sanctuaries be protected during Expansion activities and reiterated the elevated potential of additional undiscovered subsurface burial sites existing in the area (Appendix A of H-POWER Expansion Final EIS).

On current evidence, there are no known Traditional Cultural Properties or on-going cultural practices within or near the Area of Potential Effect (APE) based on a review of the pertinent literature for the area and the consultation with Auntie Nettie and Mr. Kane. While it is likely that culturally significant sites did exist at one time within or in close proximity to the H-POWER plant, the nearest (approximately 2.7 miles) known surviving

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

site with cultural significance is Pu'uokapolei, a small cinder cone that is the most prominent landmark on the Ewa Plain and the former site of Fort Barrette. In their synthesis of cultural resource studies on the Ewa Plain, Tuggle and Tomonari-Tuggle (1997:21) noted that Pu'uokapolei was the sacred center of that part of Oahu:

Probably the most important of all traditional locales on the Ewa Plain is the hill known as Pu'uokapolei. This volcanic cone at the inland edge of the Ewa Plain was the location of a temple, (of unknown affiliation), a residence of the family of the demi-god Kamapua'a, a reference point for solar observation, and a traveler's landmark (McAllister 1933:108; Kamakau 1976:14; Ii 1959:27; Thrum 1907:46).

Additional information on Pu'uokapolei is summarized in Sites of Oahu (Sterling and Summers 1978:33-34).

In 2008, follow-up consultation was conducted in the form of contacting Mr. Shad Kane and Auntie Nettie, as well as the Office of Hawaiian Affairs. When Auntie Nettie was contacted, she indicated that she did not have any further concerns regarding the H-POWER project.

3.4 Impacts and Mitigation - Archaeological and Cultural Resources

The proposed action is not expected to have any impacts to known or potential archaeological or cultural resources. Nonetheless, the site will be monitored by a qualified archaeologist during all ground disturbing activities. The existing archaeological sanctuary in parcel 35 will be fenced off and protected in accordance with AIS and preservation plan.

Section 4 – Impacts / Mitigations

4.1 Short Term Impacts

Impacts will occur during the construction period including short term positive impacts to the economy resulting from construction period employment and associated spending for construction equipment and supplies. No long term impact will result including impact to schools or other public services or facilities.

During construction there will also be impact to geology and soils through use of the construction laydown, staging, parking and fabrication area. However, this will occur on previously disturbed land appropriately zoned for this purpose, and the increased activity will be minor.

Air Quality and noise impacts will occur from construction activities including operation of mobile construction equipment. However, these impacts will be a minor change to the on-going surrounding activities. The air quality associated with white goods processing will not be impactful to the surrounding communities as the operations will follow appropriate rules and regulations.

During construction of the Solar Building, there will be a slight increase in traffic. Construction is anticipated to last about six months with an expected average vehicle count of about twelve vehicles per day.

Surface water quality could be impacted from construction period run off. However, an erosion and sedimentation control program will be employed. The contractors responsible for the project will also have a Construction SWPCP which includes additional BMPs for controlling site run off.

Biological and archaeological resources will be protected within the established sanctuary areas of the parcels. Designated Contractors will be trained prior to the start of work regarding recognition of potential discovery of remains, and what reporting is required following work stoppage in the event remains are found. Biological monitoring of the project site will be conducted and reported to USFWS.

4.2 Long Term Impacts

There are no long term impacts to air quality and human health. In fact, the building is anticipated to have long-term benefits to air quality on a life-cycle basis, due to renewable energy generation from the solar panels and the associated emissions savings. Refrigerant reclamation and recycling and metals processing will take place indoors. Refrigerant reclamation will be conducted in accordance with federal EPA regulations related to the Refrigerant Recycling Rule (Section 608 of the Clean Air Act).

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Permanent disturbance had been made to geology and soils in the area where the building will be constructed.

An additional ten (10) vehicles per day are anticipated for an active storage/operations program but most are vehicles trips that are already occurring at H-POWER, in JCIP, or on Kaomi Loop and would just be moving to this location. Up to two (2) vehicles are anticipated on days where PV housekeeping and maintenance are conducted, but most of the time the system will be operated automatically.

Minimal impact will occur to water resources as minimal additional process water will be required for recycling activities. The facility design will support zero discharge. Storm water will continue to be captured and diverted to onsite swales and settling ponds for onsite management and Best Management Practices are in effect through the facility NPDES GUP.

No archaeological, historic or cultural impacts are anticipated. The existing archaeological sanctuary on Parcel 35 will be protected and not disturbed. Construction phase excavation will be controlled and activities will be interrupted if discoveries are made.

4.3 Construction Period Mitigation

An Erosion and Sedimentation Control program will be established through a NPDES Construction phase permit. Best Management Practices (BMP) will be employed including interception of runoff, silt fences/barriers and protection of existing storm water features and devices including catch basins and culverts. Intercepted runoff will be directed to settling ponds, and contained onsite as much as possible.

Water trucks will be utilized to minimize dust and fugitive emissions. Construction equipment will be equipped with noise mufflers and emissions control devices as required by law.

The construction area has been designed to avoid disturbance of both the established sanctuaries including a buffer zone. Fencing will be maintained to protect these sensitive areas.

4.4 Long Term Mitigation

Traffic and roadway impacts will be minimal with only slightly increased traffic counts. There are no further cultural, noise, visual, socioeconomic, solid waste, energy or human health impacts that were not pre-existing. Existing biological and archaeological sanctuaries will be protected and maintained. An existing SMA (portion of Parcel 35) is fenced off, will be protected, and will not be encroached.

Section 5 - Alternatives

Criteria that were considered for the alternatives analysis included the following items:

- Ability to comply with SEP requirements
- Space availability for the requisite solar panels and associated electrical gear on City property.
- Availability of an in-house power demand that negated the need for a solar PV PPA with HECO
- Technical feasibility
- Completion by 2020
- Potential future use of areas impacted
- Minimize impact on project activity where solar PV systems are installed
- Lowest capital cost
- Lowest operational cost to City
- Locations where zoning allows for a recycling facility
- Centrally-located recycling facility

The primary purpose of the building is the solar PV to comply with the terms of the SEP, with the recycling and white goods processing being secondary to the SEP, it was more important to evaluate the alternatives with the solar PV as the priority.

5.1 No Action

The No Action Alternative would mean the solar PV systems would not be installed and no provisions made to provide for these systems. All H-POWER in-house power would continue to be produced from combusted waste.

The No Action Alternative would mean the City would be liable for penalties to EPA for failing to comply with the CD inasmuch as the solar PV project at H-POWER is the SEP required by the CD. While this alternative would result in no capital costs, the penalty for noncompliance with the SEP would result in penalties of at least \$7,000,000.

5.2 H-POWER and Parcels 33 – 35

Completing the solar PV project would result in the generation of 5,000 MWh/yr of additional power from H-POWER due to a comparable reduction in the Facility's in-house power consumption. The City anticipates that the solar PV project would continue operation for the term of the Facility operating at a capacity of 3 MW DC during this time period. No reduction in the capability of H-POWER to process waste would result. By utilizing all suitable roof areas at H-POWER and supplementing with the additional roof space on Parcels 33 – 35, the impact to H-POWER operations and the Parcels is minimized. Roof mounting the solar panels also maximizes potential future uses of the Parcels by providing interior space. Significant capital costs are anticipated.

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

However, over the thirty-year anticipated PV system life the resulting revenues returned to the City are anticipated to more than offset the capital costs.

5.3 Other City Sites

During the negotiations with EPA, the City and EPA considered other comparable refuse sites for installation of PV panels. Most of the other locations do not have adequate rooftop, parking lot, and free ground space available for a solar PV project of the magnitude required by the CD. For those locations that do have the space, such as Waimanalo Gulch Sanitary Landfill, there is insufficient internal power demand and a power purchase agreement (PPA) and an Interconnection Requirements Study (IRS) would be required with HECO. A PPA would require approval and negotiations with HECO (which HECO represented could take up to 5 years to obtain, and would also ultimately require PUC approval (another time-consuming requirement).

5.4 H-POWER Facility Only

H-POWER was also considered for the solar PV project without incorporating any additional solar PV on the adjacent Parcels. H-POWER has the requisite in-house power demand allowing it to use power without the need for a PPA specifically for the solar PV project. However, there is not adequate roof space nor enough open ground level space for the entire project. Some of the additional open spaces that could be utilized could be easily damaged or hamper operations by impacting traffic flow and reducing maintenance staging areas, in addition to other impacts. Some of these locations may be less desirable because panels may be less efficient due to shadows from neighboring buildings and structures. Thus use of only the H-POWER site would not enable the City to fully comply with the CD SEP requirements.

5.5 Parcels 33 – 35 Only

All of the solar panels could be installed on Parcels 33 – 35. The power generated could be used for certain new uses on the Parcels such as lighting with the excess power transmitted to H-POWER to off-set in-house power. However this plan would result in using up most of the available space on those parcels and negating or limiting future development. In addition the capital cost of the project would likely increase significantly.

Recommended Plan

Alternative 5.2, H-POWER and Parcels 33-35, was chosen as the alternative that best met the criteria established for the SEP.

Section 6 – Findings

6.1 Significance Criteria

Based on the significance criteria set forth in HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, the proposed action is not anticipated to result in significant environmental impacts. The determination for the proposed project is a Finding of No Significant Impact (FONSI). The findings and reasons supporting this determination are summarized as follows:

- 1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resource*

The proposed action will not result in the adverse loss of natural or cultural resources. The existing biological and archaeological sanctuaries will be protected and maintained. In the unlikely event of a discovery of significant cultural, historic or archaeological resources, the SHPD will be immediately notified for appropriate action and treatment. As required, work will be temporarily halted as instructed by SHPD. Biological monitoring of the project site will be conducted and reported to USFWS. An existing SMA is fenced off, will be protected, and will not be encroached.

- 2. Curtails the range of beneficial uses of the environment*

The subject property is zoned for intensive industrial use. The proposed use is consistent with the industrial designation of the site and will be contained entirely within the property. The proposed action does not curtail beneficial uses of the environment.

- 3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 343, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders*

The proposed action is consistent with the environmental policies, goals and guidelines expressed in HRS, Chapter 343. Potential sources of adverse impacts have been identified and appropriate measures have been developed to either mitigate or minimize potential impacts to negligible levels.

- 4. Substantially affects the economic and social welfare of the community or state*

The operation of the proposed action will be regulated in accordance with County, State and Federal regulations. It is expected to improve the social and economic environment of Oahu by generating renewable solar energy and optimizing the processing of residential recyclables.

- 5. Substantially affects public health*

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

The building is expected to improve public health by providing emissions reductions through renewable solar energy generation instead of power generation using fossil fuels.

6. Involves substantial secondary impact, such as population changes or effects on public facilities

The proposed action is expected to have no substantial secondary or indirect impacts such as population changes or effects on public facilities based on the limited scope and scale of the action.

7. Involves a substantial degradation of environmental quality

Impacts to air and water quality, noise levels, natural resources, and land use associated with the planned project are anticipated to be minimal. Mitigation measures will be employed as practicable to minimize potentially negative effects to the environment. The proposed Action does not involve substantial degradation of environmental quality, but in fact improves it through renewable solar energy generation. Refrigerant reclamation will be conducted in accordance with federal EPA regulations related to the Refrigerant Recycling Rule (Section 608 of the Clean Air Act) and is anticipated to be an insignificant source.

8. Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.

The proposed action is not expected to cause adverse cumulative impacts to the environment, nor involves a commitment for larger actions in that all work required will be limited to use of the project site. The proposed action is in accordance with the land use plans and policies of the State and City and County of Honolulu.

9. Substantially affects a rare, threatened or endangered species

The proposed action is not expected to cause adverse impacts to any rare, threatened, or endangered species. Existing biological sanctuaries will be protected and maintained. Biological monitoring of the project site will be conducted and reported to USFWS.

10. Detrimentially affects air or water quality or ambient noise levels

On a short-term basis, ambient air and noise conditions may be affected by construction activities related to the proposed action, but these are short-term potential impacts and can be controlled by mitigation measures as described in this EA. Once the action is completed, noise in the project vicinity will be allowed to return to conditions consistent with the surrounding land uses. Erosion control measures and other BMPs will be employed to prevent untreated storm water runoff from construction activities entering State waters. Air quality will be improved through emissions reductions through

FINAL ENVIRONMENTAL ASSESSMENT BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

renewable solar energy generation instead of power generation using fossil fuels. Refrigerant reclamation will be conducted in accordance with federal EPA regulations related to the Refrigerant Recycling Rule (Section 608 of the Clean Air Act) and is anticipated to be an insignificant source.

- 11. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters*

The proposed action site is not located within an environmentally sensitive area. A portion of Parcel 35 contains an SMA, but it is fenced off, will be protected, and will not be encroached. The building is located within a tsunami evacuation zone. In the event of a tsunami, evacuation and response procedures will be followed, as detailed in the emergency response plans maintained by H-POWER and the Refuse Division.

- 12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies*

The proposed action will not obstruct any significant scenic features and viewplanes due to its elevation and existing similar industrial activities in close proximity to the project site. The proposed action will not substantially affect any existing views from surrounding areas.

- 13. Requires substantial energy consumption*

Construction and daily activities associated with the proposed Action will not require substantial amounts of energy. In fact, the action will result in positive renewable solar energy generation.

6.2 Findings

In accordance with the provisions set forth in HRS, Chapter 343, and the significance criteria in HAR, Section 11-200-12 of Title 11, Chapter 200, it is anticipated that the proposed action will have no significant adverse impacts to water quality, air quality, existing utilities, noise levels, social welfare, archaeological sites, or wildlife habitat. All anticipated impacts are expected to be temporary in duration and will not adversely impact the environmental quality of the area. In fact, the proposed action is expected to have significant benefits such as the production of renewable solar energy and recycling activity. As a result, a Finding of No Significant Impact (FONSI) is being issued for this Project.

FINAL ENVIRONMENTAL ASSESSMENT
 BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Section 7 – List of Permits / Approvals

The following permits are anticipated for this project:

Approving Agency/Authority	Approval/Permit
HDOH, Clean Water Branch	Notice of General Permit Coverage NPDES Construction Storm Water Discharge Permit
HDOH, Solid and Hazardous Waste Branch	Solid Waste Management Permit (modification to existing H-POWER permit)
City and County of Honolulu Department of Planning and Permitting (DPP)	Building Permit
City and County of Honolulu Department of Planning and Permitting (DPP)	Grading Permit and Drainage Plan Approval

Section 8 – Agencies and Organizations Consulted

Notice of the Draft Environmental Assessment was published in the Office of Environmental Quality Control Environmental Notice of August 8, 2015. Copies of the Draft Environmental Assessment were mailed to the agencies and organizations listed below. Publication in the Environmental Notice initiated a 30-day public comment period. An asterisk * identifies agencies and organizations that submitted written comments to the Draft Environmental Assessment. Comment letters and responses are found in Appendix C of this Final Environmental Assessment.

State

Dept of Agriculture
Dept of Accounting and General Services*
Department of Business Economic Development & Tourism
DBEDT – Energy Division
DBEDT – Office of Planning*
Dept of Defense*
Dept of Education
Dept of Hawaiian Homelands
Dept of Health*
Dept of Human Services*
Dept of Labor and Industrial Relations
Dept of Land and Natural Resources*
DLNR – Historic Preservation Div
Dept of Transportation*
Hawaii Housing Fin. and Dev. Corp.
Office of Hawaiian Affairs*
UH Environmental Center

Federal

US Fish and Wildlife Service*
US Federal Aviation Administration*

City

Board of Water Supply*
Dept of Community Services*
Dept of Design and Construction*
Dept of Environmental Services
Department of Facility Maintenance*
Department of Planning and Permitting*

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Department of Parks and Recreation*
Dept of Transportation Services*

Other

Nearest State Library
Hawaiian Electric Company

FINAL ENVIRONMENTAL ASSESSMENT
BUILDING FOR SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER

Appendix A – References

H-POWER Expansion Project FEIS and Truck Receiving Station for Sludge FEA
(both available at <http://health.hawaii.gov/oeqc/>)

Pacific Consulting Services, Inc. “Final Archeological Inventory Survey of Parcel 35 in Support of Construction of an Equipment Staging Area for the Proposed H-POWER Expansion Project, Honouluuli Ahupuaa, Ewa District, Island of Oahu. TMK: (1) 9-1-025:035” December, 2011.

Consent Decree
(available at
http://www.justice.gov/sites/default/files/enrd/pages/attachments/2015/05/12/honolulu_consent_decree.pdf)

Appendix B – Early Consultation

Sadri, Ahmad

Subject: HDOH - SHWB Meeting - Solar Building
Location: 919 Ala Moana Blvd., Suite 212 Honolulu, Hawaii 96814
Start: Thu 7/30/2015 1:00 PM
End: Thu 7/30/2015 2:00 PM
Recurrence: (none)
Meeting Status: Accepted
Organizer: Hayasaka,Amanda

As discussed today. We will present and lending support from a Covanta/permitting perspective. Maybe on Tuesday during our standing meeting we can develop the meeting agenda. Thanks, Mandy

Sadri, Ahmad

From: Shimabukuro, Ruby [ruby.shimabukuro@hawaiianelectric.com]
Sent: Monday, May 18, 2015 5:35 PM
To: Lanuevo, Manuel S
Cc: Nakamoto, Barry; Viola, Dana M O; Lane, Bill; Hamada, Wayne; Sadri, Ahmad; Garcia, Samuel; Interconnection Web
Subject: Re: Preliminary PV Circuit Check

Hello Manny,

That's good news- congratulations!

I will forward this email to Nathan Yuen and ask him to respond. I assume we already have some sort of agreement with the City regarding H-Power and i'm not sure about the meter situation. I'm sure Nathan or someone in his group can help you on this.

Thanks!

Ruby

Sent from my iPhone

On May 18, 2015, at 8:24 PM, Lanuevo, Manuel S <mlanuevo@honolulu.gov> wrote:

Hi Ruby,

I hope you still remember the PV project that we're working with EPA and we consulted with you about six months ago. Well, EPA has now agreed with it (see attached EPA press release) and we're ready to start. The PV panels will all be installed at our H-POWER facility and is expected to generate 3.1 MW which will all be consumed at the facility.

Please advise what agreement HECO and the City will need to make and any other paperwork that we need to do to start the ball rolling.

Thanks,
Manny

-----Original Message-----

From: Shimabukuro, Ruby [mailto:ruby.shimabukuro@hawaiianelectric.com]
Sent: Monday, November 24, 2014 6:49 PM
To: Lanuevo, Manuel S
Cc: Nakamoto, Barry; Viola, Dana M O; Lane, Bill
Subject: Re: Preliminary PV Circuit Check

Hi Manny,

I did not see an email from Barry to you so I'm not sure if he is out. I don't know if you remember that the Sand Island facility has many meters and is probably on at least two different circuits.

Will your PV System for the Sand Island facility be on one building? Or will it be over multiple buildings? Until we get this resolved we cannot answer your circuit check question.

Sorry I will be out of the office on Tuesday and Wednesday. I will return on Friday after Thanksgiving. If you want, we can talk then.

Also, I think any additional Customer generator at the H power facility might trigger a study.
Thanks

Sent from my iPhone

On Nov 13, 2014, at 6:51 PM, Lanuevo, Manuel S <mlanuevo@honolulu.gov> wrote:

Hi Ruby and Barry,

After today's telecom with EPA, we've drastically reduced our project sites down to two sites namely: H-POWER; and Sand Island Wastewater Treatment Plant. Again, we intend to use the power/energy generated by PV internally (nothing going to the grid) for both facilities.

Hopefully, this will be the last time for us to request another preliminary check and that is for the Sand Island Wastewater Treatment Plant site, all info of which about this site are in the attached spreadsheet.

Let me know if you have any questions and thanks in advance for your help.

Mahalo,
Manny

-----Original Message-----

From: Lanuevo, Manuel S
Sent: Thursday, October 30, 2014 5:21 PM
To: 'Nakamoto, Barry'
Cc: Viola, Dana M O; 'Shimabukuro, Ruby'
Subject: FW: Preliminary PV Circuit Check

Hi Barry,

Just notice that the second attachment (which was what I've attached to my last e-mail to you) has two additional sites that were not included in the first attachment (Kapolei Hale and Fasi Municipal Building). Will appreciate it if you can also do the preliminary checks on those two sites.

Thanks,
Manny

-----Original Message-----

From: Nakamoto, Barry [mailto:barry.nakamoto@hawaiianelectric.com]
Sent: Thursday, October 30, 2014 10:36 AM
To: Lanuevo, Manuel S
Cc: Shimabukuro, Ruby
Subject: Preliminary PV Circuit Check

Manny,

See attached for preliminary check. Circuits with lower circuit penetrations are less likely to trigger studies. In general, circuits greater than 120% have a very high likelihood of needing a study. This is always subject to change so please keep in mind.

Thanks,
Barry

CONFIDENTIALITY NOTICE: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and/or privileged information. Any unauthorized review, use, copying, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender immediately by reply e-mail and destroy the original message and all copies.

<ENV SEP Solar RFP Site List (revised 11-13-14) (2 sites).xls>

CONFIDENTIALITY NOTICE: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and/or privileged information. Any unauthorized review, use, copying, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender immediately by reply e-mail and destroy the original message and all copies.

<Kapaa Landfill CD Final.docx>

CONFIDENTIALITY NOTICE: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and/or privileged information. Any unauthorized review, use, copying, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender immediately by reply e-mail and destroy the original message and all copies.

Sadri, Ahmad

To: Sadri, Ahmad
Subject: FW: Conditional Use Permit - Minor (CUPm) and Joint Development Agreement

From: Hirota, Jed C.
Sent: Tuesday, April 14, 2015 5:30 PM
To: Hamada, Wayne; Lanuevo, Manuel S; Jones, Suzanne; Sadri, Ahmad
Cc: Gabriel, Henry; Serikaku, Steven; O'Keefe, Michael
Subject: Conditional Use Permit - Minor (CUPm) and Joint Development Agreement

To all,

Attached are copies of the "Approved Conditional Use Permit – Minor (CUPm)" and "Executed Joint Development Agreement" for the Kaomi Loop Project. The CUPm combines the parcels (TMK# 9-1-26: 30, 33, 34 and 35) to allow for the most efficient use of their total acreage and is necessary for our future development plans. The CUPm specifies conditions for its approval which may affect Convanta or other parcels users.

