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August 11, 2016

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SEP 8 2016

OFFICE OF ENVIRONMENTAL QUALITY CONTROL

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RECEIVED

Mr. Scott Glenn
Director
Office of Environmental Quality Control
Department of Health, State of Hawai'i
235 South Beretania Street, Room 702
Honolulu, Hawai'i 96813

SUBJECT: Draft Environmental Assessment and Anticipated Finding of No Significant Impact
Job No. PLH-35b Kapaia Cane Haul Road 18" Main
Lihu'e Water System, Lihu'e, Kaua'i, Hawai'i

Aloha Mr. Glenn:

With this letter, the County of Kaua'i Department of Water hereby transmits the draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI) for the Kapaia Cane Haul Road 18" Water Main project located at TMK: (4) 3-8-003:001 in the Lihu'e District on the island of Kaua'i for publication in the next available edition of the Environmental Notice.

We have enclosed a completed Office of Environmental Quality Control (OEQC) Publication form and two hard copies of the Draft Environmental Assessment for the subject project for your review. We have also transmitted digital copies of the DEA-AFNSI and the OEQC publication form to your office at oeqc@doh.hawaii.gov.

Should you have any questions, please contact Mr. Bryan Wienand of my staff at (808) 245-5449 or email at bwienand@kauaiwater.org.

Sincerely,

[Handwritten signature]

Kirk Saiki, P.E.
Manager and Chief Engineer

17-069

AGENCY
PUBLICATION FORM SEP 8 2016

| | |
|---|--|
| Project Name: | Kāpaia Cane Haul Road 18" Main |
| Project Short Name: | (please use no more than five succinct words; count not to include document status, e.g., EA) |
| HRS §343-5 Trigger(s): | County lands and a portion of County funds will be used for the proposed project. |
| Island(s): | Kaua'i |
| Judicial District(s): | Lihu'e |
| TMK(s): | (4) 3-8-003:001 |
| Permit(s)/Approval(s): | County of Kaua'i: Public Works: Road Permit for work within County Right-of-Way Department of Planning: Special Permit State of Hawai'i: Department of Health: NPDES and Community Noise Permit Department of Transportation (Highways Division): Construction near Kūhiō Highway |
| Proposing/Determining Agency: | County of Kaua'i, Department of Water |
| Contact Name, Email, Telephone, Address | Keith Aoki kaoki@kauaiwater.org (808) 245-5411, or Bryan Wienand bwienand@kauaiwater.org (808) 245-5449. Address: 4398 Pua Loke St., Lihu'e, HI 96766 |
| Accepting Authority: | (for EIS submittals only) |
| Contact Name, Email, Telephone, Address | |
| Consultant: | Kodani and Associates Engineers, LLC. |
| Contact Name, Email, Telephone, Address | Steven B. Macklin, steven@kodani.com , (808) 245-9591 (Work) or (808) 635-5370 (Cell), Address: 1840 Leleiona St, Lihu'e, HI 96766 |

Status (select one) DEA-AFNSI**Submittal Requirements**

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.

 FEA-FONSI

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.

 FEA-EISPN

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.

 Act 172-12 EISPN
("Direct to EIS")

Submit 1) the proposing agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.

 DEIS

Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.

 FEIS

Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.

 FEIS Acceptance
Determination

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

- | | |
|---|---|
| <input type="checkbox"/> FEIS Statutory Acceptance | Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions. |
| <input type="checkbox"/> Supplemental EIS 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 or is not required; no EA is required and no comment period ensues upon publication in the Notice. |
| <input type="checkbox"/> Withdrawal | Identify the specific document(s) to withdraw and explain in the project summary section. |
| <input type="checkbox"/> Other | Contact the OEQC if your action is not one of the above items. |

Project Summary

Provide a description of the proposed action and purpose and need in 200 words or less.

The County of Kaua'i, Department of Water (DOW) *Kāpaia Cane Haul Road 18-inch Main* project proposes 9,000 linear feet of 18-inch water line along Kāpaia Cane Haul Road from Ma'alo Road to Kūhiō Highway. The project is needed because the existing transmission facilities along Kūhiō Highway from Ma'alo Road to the Līhu'e area are not adequate to utilize the capacity from the Waiahi surface water treatment plant (SWTP) for the planned affordable housing development of the Līhu'e area. The new transmission line will also allow the DOW to provide adequate fire flow to Wilcox Memorial Hospital and Elsie H. Wilcox Elementary School. The increased flow for fire protection will benefit hospital patients and school students in the event of a fire. Lastly, the new water main will provide redundancy in the event of a main break in one of the existing transmission lines from the Waiahi SWTP to Līhu'e.