Conditions #2 and #3 (see highlighted), specifically, could affect building and/or solid waste management permits, and therefore require assessment for applicability. Per Condition #2, prior to submitting any building permit application, a copy of the attached "Executed Joint Development Agreement" should be submitted for review and approval by the Director of the DPP. Per Condition #3, all lots shall be considered to be as one zoning lot, which may require modifications to existing or future solid waste management permits.

As we move forward, questions may arise and I'm happy to act as a conduit between DPP and ENV. Please let me know if you have any questions.

Thanks,

Chris

Sadri, Ahmad

From: Serikaku, Steven
Sent: Monday, March 02, 2015 4:50 PM
To: Shaw-Kim, Ardis; Peirson, James H.
Cc: Gabriel, Henry; Hirota, Jed C.; Jones, Suzanne; Lanuevo, Manuel S; Sadri, Ahmad; Hamada, Wayne
Subject: RE: Kaomi Loop Project on TMKs: 9-1-026:033, 034, 035 and Adjacent Hpower TMK: 9-1-026:030

Hi Ardis/Jamie – thanks for the response.

Refuse understands that there is a plant preserve and various easements on the properties. These will be addressed in the planning and engineering of any future project.

We also plan to meet whatever requirements necessary to meet State Ch. 343 requirements. At this stage, it is anticipated that an EA will need to be done.

Thanks.

From: Shaw-Kim, Ardis
Sent: Monday, March 02, 2015 11:40 AM
To: Peirson, James H.
Cc: Gabriel, Henry; Hirota, Jed C.; Jones, Suzanne; Lanuevo, Manuel S; Sadri, Ahmad; Hamada, Wayne; Serikaku, Steven
Subject: RE: Kaomi Loop Project on TMKs: 9-1-026:033, 034, 035 and Adjacent Hpower TMK: 9-1-026:030

Jamie:

As discussed, we will create an e-log job for the attached e-mail, and assign to one of our planners for response.

Steve Serikaku, at Refuse, can be reached at 768-3428.

Refuse is aware of the plant preserves, shown on the plat map. They will be asking their engineers to address the various easements on the property. Refuse will need to tell us how Chapter 343 requirements have been met.

Thanks,

Ardis

From: Serikaku, Steven
Sent: Wednesday, February 25, 2015 10:21 AM
To: Shaw-Kim, Ardis
Cc: Gabriel, Henry; Hirota, Jed C.; Jones, Suzanne; Lanuevo, Manuel S; Sadri, Ahmad; Hamada, Wayne
Subject: Kaomi Loop Project on TMKs: 9-1-026:033, 034, 035 and Adjacent Hpower TMK: 9-1-026:030

Hi Ardis – as a follow up to our phone discussion last week, we would like to get DPP's preliminary guidance on the following project to be developed on three (3) City owned parcels, TMKs: 9-1-026:033, 034 & 035. (See attached pdf)

Background and Project Scope:

1. TMKs: 9-1-026:033, 034 & 035 are three City owned parcels on Kaomi Loop. The 3 lots are approximately 23 acres in total.
2. Directly adjacent and to the east of the 3 parcels is the City's existing Hpower facility on TMK: 9-1-026:030.
3. ENV plans to develop several solid waste related projects which necessitate the combined use of TMKs: 9-1-026: 033, 034 & 035 to allow for the most efficient use of the total acreage. The first of these projects is a planned warehouse type building which will transverse parcels 033, 034, and 035 (see attached pdf).
4. On top of the warehouse building's roof, we plan to install a photovoltaic (PV) panel system. The power generated by the PV system will be sent directly to the City's adjacent Hpower facility on TMK: 9-1-026:30. The PV transmission line will run directly from the building to the Hpower facility crossing the common property line. The power from the new photovoltaic system will be used exclusively to supplement Hpower's on-site electrical demand.
5. The project will be routed through the normal approval and building permit process to ensure all code and environmental requirements are complied with.
6. The Public Infrastructure Map currently has those 3 lots as a Solid Waste (SW) designation.
<http://www4.honolulu.gov/docushare/dsweb/Get/Document-154877/r165cd1.htm>
http://www.honolulu.dpp.org/Portals/0/pdfs/planning/PIM/pim_ewa_2.pdf

We wish to get DPP's guidance and feedback from a land use perspective on the following:

1. What would be the quickest and most cost effective and best manner in which we would be allowed to develop the 3 parcels as if they were one lot, taking into consideration that we plan to have structures, utilities, roadways, etc. being built across the shared property lines for the 3 lot?
2. As we plan to take the photovoltaic power generated from the building on parcels 033, 034 and 035 for use at the City's Hpower facility on parcel 030, would it be prudent to consider all 4 TMK parcels (033, 034, 035 and 030) as one lot or development?
3. As we are a City agency and the 3 parcels including the adjacent Hpower parcel are City owned, are there any waivers available for our project?

Your assistance on this project is appreciated.

Thanks – Steven Serikaku, Refuse Division Planning Engineer.

Appendix C – Written Comments and Responses



DEPARTMENT OF
ENVIRONMENTAL AFFAIRS
United States Department of the Interior



FISH AND WILDLIFE SERVICE p 4 :23
15 OCT 15
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

In Reply Refer To:
2015-TA-0421

OCT 08 2015

Mr. Manuel S. Lanuevo
PE AP LEED
1000 Uluohia St. Suite 201
Kapolei, Hawai'i 96707

Subject: Technical Assistance for the Proposed Building for Supplemental Environmental Project at H-Power, Kapolei, O'ahu [TMKs: (1)9-1-026-033, 34, 35]

Dear Mr. Manuel Lanuevo:

The U.S. Fish and Wildlife Service (Service) received your letter on August 6, 2015, requesting our comments on the Draft Environmental Assessment (DEA) for the City and County of Honolulu's proposed action to construct a new "solar" building as part of the H-power's solar PV system. In addition, area within the structure may be used to support ancillary H-POWER operations and City needs including but not limited to refrigerant reclamation and recycling, metal processing, storage, and vehicle access. This project is located at 91 Hanua Street, Kapolei, O'ahu [TMKs: (1)9-1-026-033, 34, 35].

The "solar" building is pursuant to a Consent Decree between the City and County of Honolulu and the U.S. Environmental Protection Agency that involves installing a solar PV system at its waste-to-energy facility. The City will use the PV-generated power to offset some of H-POWER's in-house demand, allowing H-POWER to export additional power to HECO. The Solar Building will support the balance (inverters and battery storage) of the PV system required for integration into H-POWER.

Traffic and roadway impacts will be minimal with only slightly increased traffic count and minor construction impacts will be temporary and will be mitigated with Best Management Practices. Existing biological and archaeological sanctuaries on the project site are fenced off and will be protected and maintained during construction and once the building is operational.

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. This response is in accordance with section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*). We offer the following comments to assist you in preparation for your final Environmental Assessment.

Our data indicate that the federally and State listed endangered plant *Achyranthes splendens* var. *rotundata* are present in enclosed fence areas at the proposed project site. It is an herbaceous species that may have seedlings appear along the proposed project area at any time. In addition, the proposed project is within the federally designated critical habitat unit Oahu-Coastal-Unit 14. This critical habitat unit is occupied by the endangered Ewa Plains 'akoko, and is designated unoccupied critical habitat for 6 additional federally endangered plants (*Bidens amplexans*, *Centaureum sebaeoides*, *Chamaesyce celastroides* var. *kaenana*, *Schiedea kealiae*, *Sesbania tomentosa*, and *Vigna oahuensis*). All 7 of these plant species face a plethora of threats, including but not limited to, fire, non-native plants, and loss of habitat. Critical habitat is the scientifically calculated land area within the range of one or more species that is essential to the conservation of the species by providing the physical and biological features necessary for the expansion of the existing wild population.

Species documented within the general project vicinity federally endangered Hawaiian waterbirds: the Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian moorhen (*Gallinula chloropus sandvicensis*), Hawaiian coot (*Fulica alai*), and Hawaiian hoary bat (*Lasiurus cinereus semotus*). The federally threatened Newell's shearwater (*Puffinus auricularis newellii*) and seabirds protected under the Migratory Bird Treaty Act [16 U.S.C. 703-712] (MBTA), such as the wedge-tailed shearwater (*Puffinus pacificus chlorhynchus*), (collectively referred to as Hawaiian seabirds), could be impacted by components of your project.

This area also has a high concentration of unique limestone anchaline pool communities. The anchaline pools support two anchaline pool shrimp: the at risk opae ula (*Halocaridina rubra*) and *Metabetaeus lohena*, a candidate for listing under the Endangered Species Act (ESA). Additionally, there are restored pools near your location that have begun translocation of the orangeblack damselfly (*Megalagrion xanthomelas*), also a candidate species.

Hawaiian Waterbirds

The proposed "Solar" Building proposes direct intercepted runoff to settling ponds and contained onsite as much as possible. This will result in additional areas of standing water or creation of open water, having a high likelihood of attracting Hawaiian waterbirds from neighboring wetlands or ponds to the site. The Hawaiian stilt is known to nest in sub-optimal locations (e.g., any ponding water) if water is present. Hawaiian waterbirds attracted to sub-optimal habitat may suffer adverse impacts, such as predation and reduced reproductive success, and thus the project may create an attractive nuisance. We recommend predator control be conducted year round for the protection of Hawaiian waterbirds. With the human presence and access to habitats with endangered species at the project site we also recommend informational signage to prevent feeding of endangered birds and feral animals.

Water levels and poor water quality could also be conducive to disease. Avian botulism outbreaks are common in Hawai'i and can be a significant localized cause of waterbird mortality. Avian botulism is caused by a toxin produced by a widespread bacterium. Normally dormant, these spores release toxins only when certain conditions occur, including warm temperatures and stagnant waters. Birds usually acquire the disease by eating invertebrates containing the toxin.

Typical signs in birds include weakness, lethargy, and inability to hold up the head or to fly. There is a possibility that the proposed project may increase the risk for an outbreak of avian botulism. Botulism can occur in any area with standing fresh or brackish water frequented by waterbirds. Furthermore, birds infected with the disease have the potential to fly from other areas and introduce the source of avian botulism within your facility. We recommend you maintain surveillance for outbreaks, respond to such outbreaks by removal of carcasses, and conduct post-outbreak waterbird monitoring in the event of an incident.

We recommend the following specific minimization measures to incorporate during the construction phases of your proposed project:

- A qualified biological monitor should conduct surveys for Hawaiian waterbirds, Hawaiian geese, and any nesting activity at the proposed project site prior to project initiation.
- Any documented nests or broods within the project vicinity should be reported to the Service within 48 hours.
- A 100-foot buffer should be established and maintained around all active nests and broods until the chicks/ducklings/goslings have fledged. No potentially disruptive activities or habitat alteration should occur within this buffer.
- We should be notified immediately prior to project initiation and provided with the results of pre-construction Hawaiian waterbird and Hawaiian goose surveys.
- A biological monitor should be present on the project site during all construction or earth moving activities to ensure that Hawaiian waterbirds, Hawaiian geese, and their nests are not adversely impacted. If construction is to occur in areas away from documented Hawaiian waterbird, Hawaiian goose, or nesting sites, this measure may not be needed. Please consult with our office to determine if this is applicable prior to initiation of your proposed project.
- If a listed Hawaiian waterbird is observed within the project site, or flies into the site while activities are occurring (within 100 feet), all potentially disruptive activities (including human activity, mechanical or construction disturbance) will be stopped until the animal(s) voluntarily leave the area.

Hawaiian Hoary Bat

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 if any fences are constructed they be designed to avoid the use of barbed wire.

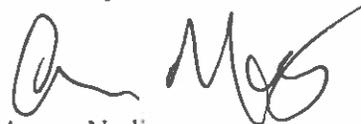
Hawaiian seabirds

Outdoor lighting, such as night-time construction and street lights, can adversely impact listed and migratory seabird species. Seabirds fly at night and are attracted to artificially-lighted areas which can result in disorientation and subsequent fallout due to exhaustion or collision with objects such as utility lines, guy-wires, and towers that protrude above the vegetation layer. Once grounded, they are vulnerable to predators and are often struck by vehicles along roadways. Any increase in the use of night-time lighting, particularly during each year's peak fallout period (September 15 through December 15), could result in additional seabird injury or mortality. Impacts to seabirds can be minimized by shielding outdoor lights associated with the project to the maximum extent possible, eliminating night-time construction, and providing all project staff and residents with information about seabird fallout. All lights, including street lights, should be shielded so the bulb can only be seen from below and use the lowest wattage bulbs possible. If existing power lines and cables must be altered or replaced as a result of your proposed project, or if night-time construction is proposed June through December, we suggest that you contact our office so that we may assist you in developing appropriate avoidance and minimization measures. The final Environmental Assessment should address all potential impacts to seabirds and outline measures to minimize these impacts.

Since there are numerous anchialine pools surrounding the proposed project area, the Service also recommends incorporating an anchialine pool biologist into your proposed project plan to ensure that the integrity of any existing anchialine pools and species within them are not compromised (e.g., filled in, crushed, etc.) by the proposed activities.

We hope this information assists you in developing a comprehensive and thorough final Environmental Assessment. We recommend you work with our office during project planning so that we may assist you in developing measures to avoid impacts to listed species. We appreciate your efforts to conserve Hawai'i's native species. If you have questions regarding these comments, please contact Joy Browning, Fish and Wildlife Biologist (phone: 808-792-9400, email: joy_browning@fws.gov).

Sincerely,



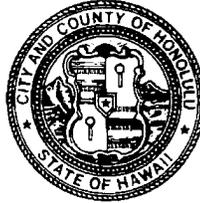
Aaron Nadig
Island Team Manager
O'ahu, Kaua'i, North Western Hawaiian
Islands, and American Samoa

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-028

December 10, 2015

Mr. Aaron Nadig
Island Team Manager
U.S. Fish and Wildlife Service
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

Subject: Draft Environmental Assessment (Technical Assistance)
Building for Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Mr. Nadig:

Thank you for your letter dated October 8, 2015. We have the following responses to your comments:

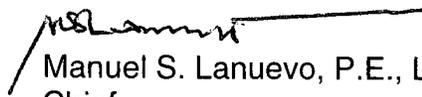
1. We will consult with your office regarding predator control methods for the protection of potential Hawaiian seabirds that may be attracted to the project area, and informational signage to prevent feeding of endangered birds and feral animals.
2. We will maintain surveillance for potential avian botulism outbreaks. In the event of an outbreak, we will respond by removing carcasses and conducting post-outbreak waterbird monitoring.
3. We will contract a qualified biological monitor to conduct surveys for Hawaiian waterbirds, Hawaiian geese, and any nesting activity at the proposed project site prior to project initiation. If any nests or broods are documented, they will be reported to your office within 48 hours and a 100-ft. buffer will be established and maintained around all active nests and broods until fledging. We will notify you prior to project initiation and provide results of biological surveys.

Mr. Aaron Nadig
December 10, 2015
Page 2

4. We will conduct additional biological monitoring to ensure that Hawaiian waterbirds, Hawaiian geese, and their nests are not adversely impacted during construction. If a listed Hawaiian waterbird is observed within the project site, or flies into the site while activities or occurring (within 100 ft.) all potentially disruptive activities will be stopped until the animal(s) voluntarily leave the area.
5. To minimize impacts to the endangered Hawaiian hoary bat, we will not disturb, trim, or remove woody plants greater than 15 feet tall between June 1 and September 15, and any fences constructed will be designed to avoid the use of barbed wire.
6. To minimize impacts to seabirds from lighting, outdoor lights associated with the project will be shielded to the extent possible.
7. The Anchialine pools present within enclosures contained in the Parcels are protected by a fence and a buffer zone, and will not be disturbed. The integrity of these pools will not be compromised.

Please contact me at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse



**STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
560 N. NIMITZ HWY., SUITE 200
HONOLULU, HAWAII 96817**

HRD15/1622D

September 8, 2015

Manuel S. Lanuevo, P.E., LEED AP
Chief
ENV-Refuse
1000 Uluohia St., Suite 201
Kapolei, HI 96707

Re: Building for Supplemental Environmental Project at H-Power
Honouliuli Ahupua'a, 'Ewa Moku, O'ahu Moku
Tax Map Key (1) 9-1-026:033, 034, 035

Aloha Mr. Lanuevo:

The Office of Hawaiian Affairs (OHA) received your letter dated August 6, 2015, requesting comments on a draft environmental assessment (DEA) for the project entitled "*Building for Supplemental Environmental Project at H-Power.*" The project is being proposed by the Refuse Division of the Department of Environmental Services (ENV) for the City and County of Honolulu (C&C Honolulu). The project will entail the construction of the "Solar Building", as a component of the H-Power solar photovoltaic (PV) system, as required by a consent decree between C&C Honolulu and the U.S. Environmental Protection Agency. The Solar Building will include a rooftop PV system, house additional PV components, and provide space for ancillary H-Power operations, such as refrigerant reclamation, metals, processing, vehicle access, and storage.

Although OHA recognizes the need for the project and generally supports renewable energy projects, we have several outstanding concerns that we ask be addressed in the final environmental assessment for this project.

Recommended archaeological monitoring at project site

The 'Ewa plain has historically been known to contain sinkholes in which human skeletal remains, as well as avi-faunal remains. These sinkholes can continue to exist in areas that have been graded or heavily cultivated for agricultural uses. There would appear to be a higher than normal probability of unmarked burial sites existing in the project area given the previous burial find during construction of the H-Power facility. There is also a possibility of other burials being associated with this previously discovered burial, either proximally or distally.

According to records at the Bishop Museum pertaining to inventories conducted for compliance with the Native American Graves Protection and Repatriation Act of 1990, burial sites in Honouliuli, and in 'Ewa generally, have included:

- *In 1933, human remains representing three individuals from stone pits at 'Ewa, O'ahu were collected by J.W. Barrington and Edwin H. Bryan;*
- *In 1938, human remains representing six individuals from Honouliuli, 'Ewa, O'ahu were collected by Kenneth P. Emory and William A. Lessa and acquired by the Bishop Museum. Museum documentation indicates these remains were in a shallow crypt burial one mile from the coast;*
- *In 1942, human remains representing two individuals from Kualakai, 'Ewa Beach, O'ahu were donated to the Bishop Museum;*
- *In 1959, human remains representing seven individuals from 'Ewa, O'ahu were donated to the Bishop Museum by the Anthropology Club of the University of Hawai'i (from Standard Oil Refinery land); and*
- *In 1980, human remains representing nine individuals from Honouliuli, O'ahu were collected and donated to the Bishop Museum by Albert, Borthwick, and Folk. Donor information indicates these human remains were recovered from coral sinkholes.*

The depth of grading, grubbing, or foundation-laying activities and the likelihood of adversely impacting any sub-surface cultural sites or deposits are contingent upon understanding the original surface grade as it may have existed prior to agricultural activities and construction grading. Native Hawaiian burial sites have been found just on and under the surface, to depths of eight or nine feet depending upon the nature of the terrain. Furthermore, the nature of documented interments in the 'Ewa area (e.g., stone pits, sinkholes, crypts) could allow for the survival of these sites despite intensive surface activities.

Given the reasoning above, we strongly recommend archaeological monitoring during all ground disturbing activity associated with the project. Although ENV states that "The proposed action site will be monitored"¹ we ask that this be made to a more specific commitment, to read "The proposed action site will be monitored by a qualified archaeologist during all ground disturbing activities." This commitment will provide for much improved protection of

¹ Building for Supplemental Environmental Project at H-Power DEA, p. 52. See also DEA, p.55

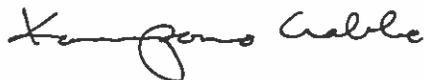
unidentified burial sites or cultural deposits, beyond the current, ambiguous reference to provide for monitoring.

Include buffer distances for archaeological and plant sanctuaries

The final EA should include buffer distances for archaeological and plant sanctuaries nearby to the project area. Although ENV commits to establishing “buffer zones” and fencing,² the DEA does not provide a distance for such buffers, which would allow a reviewing party to assess their adequacy. Indeed, the map of the Solar Building conceptual layout plan³ does not include a map scale and appears to show the building footprint almost abutting the “Existing Archaeological Sanctuary”, which contains a historic site. We ask that the final EA include the distance between the protected sanctuary boundary and the edge of the buffer, as well as an analysis of the sufficiency of the buffer distance given the construction and operational activities that are expected to occur at the project site.

Thank you for the opportunity to comment. Should you have questions regarding this letter, please contact Everett Ohta, OHA Lead Compliance Specialist, at 594-0231 or by email at everetto@oha.org.

‘O wau iho nō me ka ‘oia ‘i‘o,



Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer

KC:km/eo

**Please address replies and similar, future correspondence to our agency:*

*Dr. Kamana'opono Crabbe
Attn: OHA Compliance Enforcement
560 N. Nimitz Hwy., Ste. 200
Honolulu, Hawai'i 96817*

² DEA, p. 57.

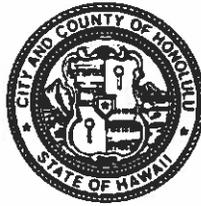
³ DEA, p.9, Figure S1.

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-017

November 19, 2015

Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer
State of Hawaii
Office of Hawaiian Affairs
560 North Nimitz Highway, Suite 200
Honolulu, Hawai'i 96817

Subject: Draft Environmental Assessment – Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Dr. Crabbe:

Thank you for your letter dated September 8, 2015. It was our intention to provide archaeological monitoring during all ground disturbing activities and we will expand the language in the EA to match your recommendation. For the existing archaeological sanctuary, a five (5) meter (15 feet) buffer distance is being provided along the interior of the fence line containing the sanctuary. This matches recommendations made in the Final Archaeological Inventory Survey (FAIS) for the area. We believe that is sufficient considering the construction and operational activities that are expected to occur. Additionally, the sanctuary will be protected by utilizing Best Management Practices (BMP's) during and after the construction period.

Please contact me at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Manuel S. Lanuevo", is written over a horizontal line.

Manuel S. Lanuevo, P.E., LEED AP
Chief

cc Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse

DAVID Y. IGE
GOVERNOR



ARTHUR J. LOGAN
MAJOR GENERAL
ADJUTANT GENERAL

KENNETH S. HARA
COLONEL
DEPUTY ADJUTANT GENERAL

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

August 25, 2015

Mr. Manuel S. Lanuevo, P.E. LEED AP
Chief, Department of Environmental Services
City and County of Honolulu
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

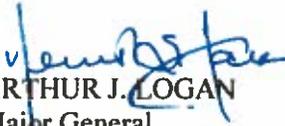
Subject: Draft Environmental Assessment (DEA), Building for Supplemental Environmental
Project at H-Power, Oahu, Ewa, TMK: (1) 9-1-026: 033, 34, 35

Dear Mr. Lanuevo:

Thank you for the opportunity to comment on the above draft document. The State of Hawaii Department of Defense has no comments to offer relative to the project.