County of Kaua'i Department of Water

Kāpaia Cane Haul Road 18-inch Main

Draft Environmental Assessment
Submitted Pursuant to Hawai'i Revised Statutes
Chapter 343

Applicant:

County of Kaua'i
Department of Water
4398 Pua Loke Street
Līhu'e, HI 96766

Accepting Agency:

County of Kaua'i
Department of Water
4398 Pua Loke Street
Līhu'e, HI 96766

Prepared by:

Kodani & Associates Engineers, LLC
3126 Akahi Street
Līhu'e, HI 96766

August 2016

| | |
|-------------------|--|
| Project Name: | Kāpaia Cane Haul Road 18-Inch Main |
| Applicant: | County of Kaua'i Department of Water 4398 Pua Loke Street Līhu'e, HI 96766 Contact: Kirk Saiki, Manager & Chief Engineer |
| Property Owners: | Grove Farm Company, Inc. 3-1850 Kaumuali'i Highway Līhu'e, HI 96766 Contact: Ms. Shawn Shimabukuro <u>and</u> County of Kaua'i Department of Public Works 4444 Rice Street, Suite 275 Līhu'e, HI 96766 Contact: Mr. Lyle Tabata, Acting County Engineer <u>and</u> State of Hawai'i Department of Transportation, Highways Division 1720 Haleukana Street Līhu'e, HI 96766 Contact: Mr. Larry Dill, District Engineer |
| Accepting Agency: | County of Kaua'i Department of Water 4398 Pua Loke Street Līhu'e, HI 96766 Contact: Kirk Saiki, Manager & Chief Engineer |
| Locations: | <ul style="list-style-type: none"> • 'Ehiku Street and Kūhiō Highway intersection in Līhu'e, Kaua'i • 'Ehiku Street • Kāpaia Cane Haul Road (located between the 'Ehiku Street and Ma'alo Road) • Kāpaia Cane Haul Road intersection with Ma'alo Road |
| TMKs: | <ul style="list-style-type: none"> • (4) 3-8-03:001 • (4) 3-8-04:001 • 'Ehiku Street and Kūhiō Highway (near plats (4) 3-8-15: and (4) 3-8-07: and (4)3-8-09:) |

| | |
|----------------------------|---|
| Proposed Action: | <p>Construct an 18-inch water transmission line, consistent with the Department of Water, Capital Improvement Project for 2015</p> <ul style="list-style-type: none"> • Approximately 7,525 feet along Kāpaia Cane Haul Road; and • Approximately 1,475 feet along 'Ehiku Street to Kūhiō Highway • Total length of transmission line: approximately 9,000 feet |
| Land area: | <ul style="list-style-type: none"> • TMK parcels: 432.92 acres and 294.64 acres • 'Ehiku Street (County of Kaua'i) |
| State Land Use District: | <i>Agricultural District & Urban District</i> |
| Kaua'i General Plan: | <i>Agriculture</i> |
| Kaua'i County Zoning: | <i>Agriculture District (A) & Open (O)</i> |
| Possible Permits Required: | <p>County of Kaua'i:</p> <ul style="list-style-type: none"> • Public Works: Road Permit for work within County Right-of-Way • Department of Planning: Special Permit <p>State of Hawai'i:</p> <ul style="list-style-type: none"> • Department of Health: NPDES and Community Noise Permit • Department of Transportation (Highways Division): Construction near Kūhiō Highway |
| Anticipated Determination: | Finding of No Significant Impact (FONSI) |

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1.0 PROPOSED PROJECT

1.1 Background and Description

In March 2001 the County of Kaua'i, Department of Water completed the *Department of Water, Water Plan 2020* which is a comprehensive plan that covers all of the water systems of the Department of Water, County of Kaua'i, from Hā'ena to Kekaha. The Department's mission statement:

“Together, we provide safe, affordable, and sufficient drinking water through wise management of our resources and with excellent customer service for the people of Kaua'i.”

In 2009, Kodani & Associates Engineers, LLC prepared the Līhu'e-Hanama'ulu Master Planned Community Water Master Plan for Grove Farm Company, Inc. (Grove Farm). In part, the Master Plan was prepared for the future development process of Grove Farm property. Phase I of the Master Plan included the proposed development of a 9,000 linear feet (L.F.) of 18-inch water line along the main Kāpaia Cane Haul Road from Ma'alo Road to Kūhiō Highway (See **Exhibit E**).

The County of Kaua'i, Department of Water (DOW) *Kāpaia Cane Haul Road 18-inch Main* proposed project is currently described in the 2015 Proposed Capital Improvement Project (CIP).¹ The DOW wishes to increase potable water capacity in the Līhu'e area to satisfy existing and future potable water needs. Grove Farm is the owner of the property on which the main portion of the transmission line is proposed to be constructed and is able to satisfy a portion of the increased capacity needs of the DOW.

The Grove Farm Waiahi surface water treatment plant (SWTP) is located above Hanama'ulu at the Kāpaia Reservoir on Grove Farm property. Located along Ma'alo Road the Waiahi SWTP provides the bulk of the source water for the Līhu'e area. The existing transmission facilities along Kūhiō Highway from Ma'alo Road to the Līhu'e area are not adequate to utilize the capacity or suitable flow from the SWTP for the planned affordable housing development of the Līhu'e area. The proposed 18-inch water main transmission line along the Kāpaia Cane Haul Road is needed to adequately transmit the intended flow from the SWTP to where it is needed, including the planned affordable housing area. The new transmission line will also allow the DOW to provide adequate fire flow to Wilcox Memorial Hospital and Elsie H. Wilcox Elementary School.