If you have any questions or concerns, please have your staff contact Mr. Lloyd Maki, Assistant Chief Engineering Officer at (808) 733-8441.

Sincerely,

for 
ARTHUR J. LOGAN
Major General
Hawaii National Guard
Adjutant General

DAVID Y. IGE
GOVERNOR



RACHAEL WONG, DrPH
DIRECTOR

PANKAJ BHANOT
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
Benefit, Employment & Support Services Division
820 Millilani Street, Suite 606
Honolulu, Hawaii 96813

August 17, 2015

Re: 15-0477

ENV- Refuse
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Attn: Manuel S. Lanuevo, PE AP LEED

Dear Mr. Lanuevo:

Subject: Draft Environmental Assessment (EA) - Building for Supplemental
Environmental Project at H-Power Oahu Ewa
TMK: (1) 9-1-026-033, 34, 35

This is in response to your letter dated August 6, 2015 requesting the Department of Human Services' (DHS) comment on the Draft Environmental Assessment (EA) on the Supplemental Environmental Project at H-Power.

The DHS has reviewed the attached CD and has no comment at this time.

If you have any questions or need further information, please contact Ms. Jill Arizumi, Child Care Program Specialist, at (808) 586-5240.

Sincerely,

A handwritten signature in cursive script, appearing to read "Scott Nakasone".

Scott Nakasone
Assistant Division Administrator

c: Rachael Wong, DrPH, Director

DAVID Y. IGE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

FORD N. FUCHIGAMI
DIRECTOR

Deputy Directors
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

IN REPLY REFER TO:
STP 8.1854

September 8, 2015

Mr. Manuel S. Lanuevo, P.E., LEED AP
City and County of Honolulu
Department of Environmental Services
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Dear Mr. Lanuevo:

Subject: Building for Supplemental Environmental Project at H-Power
Draft Environmental Assessment (EA)
Ewa, Oahu
TMK: (1) 9-1-026:033, 034, and 035

The Department of Transportation (DOT) has the following comments on the subject EA:

Airports Division (DOT-AIR)

The subject project is close to the Kalaeloa Airport and within the primary air traffic corridor for Honolulu International Airport. Consequently, Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration should be submitted (<https://oeaaa.faa.gov/oeaaa>). Because the photovoltaic (PV) project could create a hazard to pilots due to the potential for glint and glare, a glint and glare analysis should also be submitted with the FAA Form 7460-1. The following website may assist you with preparation of a glint and glare analysis: www.sandia.gov/glare

If glint or glare from the PV array creates a hazardous condition for pilots, the operator must be prepared to immediately mitigate the hazard, upon notification by the DOT-AIR or the Federal Aviation Administration.

Highways Division (DOT-HWY)

The subject project is not expected to significantly impact the State highway facility. However, a permit from DOT-HWY is required for the transport of oversized and/or overweight materials and equipment on State highway facilities.

Mr. Manuel S. Lanuevo
September 8, 2015
Page 2

STP 8.1854

If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Sincerely,



FORD N. FUCHIGAMI
Director of Transportation

c: Mr. Gordon K. Wong, Federal Aviation Administration

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-018

November 19, 2015

Mr. Ford N. Fuchigami, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Subject: Draft Environmental Assessment – Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Mr. Fuchigami:

Thank you for your letter dated September 8, 2015. This project will utilize solar panels that are pre-approved by the FAA. We will also submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, along with a glint/glare analysis. We are anticipating installing the solar panels sometime after July 1, 2016. We will be providing the additional documentation consistent with this timeframe.

For transportation of any oversize and/or overweight materials and equipment on State highways, the necessary permits will be obtained.

Please contact me at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse



OFFICE OF PLANNING STATE OF HAWAII

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/>

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
ACTING DIRECTOR
OFFICE OF PLANNING

Ref. No. P-14895

September 2, 2015

Mr. Manuel S. Lanuevo, PE AP LEED, Chief
City and County of Honolulu
Department of Environmental Services
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Dear Mr. Lanuevo:

Subject: Draft Environmental Assessment
Building for Supplemental Environmental Project at H-Power
Ewa, Oahu
TMK: (1) 9-01-026-033, 034, and 035

Thank you for the opportunity to provide comments on the subject Draft Environmental Assessment (EA) for the Supplemental Environmental Project (SEP) at H-Power.

Pursuant to a Consent Decree between the City and County of Honolulu (City) and the U.S. Environmental Protection Agency (EPA), the City agreed to a SEP that involves the installation of a solar photovoltaic (PV) system at its waste-to-energy facility, H-Power, located in the James Campbell Industrial Park. The project includes the construction of a new building, which will be sited on City-owned property adjacent to H-Power, and will support the balance of the PV system required for integration into H-Power. The City will use the PV-generated power to offset some of H-Power's in-house power demand, allowing H-Power to export additional power to HECO. The area inside the structure will be made available to support ancillary H-Power operations and City needs, including but not limited to refrigerant reclamation and recycling, metals processing, storage, and vehicle access. The subject property is zoned for intensive industrial uses.

The Office of Planning (OP) supports the City's initiative to comply with the terms of the Consent Decree and pursue this environmentally beneficial project. Because the two primary components of the proposed project are renewable solar energy generation and recycling, the project falls under two of the EPA recommended categories of SEPs: to reduce the generation of pollution through source reduction, and to reduce the amount of toxicity of releases into the environment by means of recycling.

Furthermore, OP acknowledges that the installation of the PV system would further the State's interest in reducing our State's dependency on fossil fuels, with a goal to generate 100 percent clean energy by 2045.

OP offers the following additional comments for your consideration:

1. The Draft EA does not address the goals and objectives listed in the Hawaii State Planning Act, Hawaii Revised Statutes (HRS), Chapter 226, better known as the Hawaii State Plan. The Hawaii State Plan provides goals, objectives, priorities, and priority guidelines for growth, development, and the allocation of resources throughout the State. It contains diverse policies and objectives on topics of state interest including but not limited to, the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, climate change adaptation, and sustainability.

This project may be relevant to a number of its themes, goals, objectives, and policies. These include, but are not limited to, HRS § 226-14 - facility systems; HRS § 226-18 – energy; and, because this project involves solar-power/resource conservation/energy efficiency, HRS § 226-108 – the priority guideline on sustainability. The Final EA should include an assessment as to how the proposed action conforms to HRS 226, the Hawaii State Plan.

2. The Draft EA, Section 2.6, page 32, acknowledges that the project site is within the Coastal Zone, that the project must be consistent with the Hawaii Coastal Zone Management (CZM) program, and that OP conducts federal consistency reviews for this type of project. The Draft EA, however, does not address the project's conformity with the enforceable policies of the Hawaii CZM program found in HRS § 205A-2.

Since HRS § 205A-1 defines the entire State as being within coastal zone management area, this project is within the CZM area and must conform to CZM objectives and policies. These objectives and policies include: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources.

As HRS Chapter 205A requires all State and county agencies to enforce the CZM objectives and policies, the Final EA should include an assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2.

3. Please indicate in the Final EA where the public would be able to access the Consent Decree to view the original language of the agreement.

Mr. Manuel S. Lanuevo, PE AP LEED, Chief
September 2, 2015
Page 3

If you have any questions regarding this comment letter, please contact Katie Mineo,
Land Use Division at (808) 587-2883 or Josh Hekeka, CZM Program at (808) 587-2845.

Sincerely,

A handwritten signature in black ink, appearing to read 'L. Asuncion', with a horizontal line extending to the right.

Leo R. Asuncion
Acting Director

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-023

November 25, 2015

Mr. Leo R. Asuncion, Acting Director
State of Hawaii
Office of Planning
P.O. Box 2359
Honolulu, Hawaii 96804

**Subject: Draft Environmental Assessment - Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii**

Dear Mr. Asuncion:

Thank you for your letter dated September 2, 2015. We have the following responses to your comments:

1. We have included in the Final EA the following assessment as to how the proposed action conforms to HRS 226 (the Hawaii State Plan): "The proposed project is consistent with the themes, goals, objectives and policies of the Hawaii State Planning Act, Hawaii Revised Statutes (HRS), Chapter 226, better known as the Hawaii State Plan. With respect to HRS § 226-14, § 226-18 and § 226-108, the building will provide an array of solar panels to provide renewable and sustainable energy, as well as to help reduce greenhouse gas emissions on a life-cycle basis. The project will provide safe and reliable recycling and disposal of solid waste and intends to utilize energy efficient products in the design of the building."
2. We have included in the Final EA the following assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205 A-2: "Federal consistency review is not a requirement, as this project does not involve federal agency activity, does not require any federal license or permit subject to CZM Program review and will not be receiving federal funds. This project is consistent with the CZM objectives and policies specified within HRS §205A-2, as there are no anticipated impacts to any of the recreational resources, historical resources, scenic/open space resources, coastal ecosystem, economic use, beach and marine resources."

Mr. Leo R. Asuncion, Acting Director
November 25, 2015
Page 2

3. We have included in the Final EA a website address for accessing the Consent Decree.

Please contact me at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843



September 8, 2015

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair
ADAM C. WONG, Vice Chair
DAVID C. HULIHEE
KAPUA SPROAT
BRYAN P. ANDAYA

ROSS S. SASAMURA, Ex-Officio
FORD N. FUCHIGAMI, Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

TO: LORI M.K. KAHIKINA, P.E., DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

ATTN: MANUEL S. LANUEVO, P.E. AP LEED

FROM: ERNEST Y.W. LAU, P.E., MANAGER AND CHIEF ENGINEER *eyw*

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT ON BUILDING FOR
SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER
TAX MAP KEY: 9-1-026: 033, 034, 035

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the H-Power environmental project. We have the following comments:

1. The existing water system cannot provide adequate fire protection to accommodate the proposed development. The Board of Water Supply (BWS) Water System Standards require a fire hydrant to be located within 125 linear feet of the property and provide a fire flow of 4,000 gallons per minute (gpm) for industrial developments. The nearest fire hydrant, fire hydrant L-4256, is located approximately 10 feet from the property; however, it can only supply a flow of 3,400 gpm. Therefore, the developer will be required to install the necessary water system improvements to provide adequate fire protection in accordance with our Water System Standards.
2. In response to Council Resolution 06-329, supporting the use of recycled water for industrial uses at the City's H-POWER facility and in accordance with BWS Rules and Regulations Section 1-112, Nonpotable Water, recycled water should be utilized in lieu of potable water for nonpotable purposes. The BWS Recycled Water System is located within an easement between the proposed H-Power environmental project site and the H-Power facility.
3. We remind Environmental Services that Covanta, the H-Power contractor, has not fulfilled a previous BWS requirement to utilize RO demineralized recycled water associated with the H-Power 3rd boiler project to replace the use of potable water for boiler feed. Since Covanta has been non-responsive to our attempts at a resolution to our recycled water requirement, it will be difficult for BWS to approve any further building permits for water services to these facilities.

Ms. Lori Kahikina
September 8, 2015
Page 2

4. The availability of potable water will be confirmed when the building permit application is submitted for approval. However, please be advised that this information is based upon current data, and therefore, the BWS reserves the right to change any position or information stated herein up until the final approval of the building permit application. The availability of recycled water for the H-POWER development will be confirmed when a recycled water service agreement is executed.
5. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage. Construction drawings should be submitted for our review and the construction schedule should be coordinated to minimize impact to the water system.
6. The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843



October 13, 2015 15 OCT 13 P 4:23

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair
ADAM C. WONG, Vice Chair
DAVID C. HULIHEE
KAPUA SPROAT
BRYAN P. ANDAYA

ROSS S. SASAMURA, Ex-Officio
FORD N. FUCHIGAMI, Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer *ELW*

TO: LORI M.K. KAHIKINA, P.E., DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

ATTN: MANUEL S. LANUEVO, P.E. AP LEED

FROM: ERNEST Y. W. LAU, P.E., MANAGER AND CHIEF ENGINEER *ELW*

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT ON BUILDING FOR
SUPPLEMENTAL ENVIRONMENTAL PROJECT AT H-POWER
TAX MAP KEY: 9-1-026: 033, 034, 035

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the H-Power environmental project. The following supersedes our previous comments dated September 8, 2015:

1. The existing water system is adequate to accommodate the proposed development.
2. In response to Council Resolution 06-329, supporting the use of recycled water for industrial uses at the City's H-POWER facility and in accordance with the Board of Water Supply (BWS) Rules and Regulations Section 1-112, Nonpotable Water, recycled water should be utilized in lieu of potable water for nonpotable purposes. The BWS Recycled Water System is located within an easement between the proposed H-Power environmental project site and the H-Power facility.
3. We remind Environmental Services that Covanta, the H-Power contractor, has not fulfilled a previous BWS requirement to utilize RO demineralized recycled water associated with the H-Power 3rd boiler project to replace the use of potable water for boiler feed. Since Covanta has been non-responsive to our attempts at a resolution to our recycled water requirement, it will be difficult for BWS to approve any further building permits for water services to these facilities.

Ms. Lori Kahikina
October 13, 2015
Page 2

4. The availability of potable water will be confirmed when the building permit application is submitted for approval. However, please be advised that this information is based upon current data, and therefore, the BWS reserves the right to change any position or information stated herein up until the final approval of the building permit application. The availability of recycled water for the H-POWER development will be confirmed when a recycled water service agreement is executed.
5. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage. Construction drawings should be submitted for our review and the construction schedule should be coordinated to minimize impact to the water system.
6. The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-021

November 20, 2015

Mr. Ernest Y.W. Lau, P.E.
Manager and Chief Engineer
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96843

**Subject: Draft Environmental Assessment – Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii**

Dear Mr. Lau:

Thank you for your letters dated September 8, 2015 and October 13, 2015, and for meeting with us on September 29, 2015. Pursuant to our discussions, we have the following responses to your comments:

1. For the Solar Building we do not anticipate a commercial potable water demand that can be provided by recycled water.
2. We hold weekly progress meetings with Covanta to discuss progress on the recycled water system for the H-POWER facility. The majority of the infrastructure has been installed and final drawings have been received. Covanta has reviewed and commented on the recycled water agreement and are preparing to finalize it. We are looking forward to completing the project. We will continue to provide updates on our progress.
3. We understand that the availability of potable water will be confirmed during the review of the building permit application, and that the availability of recycled water will be confirmed upon execution of the recycled water service agreement.

Mr. Ernest Y.W. Lau, P.E.
November 20, 2015
Page 2

4. We understand that when water is made available, we will be required to pay Water System Facilities Charges for resource development, transmission and daily storage. We will submit construction drawings for review and coordinate the construction schedule to minimize impact to the water system.
5. We will coordinate the on-site fire protection requirements with the Fire Prevention Bureau of the Honolulu Fire Department. We understand that the proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

Please contact me at 768-3401, if you have any questions. Thank you for meeting with us and for participating in the environmental review process.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse

8.19.15 #

DAVID Y. IGE
GOVERNOR



DOUGLAS MURDOCK
Comptroller

AUDREY HIDANO
Deputy Comptroller

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

AUG 14 2015

(P)1212.5

Mr. Manuel S. Lanuevo, PE AP LEED
ENV-Refuse
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Dear Mr. Lanuevo:

Subject: Draft Environmental Assessment
Building for Supplemental Environmental Project at H-Power
TMK: (1) 9-1-026: 033, 034, and 035

Thank you for the opportunity to provide comments for the subject project. The subject project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, your staff may call Ms. Gayle Takasaki of the Public Works Division at 586-0584.

Sincerely,

DOUGLAS MURDOCK
Comptroller

department OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU

715 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813 • AREA CODE 808 • PHONE: 768-7762 • FAX: 768-7792

KIRK CALDWELL
MAYOR



2015 OCT -1
RECEIVED
H-POWER
GARY K. NAKATA
DIRECTOR

BARBARA YAMASHITA
DEPUTY DIRECTOR

September 25, 2015

Mr. Manuel Lanuevo, P.E., LEED AP Chief
Department of Environmental Services
Refuse Division
City and County of Honolulu
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Dear Mr. Lanuevo:

SUBJECT: Draft Environmental Assessment
Building for Supplemental Environmental Project at H-Power
Campbell Industrial Park, Kapolei, Hawaii
Tax Map Key: (1) 9-1-026:033, 34, and 35

We have reviewed your letter dated August 6, 2015, and the attached draft EIS.

Our review of the documents provided indicates the proposed project will have no adverse impacts on any Department of Community Services' activities or projects at this time. Thank you for providing us with the opportunity to comment on this matter.

Sincerely,

A handwritten signature in blue ink, appearing to be "GK", is written over a faint circular stamp.

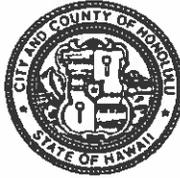
Gary K. Nakata
Director

GKN:jc

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

KIRK CALDWELL
MAYOR



ROBERT J. KRONING, P.E.
DIRECTOR

MARK YONAMINE, P.E.
DEPUTY DIRECTOR

August 20, 2015

Memorandum

To: Manuel S. Lanuevo, P.E., LEED AP
Department of Environmental Services

From: 
Robert J. Kroning, P.E., Director

Subject: Draft Environmental Assessment (DEA)
Building for Supplemental Environmental Project at H-Power
Oahu Ewa, TMK: (1)9-1-026-033, 34, 35

The Department of Design and Construction does not have comments to offer on the subject project.

Thank you for the opportunity to review and comment. Should you have any questions, please contact me at x88480.

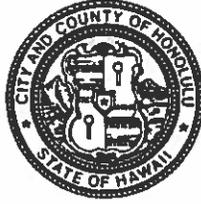
RJK:cf (619518)

8.19.15 #4

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

1000 Ulu'ohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR



ROSS S. SASAMURA, P.E.
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 15-583

August 17, 2015

MEMORANDUM

TO: Lori M.K. Kahikina, P.E., Director
Department of Environmental Services

ATTENTION: Manuel S. Lanuevo, P.E., LEED AP, Chief
Refuse Division

A handwritten signature in black ink, appearing to read "Ross S. Sasamura", is written over the "FROM:" field.

FROM: Ross S. Sasamura, P.E.
Director and Chief Engineer
Department of Facility Maintenance

SUBJECT: Draft Environmental Assessment (DEA)
Building for Supplemental Environmental Project at H-Power
Oahu Ewa, TMK: (1) 9-1-026-033, 34, 35

Thank you for the opportunity to review and comment on the above-subject property, dated August 6, 2015.

We have no comments or objections at this time, as we do not have any facilities or easements on the subject property.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3696.

DAVID Y. IGE
GOVERNOR OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 3, 2015

City and County of Honolulu
Department of Environmental Services, Refuse Division
Attn: Manuel S. Lanuevo
1000 Uluohia St., Suite 201
Kapolei, HI 96707

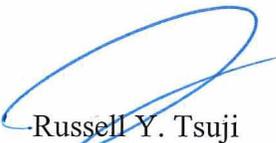
Dear Mr. Lanuevo,

SUBJECT: Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (1) Land Division - Oahu District; (2) Engineering Division; (3) Division of Boating & Ocean Recreation; and (4) Division of Forestry & Wildlife. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,



Russell Y. Tsuji
Land Administrator

Enclosure(s)



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 10, 2015

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power

LOCATION: Oahu Ewa, TMK: (1) 9-1-026-033, 34, 35

APPLICANT: City and County of Honolulu, Department of Environmental Services, Refuse Division

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: Opa\$\$word0 (first and last characters are zeros)
3. Click on: Requests for Comments
4. Click on the subject file "Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power" then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Linda Kawakami at (808) 587-0371 or Linda.Kawakami@hawaii.gov)

Please submit any comments by **September 2, 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: _____
 Date: _____

[Handwritten Signature]
 8/14/15
 b2



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 10, 2015

MEMORANDUM

TO: PR:

DLNR Agencies:

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

FROM: TD:

SUBJECT:

Russell Y. Tsuji, Land Administrator
Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power

LOCATION:

Oahu Ewa, TMK: (1) 9-1-026-033, 34, 35

APPLICANT:

City and County of Honolulu, Department of Environmental Services, Refuse Division

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
4. Click on the subject file "Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power" then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Linda Kawakami at (808) 587-0371 or Linda.Kawakami@hawaii.gov)

Please submit any comments by **September 2, 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: Carty S. Chang, Chief Engineer

Date: 8/27/15

2015 AUG 28 AM 10:30
RECEIVED
LAND DIVISION
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

**DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION**

LD/ Russell Y. Tsuji

**REF: DEA for Supplemental Environmental Project Building at H-Power, Ewa
Oahu.061**

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. Carter Romero (Acting) at (808) 961-8943 of the County of Hawaii, Department of Public Works.
- () Ms. 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.

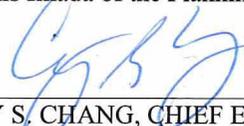
- () The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering 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: _____