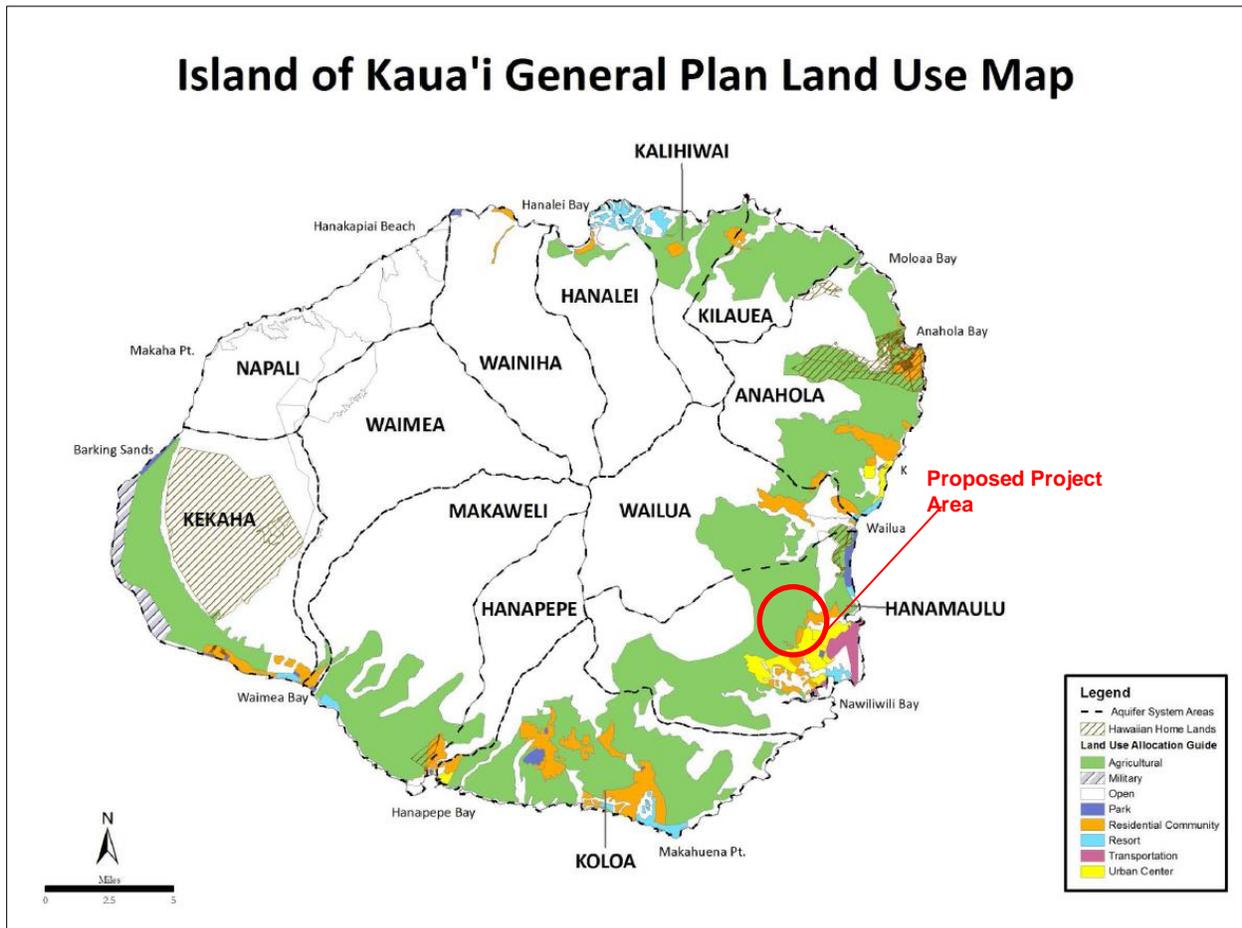
¹ County of Kaua'i, Department of Water, Proposed Capital Improvement Projects, 2015, Project No. PLH-35b.

The increased flow for fire protection will benefit hospital patient and school students in the event of a fire. In addition, it will provide backup service in the event that there is a main break in one of the transmission lines from the Waiahi SWTP.

1.2 Location

On Kaua'i, the proposed project is located within the Department of Water's Hanama'ulu Aquifer System Area. The below map² illustrates the area.

Figure 1: General Plan map related to project area



Construction of the new water main transmission line will begin at Kūhiō Highway at the intersection with 'Ehiku Street. The transmission line will be constructed primarily under the pavement of 'Ehiku then continuing on to the Kāpaia Cane Haul Road. The Kāpaia Cane Haul Road is an existing asphalt road and the majority of the proposed transmission line will be constructed under the existing pavement.

² Department of Water: <http://www.kauaiwater.org/GeneralPlan.pdf>.

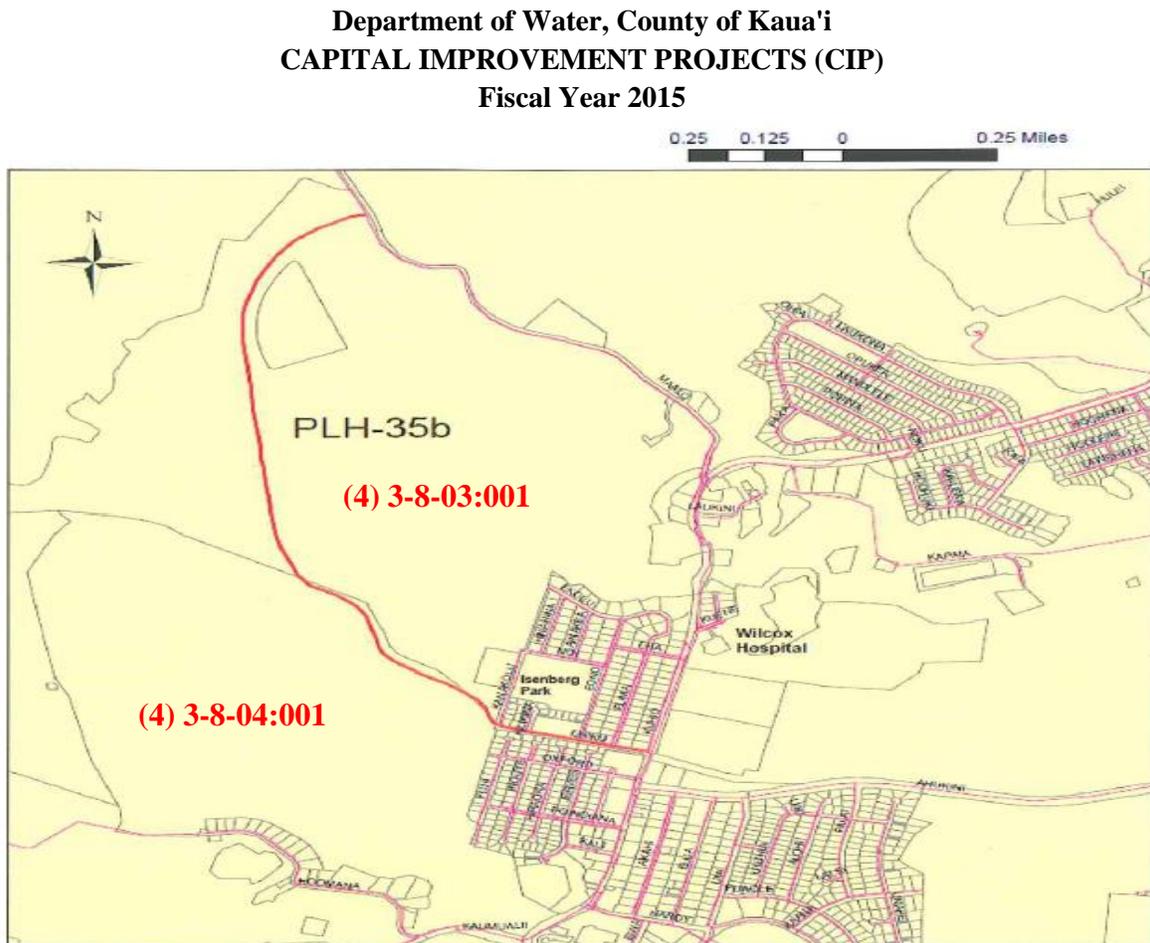
A map of the proposed CIP project is displayed below in **Figure 2**.

The overall length of the 18-inch transmission line is approximately 9,000 feet and is proposed to be constructed within four (4) areas:

- Kūhiō Highway intersection with 'Ehiku Street
- County of Kaua'i's 'Ehiku Street to beginning of Kāpaia Cane Haul Road
- On the Kāpaia Cane Haul Road³ within the 432.92 acre and 294.64 acre Grove Farm parcels on Tax Map Keys (4) 3-8-03:001 and (4) 3-8-04:001
- Kāpaia Cane Haul Road intersection with Ma'alo Road

The below map illustrates the location of the transmission line from Kūhiō Highway to Ma'alo Road.

Figure 2: 18-inch water transmission line (red) crossing over two parcels and on 'Ehiku Street.



³ Primary access to the Kāpaia Cane Haul Road is to turn mauka off Kūhiō Highway onto the County's 'Ehiku Street. At the western end of 'Ehiku Street, the Grove Farm gate then makes access available to the Kāpaia Cane Haul Road.