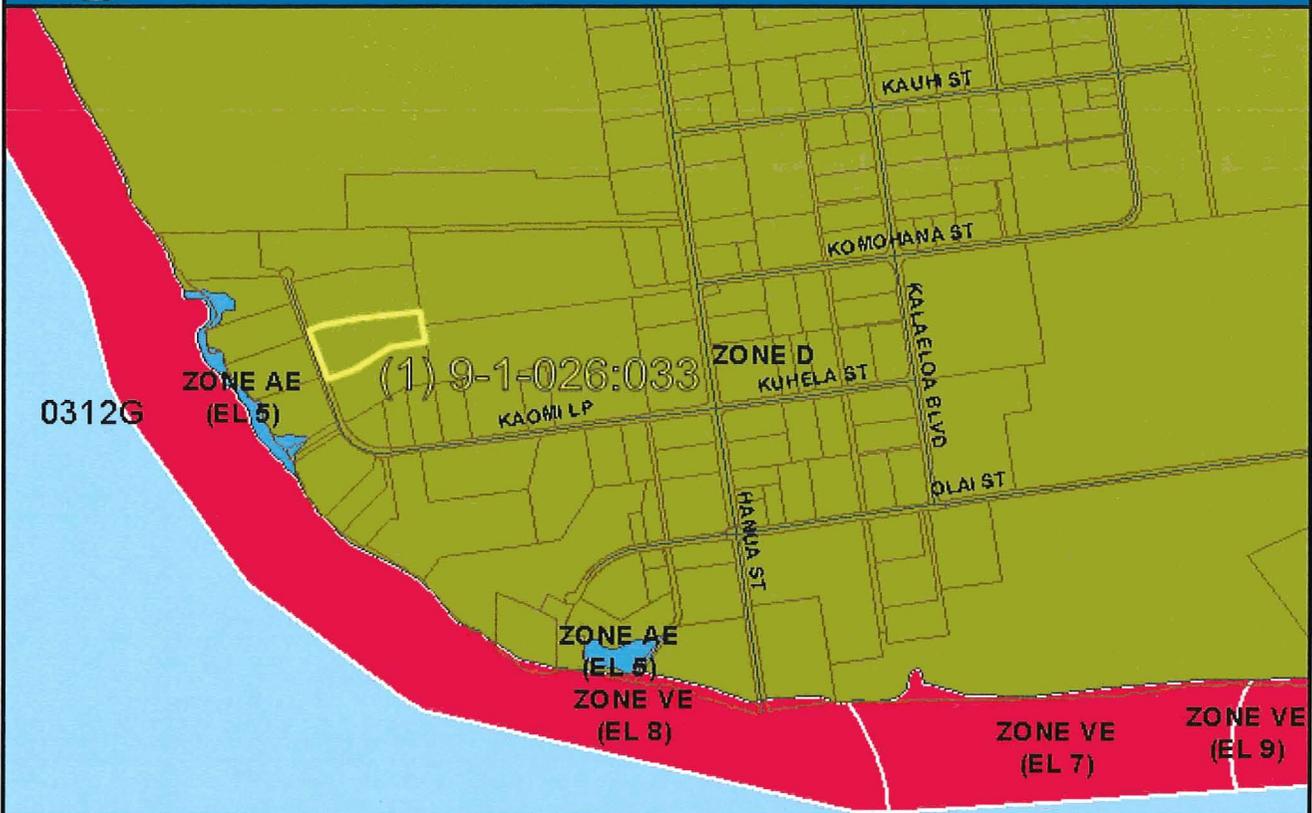
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: 
CARTY S. CHANG, CHIEF ENGINEER

Date: 8/27/15



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) 9-1-026-033
PARCEL ADDRESS:
FIRM INDEX DATE: NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S): NONE
FEMA FIRM PANEL(S): 15003C0312G
PANEL EFFECTIVE DATE: JANUARY 19, 2011

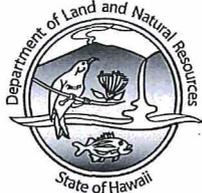
PARCEL DATA FROM: APRIL 2014
IMAGERY DATA FROM: MAY 2006

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

If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and shall not be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.



RECEIVED
LAND DIVISION

2015 AUG 18 AM 11:05

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 10, 2015

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power

LOCATION: Oahu Ewa, TMK: (1) 9-1-026-033, 34, 35

APPLICANT: City and County of Honolulu, Department of Environmental Services, Refuse Division

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
4. Click on the subject file "Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power" then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Linda Kawakami at (808) 587-0371 or Linda.Kawakami@hawaii.gov)

Please submit any comments by **September 2, 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: Edward Underwood
 Date: 8/14/15

56739

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT



RECEIVED
STATE PARKS DIV

15 AUG 20 P4:26

DEPT OF LAND &
NATURAL RESOURCES

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 10, 2015

MEMORANDUM

TO: *from:*

DLNR Agencies:

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

RECEIVED
LAND DIVISION
2015 AUG 24 AM 11:21
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

FROM: *to:*

Russell Y. Tsuji, Land Administrator

SUBJECT:

Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power

LOCATION:

Oahu Ewa, TMK: (1) 9-1-026-033, 34, 35

APPLICANT:

City and County of Honolulu, Department of Environmental Services, Refuse Division

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
4. Click on the subject file "Draft Environmental Assessment (EA), Building for Supplemental Environmental Project at H-Power" then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Linda Kawakami at (808) 587-0371 or Linda.Kawakami@hawaii.gov)

Please submit any comments by **September 2, 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: *Galen Kawakami*
Print Name: Galen Kawakami
Date: 8/14/2015

DAVID Y. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 18, 2015

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
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

MEMORANDUM

TO: Russell Y. Tsuji, Land Administrator

FROM: Galen K. Kawakami, Acting Administrator

SUBJECT: Request for Comments, Draft Environmental Assessment, Building for Supplemental Project at H-Power, Ewa, Oahu, TMK: (1) 9-1-026-033, 34, 35

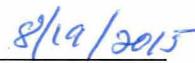
The City and County of Honolulu, Department of Environmental Service, Refuse Division proposes construction of a solar PV system at its waste-to-energy facility, H-POWER. A new building is proposed as part of the H-POWER solar PV system. The Solar Building will be sited on City-owned parcels adjacent to H-POWER. The Solar Building will support the balance of the PV system required for integration into H-POWER. The area within the structure will support ancillary H-POWER operations and City needs including but not limited to refrigerant reclamation and recycling, metals processing, storage, and vehicle access.

Due to the proximity of this proposed facility to the coast, it is recommended that night-time lighting for this facility be minimized to that necessary for safety and security, and that all lighting be of the shielded flat-lens cut-off type that does not project light horizontally so as to minimize attraction of seabirds. If seabirds are attracted to the facility and end up grounded, a plan should be in place for transporting them to a permitted rehabilitation facility.

Thank you for the opportunity to comment on this plan.



Galen K. Kawakami, Acting Administrator



Date

Cc: Suzanne Case, Chairperson

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-022

November 20, 2015

Mr. Russell Y. Tsuji, Land Administrator
State of Hawaii
Department of Land and Natural Resources
Land Division
PO Box 621
Honolulu, Hawaii 96809

Subject: Draft Environmental Assessment - Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Mr. Tsuji:

Thank you for your letter dated September 3, 2015. Per your comments, the project will minimize night-time lighting to that necessary for safety and security, and lighting will not project horizontally as to minimize attraction of seabirds. If the seabirds are attracted to the facility and end up grounded, contact will be made to the State Division of Forestry and Wildlife and/or a permitted seabird rehabilitation facility (i.e. Sea Life Park, Hawaii Wildlife Center, or other facility) for instructions.

Please contact me at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse



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

In reply, please refer to:
EMD/CWB

08024PNN.15

August 17, 2015

Mr. Manuel S. Lanuevo, P.E., LEED AP
Chief
Department of Environmental Services
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Dear Mr. Lanuevo:

SUBJECT: Comments on the Draft Environmental Assessment for the Building for Supplemental Environmental Project at H-Power TMK (1) 9-1-026:033, 034, 035 Kapolei, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated July 29, 2015, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: <http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf>.

1. Any project and its potential impacts to State waters must meet the following criteria:
 - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
 - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
 - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <https://eha-cloud.doh.hawaii.gov/epermit/>. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.
5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
 - a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like

community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

- b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
- c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.
- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at:

<http://health.hawaii.gov/cwb>, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,



ALEC WONG, P.E., CHIEF
Clean Water Branch

NN:ay

c: DOH-EPO #15-195 [via email only]

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-020

November 20, 2015

Mr. Alec Wong, P.E., Chief
Clean Water Branch
State Of Hawaii
Department Of Health
P O Box 3378
Honolulu, Hawaii 96801-3378

Subject: Draft Environmental Assessment - Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Mr. Wong:

Thank you for your letter dated August 17, 2015. We have the following responses to your comments:

1. The project will comply with the criteria listed (antidegradation policy, designated uses, and water quality).
2. The project will submit a Notice of Intent (NOI) form for NPDES general permit coverage.
3. The project does not involve work in, over, or under waters of the United States.
4. The project will comply with the State's Water Quality Standards.
5. Planning, design, and operation of the project will follow the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters.

Mr. Alec Wong, P.E., Chief
November 20, 2015
Page 2

Please contact me at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse



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

In reply, please refer to:
File:

EPO 15-195

August 10, 2015

Mr. Manuel S. Lanuevo, PE AP LEED
Chief, Refuse Division
Department of Environmental Services
1000 Uluohia Street, Suite 308
Kapolei, Hawaii 96707

Dear Mr. Lanuevo:

SUBJECT: Draft Environmental Assessment (DEA) for Building for Supplemental Environmental Project at H-Power, Ewa, Oahu
TMK: (1) 9-1-026-033, 34, 35

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your DEA to our office via the OEQC link:
http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2010s/2015-08-08-OA-5B-DEA-Building-for-Supplemental-Environmental-Project-at-H-Power.pdf

EPO strongly 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.

EPO offers the following comments:

1. We suggest you review the requirements for the National Pollutant Discharge Elimination System (NPDES) permit. We recommend contacting the Clean Water Branch at (808) 586-4309 or cleanwaterbranch@doh.hawaii.gov after relevant information is reviewed at:
 - a. <http://health.hawaii.gov/cwb>
 - b. <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/standard-npdes-permit-conditions>
 - c. <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/forms>
2. EPO recommends you review the need and/or requirements for a Clean Air Branch permit. The Clean Air Branch can be consulted via e-mail at: Cab.General@doh.hawaii.gov or via phone: (808) 586-4200.
3. If noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please call the Indoor and Radiological Health Branch at (808) 586-4700 and review relevant information online at: <http://health.hawaii.gov/irhb/noise>

Mr. Manuel S. Lanuevo
Page 2
August 10, 2015

EPO also suggests that the Hazard Evaluation and Emergency Response (HEER) Office's Site Discovery and Response (SDAR) Section be contacted. The SDAR section protects human health and the environment by identifying, investigating, and remediating sites contaminated with hazardous substances (non-emergency site investigations and cleanup). The HEER Office's SDAR Section can be contacted at: (808) 586-4249 and relevant information can be reviewed at: <http://eha-web.doh.hawaii.gov/eha-cma/Leaders/HEER/site-assessment-and-cleanup-programs>

EPO encourages you 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>

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/>.

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

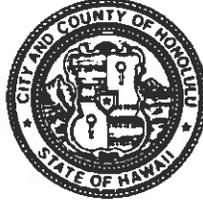
c: DOH: CWB, SHWB (via email only)

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-024

November 25, 2015

Ms. Laura Leialoha Phillips McIntyre, AICP
Program Manager
State of Hawaii
Department of Health
Environmental Planning Office
P.O. Box 3378
Honolulu Hawaii 96801-3378

Subject: Draft Environmental Assessment - Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Ms. McIntyre:

Thank you for your letter dated August 10, 2015. We have the following responses to your comments:

1. The project will be covered by an NPDES permit.
2. We are corresponding with DOH Clean Air Branch with respect to air permit requirements.
3. The project will comply with noise level requirements as set forth in HAR, Chapter 11-46, "Community Noise Control".
4. We appreciate the additional resources provided, including the Hazard Evaluation and Emergency Response Office's Site Discovery and Response Section, The Hawaii Environmental Health Portal, and the revised Water Quality Standards Maps.

Ms. Laura Leialoha Phillips McIntyre, AICP
November 25, 2015
Page 2

Please contact me at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse

Sadri, Ahmad

From: Lanuevo, Manuel S
Sent: Wednesday, September 09, 2015 3:33 PM
To: Sadri, Ahmad
Cc: Hamada, Wayne
Subject: FW: H-Power Supplemental Environmental Project DEA

Hi Ahmad,

[Here's the DPP comments.](#)

Thanks,
Manny

From: Takahashi, Eugene H.
Sent: Wednesday, September 09, 2015 2:55 PM
To: Lanuevo, Manuel S
Cc: Blair, Thomas G
Subject: H-Power Supplemental Environmental Project DEA

Per your request, we are emailing our comments to you.