1.3 Land Use Classification, General Plan, and Zoning

| | TMK (4) 3-8-03:001 | TMK (4) 3-8-04:001 |
|-----------------------------|--|---|
| State Land Use District: | <i>Agricultural District</i> | <i>Agricultural District & Urban District</i> |
| Kaua'i County General Plan: | <i>Agriculture</i> | <i>Agriculture</i> |
| Kaua'i County Zoning: | <i>Agriculture District (A) & Open (O)</i> | <i>Agriculture District (A) & Open (O)</i> |

The existing State Land Use District classifications for the TMKs within project area are *Agricultural*; in TMK (4)3-8-04:001 a small portion is classified as *Urban District*. These classifications are shown in **Exhibit B**. 'Ehiku Street and Kūhiō Highway do not have any Land Use Classification.

The County of Kaua'i General Plan land use designation for the project areas within the Grove Farm parcels are *Agriculture*, as shown on the County General Plan map in **Exhibit C**.

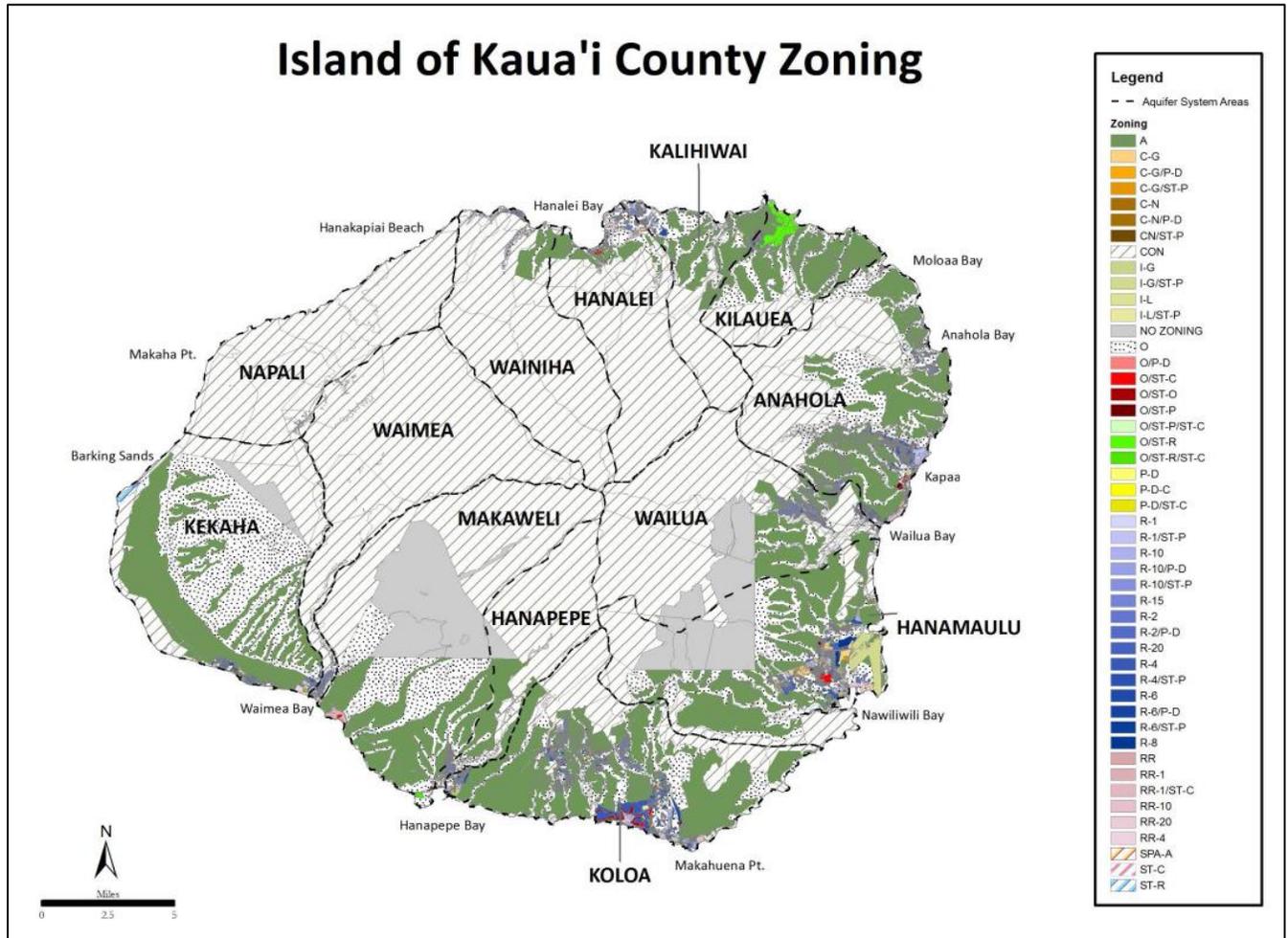
The County Zoning for the parcels is *Agriculture District (A)* and *Open (O)*, and is shown in **Exhibit D**. 'Ehiku Street and Kūhiō Highway do not have any County Zoning.

The proposed project area is outside the Special Management Area, and not within the Shoreline Setback area.

Related to the Kaua'i County Zoning, the below map in **Figure 3** illustrates the DOW's Aquifer System Area of Hanama'ulu⁴, which includes the proposed project area.

⁴ Department of Water: <http://www.kauaiwater.org/Zoning.pdf>.

Figure 3: County Zoning map related to DOW Aquifer System Area.



1.4 Possible Permits Required and Approvals

According to the Comprehensive Zoning Ordinance, Table 8-2.4, no Use Permit is required for the proposed project on County Agriculture land:

8-2.4 (f) (10) *Private and public utilities and facilities, other than maintenance and storage of equipment, materials, and vehicles.*

County of Kaua‘i, Department of Public Works

A Department of Public Works Road Permit for the construction of the 18-inch transmission line within the County Right-of-Way on 'Ehiku Street may be required. A permit from the State Department of Transportation, Highways Division may also be required as the proposed project transmission line will connect with an existing pipeline along the right-of-way Kūhiō Highway.

County of Kauaʻi, Department of Planning

A Department of Planning Special Permit may not be required for the 18-inch water transmission line proposed to be constructed on the Kāpaia Cane Haul Road as the two parcels are within the State Land Use *Agricultural District* and over 15 acres.

§205-4.5 Permissible uses within the agricultural districts. (a) *Within the agricultural district, all lands with soil classified by the land study bureau's detailed land classification as overall (master) productivity rating class A or B shall be restricted to the following permitted uses:*

.....

(7) *Public, private, and quasi-public utility lines and roadways, transformer stations, communications equipment buildings, solid waste transfer stations, major water storage tanks, and appurtenant small buildings such as booster pumping stations, but not including offices or yards for equipment, material, vehicle storage, repair or maintenance, treatment plants, corporation yards, or other similar structures.*

Standard National Pollutant Discharge Elimination System (NPDES) Conditions

Should a State of Hawaiʻi, Department of Health NPDES permit be required, the proposed project will meet these standard conditions.

Basic water quality criteria (comply with Hawaiʻi Administrative Rules, Chapter 11-54, Section 11-54-04)

a. *The Permittee shall not cause or contribute to a violation of the narrative basic water quality criteria specified in Section 11-54-04(a) which states:*

“(a) *All waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including:*

- 1) *Materials that will settle to form objectionable sludge or bottom deposits;*
- 2) *Floating debris, oil, grease, scum, or other floating materials;*
- 3) *Substances in amounts sufficient to produce taste in the water or detectable off-flavor in the flesh of fish, or in amounts sufficient to produce objectionable color, turbidity, or other conditions in the receiving waters;*
- 4) *High or low temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or*

in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water;

- 5) *Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life;*
- 6) *Soil particles resulting from erosion on land involved in earthwork, such as the construction of public works; highways; subdivisions; recreational, commercial, or industrial developments; or the cultivation and management of agricultural lands”*

b. The Permittee shall not cause or contribute to a violation of the basic numeric water quality requirements of Hawai'i Administrative rules, Chapter 11-54, Section 11-54-04(b).

Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 46, Community Noise Control

Should a Community Noise Control permit be required, the proposed project would submit an application to conduct construction activities within the proposed project area⁵.

1.5 Approximate Cost & Project Schedule

The total estimated budget is \$3,500,000. Funding will be provided by the County of Kaua'i, Department of Water (approximately two-thirds (2/3) of budget) and by Grove Farm/Waiahi Water Co. (approximately one-third (1/3) of budget). The DOW and Grove Farm are in the process of entering into the “Kāpaia Cane Haul Road 18” Main Agreement ('Ehiku Street to Ma'alo Road”).

The proposed project is tentatively scheduled to begin at the end of 2016.

1.6 Environmental Review Trigger

Under the Hawai'i Revised Statutes, Section 343-5(a), an Environmental Assessment is required as a portion of County lands and a portion of County funds will be used for the proposed project.

⁵ State of Hawai'i, Department of Health, *Guide for Filing Community Noise Permit Applications (Construction Activities)*. <http://health.hawaii.gov/irhb/files/2013/07/noiseconguide.pdf>

2.0 TECHNICAL CHARACTERISTICS AND PUBLIC SERVICES

2.1 Department of Water

The County of Kaua'i, Department of Water operates 13 water systems island wide. The project area is within the Puhi-Līhu'e-Hanama'ulu water system which has the most diverse customer base. The proposed project will upgrade the existing system in this service area by increasing water transmission capacity to provide for future water demands.

The surface water source is the Kāpaia Reservoir. The water is pumped into a treatment plant to remove all the suspended material from the water. The water is disinfected, sent to an enclosed 264,000 gallon storage tank, and then sent into the transmission and distribution system.

2.2 Fire, Police, and Medical Services

The County of Kaua'i's Līhu'e Fire Station on Rice Street, is less than two miles from the entrance to the proposed project area. The Fire Department's Fire/Rescue/Hazmat/Medical Response Operations program provides fire protection and suppression, rescue (ocean and land), hazmat and emergency medical services.