Thank you for your letter dated August 6, 2015, requesting comments on the Draft Environmental Assessment (DEA) for the Building for Supplemental Environmental Project at H-Power. We have reviewed the information provided and offer the following comments:

1. Section 2.6, Floodplains, contains numerous errors. The DEA states a Flood Insurance Rate Map (FIRM) was not available, however the text references a FIRM from 2004 used for Figure 2.6-3. The FIRM in 2-6.3 is dated January 19, 2011, not 2004. The applicant shall carefully review the DEA and revise it accordingly.
2. Page 11, 4th Paragraph: Conceptual drawings showing the solar building, paved driveway, miscellaneous improvements, and possible future development are missing from the DEA.
3. Page 12, 1st Paragraph: The DEA should include a discussion of the existing infrastructure and utilities and proposed impacts and mitigation measures to these facilities (ex., drainage, wastewater, water, etc.).
4. The DEA states that no wetlands exist according to the National Wetlands Inventory (NWI) (dated 2008). According to our records and the NWI (last checked August 18, 2015), figure 2.8-1 is outdated. There is a freshwater emergent wetland (PEM1A) on TMK: 9-1-026: 034 in the vicinity of the proposed structure. A wetland delineation may be required from the U.S. Army Corps of Engineers (USACE). Please update the figures and revise the DEA accordingly.
5. The DEA should include a discussion describing the proposed grading work, as Section 7 indicates that a grading permit is anticipated.

6. If the project drains to the City's drainage facilities and all natural drainage ways that the City has ownership and/or responsibility for, then the project shall comply with the prevailing standards at the time the construction and grading plans are submitted for review and approval.

Should you have any questions, please contact Thomas Blair at 768-8030

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

1000 ULUOHA 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:
RH 16-026

December 8, 2015

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

Subject: Draft Environmental Assessment (DEA) – Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Mr. Atta:

Thank you for Department of Planning and Permitting (DPP) comments to the DEA (attached e-mail received September 9, 2015), and for meeting with us on October 19, 2015. Pursuant to our discussion regarding the potential emergent wetland on Parcel 34, we understand that DPP is withdrawing this comment because DPP is not the agency responsible for wetland delineation, and that DPP believes that the area identified does not meet the requirements for an emergent wetland. For reference, please see attached maps and pictures of the area that were provided and discussed in our meeting.

We will make the suggested changes and edits to the EA that were proposed in the other comments received in the e-mail, including:

1. Corrections to errors in Section 2.6 "Floodplains".
2. Additional conceptual drawings.
3. A discussion of the existing infrastructure and utilities and proposed impacts and mitigation measures to these facilities.
4. A discussion describing the proposed grading work.
5. The project shall comply with the prevailing standards at the time the construction and grading plans are submitted for review and approval.

Mr. George Atta, Director
December 8, 2015
Page 2

Please contact Manuel Lanuevo at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lori M.K. Kahikina', with a stylized flourish at the end.

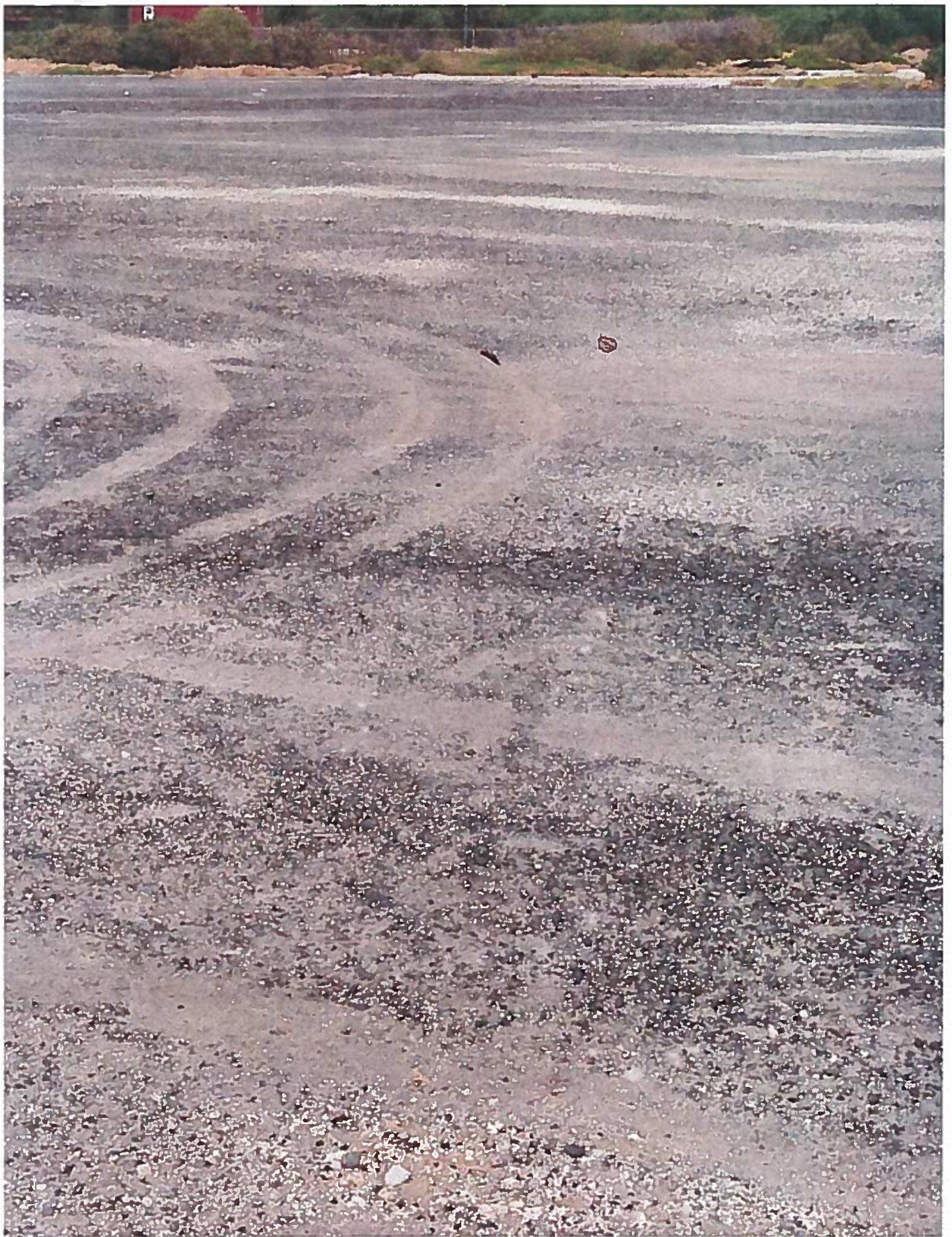
Lori M.K. Kahikina, P.E., Director
Environmental Services

Attachments

cc: Manuel Lanuevo, ENV-Refuse
Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse



PICTURE
TAKEN
FROM
HERE





U.S. Fish and Wildlife Service
National Wetlands Inventory

Lot 35 Emergent
Weland

Sep 17, 2015



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Rivenne
- Other

The map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currency of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

DEPARTMENT OF PARKS & RECREATION
CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

DEPARTMENT OF
ENVIRONMENTAL SVCS

15 SEP -9 A11 :01

KIRK CALDWELL
MAYOR



MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

September 1, 2015

MEMORANDUM

TO: Lori M.K. Kahikina P.E., Director
Department of Environmental Services

FROM: Michele K. Nekota 
Director

SUBJECT: Draft Environmental Assessment (DEA)
Building for Supplemental Environmental Project at H-Power
Oahu Ewa, TMK: (1)9-1-026-033, 34, 35

Thank you for the opportunity to review and comment on the draft environmental assessment for the Building for Supplemental Environmental Project at H-Power.

The Department of Parks and Recreation has no comment. As the proposed project will have no impact on any of our programs or facilities, you may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner, at 768-3017.

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

TP8/15-620184R

August 31, 2015

MEMORANDUM

TO: Lori M.K. Kahikina, P.E., Director
Department of Environmental Services

ATTENTION: Manuel S. Lanuevo, P.E., LEED AP, Chief
Refuse Division

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

SUBJECT: Draft Environmental Assessment Building for Supplemental
Environmental Project at H-Power; Oahu, Ewa, Tax Map Key:
(1)9-1-026-033, 34, and 35

In response to a letter from Manuel S. Lanuevo, P.E., LEED AP, Chief, Refuse Division, Department of Environmental Services, dated August 6, 2015, we have no comments to offer concerning this project.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Michael Murphy of my staff at 768-8359.

8/19/15 #3



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports District Office

300 Ala Moana Blvd., Rm. 7-128
Honolulu, HI 96813
MAIL: Box 50244
Honolulu, HI 96850-0001
Telephone: (808) 541-1232
FAX: (808) 541-3566

August 13, 2015

Mr. Manuel S. Lanuevo, P.E.
City and County of Honolulu
Department of Environmental Services, Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, HI 96707

Dear Mr. Lanuevo:

**SUBJECT: Draft Environmental Assessment - Building for Supplemental
Environmental Project at H-Power (Solar Panels); Kalaeloa, Hawaii**

We have reviewed the Draft Environmental Assessment Supplemental for the proposed installation of a solar PV system at the waste-to-energy facility near Kalaeloa Airport.

Per Federal Aviation Regulation (FAR) Part 77, Notice of Proposed Construction or Alteration, we request an airspace review be conducted by the proponent through submittal of FAA Form 7460-1, Notice of Proposed Construction or Alteration. The proposal is close to Kalaeloa Airport and also within the primary air traffic corridor for Honolulu International Airport. The potential for glint/glare hazards to aircraft must be analyzed.

A glint/glare analysis should be submitted with FAA Form 7460-1 information. The following website may assist you with preparation of a glint/glare analysis:

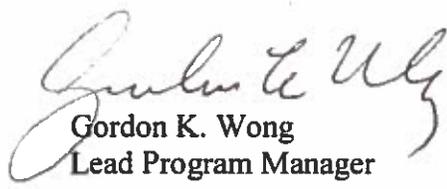
www.sandia.gov/glare

FAA Form 7460-1 data, including the glint/glare analysis report must be filed online at:

<https://oeaaa.faa.gov/oeaaa>

Please call if you have any questions.

Sincerely,



Gordon K. Wong
Lead Program Manager

Ronnie V. Simpson
Manager, Airports District Office

cc: State of Hawaii, Department of Transportation, Airports Division

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



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

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RH 16-019

November 19, 2015

Mr. Gordon K. Wong
Lead Program Manager
U.S. Department of Transportation
Federal Aviation Administration
Box 50244
Honolulu, Hawaii 96850-0001

Subject: Draft Environmental Assessment - Building for
Supplemental Environmental Project at
H-Power (Solar Panels); Kalaeloa, Hawaii

Dear Mr. Wong:

Thank you for your letter dated August 13, 2015. This project will utilize solar panels that are pre-approved by the FAA. We will also submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, along with a glint/glare analysis. We are anticipating installing the solar panels sometime after July 1, 2016. We will be providing the additional documentation consistent with this timeframe.

Please contact me at 768-3401, if you have any questions. Thank you for participating in the environmental review process.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: Wayne Hamada, ENV-Refuse
Ahmad Sadri, ENV-Refuse
Steven Serikaku, ENV-Refuse