The Kaua'i Police Department main station and administrative headquarters is located on Kaana Street, near Kapule Highway. The Police Department is also less than two miles from the project area location.

Wilcox Hospital is situated on Kūhiō Highway, less than one mile from the proposed project area.

2.3 Schools and Libraries

The Department of Education's (DOE) Kaua'i complex includes the Elsie H. Wilcox Elementary School, the King Kaumuali'i Elementary School, Chiefess Kamakahelei Middle School and Kaua'i High School, which are located within the general area of the proposed project area. The Līhu'e Public Library is within the Līhu'e Town Center area.

2.4 Utilities: Electrical and Telephone

Electrical power and telephone services are currently not available along the Kāpaia Cane Haul Road, although they are available both on 'Ehiku Street and Ma'alo Road. Kaua'i

Island Utility Company (KIUC) electrical transmission lines are situated along the Kāpaia Cane Haul Road corridor.

2.5 Wastewater

The portion of the proposed project within the County’s Agriculture zoned area does not have any public wastewater collections and disposal systems. The project area on 'Ehiku Street is serviced by the County of Kaua'i, Department of Public Works, Division of Wastewater Management.

3.0 SOCIO-ECONOMIC CHARACTERISTICS

3.1 Demographic Data

According to the 2010 Census, the Kaua'i population was 67,091 residents. The 2010 Census data population for the Līhu'e area was 6,455.⁶ Other relevant data is:

| Description | Census Tract 405 |
|--------------------------|------------------|
| Population: Līhu'e | 6,455 |
| Number of Households | 2,196 |
| Median Household Income | \$67,448 |
| Per Capita Income (2013) | \$27,815 |

In the 2010 census, the predominant ethnic groups within the Līhu'e area were, approximately, Asian (44.4%), Two or More Races (24.8%), White (22.2%), and Native Hawaiian and other Pacific Islanders (7.0%).

The February 2014 *Kaua'i General Plan Update: Socioeconomic Analysis and Forecasts* projects the Kaua'i population growth on Kaua'i to 88,013 in 2035. This is expected to increase the demand for water by Kaua'i residents, businesses, and visitors.

3.2 Historic, Cultural, and Archaeological Resources

The State of Hawai'i, Department of Land and Natural Resources, State Historic Preservation Division maintains a statewide inventory of known historic properties, which includes archaeological sites, buildings, structures, objects, districts, and traditional cultural places. The inventory for the Līhu'e area includes the Līhu'e Civic Center Historic District, Līhu'e Post Office, Kaua'i Museum, and several Grove Farm

⁶ Source: <http://quickfacts.census.gov/qfd/states/15/1545200.html> Accessed 11-08-15.

buildings and objects. These historic properties are identified in the County of Kaua'i's *Kaua'i General Plan*⁷ as shown in below in **Figure 4**.

Potential Impacts and Mitigative Measures

Should historic, cultural or archaeological resources appear during the construction phase, construction activities would immediately cease and the County of Kaua'i, Department of Planning and the State Historic Preservation Division will be notified.

Figure 4: Heritage Resources Map



**Lihue Planning District
Heritage Resources**



| Legend | | | |
|--------|---|--|--|
| | Important Land Form | | Registered Archaeological Sites (excluding burials & lava tubes) |
| | Open Space, Parks, Agriculture, Conservation | | Helau Site |
| | Residential, Urban Center, Resort, Transportation, Military | | Registered Historic Buildings & Structures |
| | Streams, Reservoirs, Ponds | | Other Important Historic Buildings & Structures |
| | Scenic Roadway Corridors | | Major Taro Growing Areas |
| | Coral Reefs | | Other Natural, Historic, Cultural, Scenic Features |
| | Marshes | | Special Streams |
| | Resource Parks & Sites | | Streams |
| | Federal & State Natural Preserves | | Small Boat Harbors/Ramps |

⁷ County of Kaua'i, General Plan (November 2000), Lihue Planning District Heritage Resources.

4.0 ENVIRONMENTAL CHARACTERISTICS

4.1 Air Quality and Noise Levels

There are no major air pollutant generators in this project area. Occasional dust is generated by the occasional vehicles, including those from the KIUC power plant that travel along the existing Kāpaia Cane Haul Road. Noise along the Road is very minimal as vehicular access is limited. Located along the transmission line route is the existing KIUC power plant that produces minimal noise.

Potential Impacts and Mitigative Measures

Construction of the proposed transmission line may result in short-term air quality and noise impacts.

Air Quality: Construction activities may result in short-term air quality impacts, including the generation of dust from soil excavation and asphalt road removal, and from emissions from construction vehicles and equipment.

To mitigate any air quality impacts, all phases of excavation and construction will be required to comply with the Hawai'i Administrative Rules, §11-60.1 on air pollution and fugitive dust, and comply with all applicable County ordinances.

To comply with the fugitive dust regulations, the Department of Water will require that the Contractor implement adequate dust control measures, such methods include, but are not limited to, the following:

- Planning different phases of construction, focusing on minimizing the amount of dust generating materials and activities, and locating potentially dusty equipment to areas of the least impact;
- Providing an adequate water source at the site prior to start-up construction activities;
- Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities;
- Minimizing dust from shoulders and roads;
- Controlling dust from debris being hauled away from the project site. Also, controlling dust from daily operations of materials being processed, stockpiled, and hauled to and from the proposed project location.

Exhaust emissions from construction equipment and vehicles are not anticipated to significantly alter ambient air quality and can be minimized by proper operation and

maintenance of all petroleum-fueled equipment. In addition, the prevailing winds can be expected to dilute and disperse exhaust emissions away from the nearby homes, other structures and Līhu'e Village Park.

Noise: The parcels currently have very minor noise impacts, but the proposed project noise is expected to increase slightly once construction begins on the properties. Although noise cannot be eliminated entirely the Contractor will provide effective control measures to minimize construction related noise from impacting the surrounding area. The hours of operation will be regulated. If required, a Department of Health Community Noise Permit will be obtained. Based on the location and the surrounding area, it is anticipated that noises emanating from the proposed construction of the transmission line will be minimal.

4.2 Flora and Fauna

The proposed water transmission line will be constructed almost entirely within the existing paved roadway segments of Kūhiō Highway, County 'Ehiku Street, Kāpaia Cane Haul Road and Ma'alo Road. As such, minimal impacts on flora and fauna is expected.

Potential Impacts and Mitigation

The area surrounding the Kāpaia Cane Haul Road was previously an agricultural area; therefore it is unlikely that there are any rare, threatened or endangered species of flora or fauna remaining nearby the project area. 'Ehiku Street is surrounded by structures in a residential area so it is also unlikely that there are any rare, threatened or endangered species of flora or fauna remaining nearby this area.

4.3 Geology, Topography and Soils

Kaua'i is the fourth largest island in the Hawaiian group and considered to be one of the oldest geologically. The island is volcanic in origin, and in general geological terms, is described as a dissected basaltic dome of a single large shield volcano. Kaua'i was formed by the passage of the Pacific plate over the Hawai'i hotspot, generating two major lava flows: the Waimea volcanic series and the Kōloa volcanic series. The rocks on Kaua'i are all volcanic, except for minor accounts of sediments derived from volcanic rocks by erosion, and a narrow, discontinuous fringe of calcareous reef and beach deposits.

Ground elevations within the project area range between 200 feet to 280 feet above mean sea level for the water line location.

The soils of Kaua'i have developed primarily from volcanic materials and have concentrated iron and aluminum in the profiles. The quantities of silica and bases are low, particularly in the high rainfall areas, due to leaching of these materials. According to the U.S. Department of Agriculture ("USDA"), Natural Resources Conservation Service⁸, the soil in the region in the project area is primarily the Puhi silty clay loam (PnB). Other soils present within the project area include Hanalei silty clay (HnA), Hanalei silty clay (HrB), Līhu'e silty clay (LhC), Puhi silty clay loam (PnB), Puhi silty clay loam (PnC) and Puhi silty clay loam (PhD).

The Puhi series consists of deep, well drained soils that formed in material weathered from basic igneous rock. Puhi soils have very slow to rapid runoff, depending upon slope, and moderately rapid permeability; the soils are on uplands and have slopes of 3 to 40 percent, with dominant slopes from 3 to 15 percent.

Potential Impacts and Mitigation Measures

Impacts occurring on the physical terrain from the construction of the transmission line will be minimal. To minimize soil erosion during the construction process, erosion control measures will be designated and implemented in accordance with applicable government regulations. Should a Department of Health, NPDES permit be required, regulations will also be followed. Implementation of Best Management Practices for all construction will ensure that the proposed project activities will not substantially degrade the site's environmental quality.

4.4 Hazards: Flooding and Tsunami

According to the current Flood Hazard Assessment Report (FHAR), the property is located in Zone X; areas determined to be outside of the 0.2% annual chance floodplain. The De Mello Reservoir is within a "Dam Evacuation Zone" based on the information provided in FHAR, as identified in **Exhibits F & G**.

4.5 Hydrological Characteristics

Hydrology is the science that encompasses the occurrence, distribution, movement and properties of the waters of the earth and their relationship with the environment within each phase of the hydrologic cycle⁹. All of the physical, chemical and biological processes involving water as it travels its various paths in the atmosphere, over and

⁸ Further information and details are available at: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

⁹ Definition of hydrology from USGS, available at: <http://water.usgs.gov/edu/hydrology.html>.

beneath the earth's surface and through growing plants, are of interest to those who study the hydrologic cycle.

There are many pathways the water may take in its continuous cycle of falling as rainfall and returning to the atmosphere. It may flow to rivers and finally to the sea. It may soak into the soil to be evaporated directly from the soil surface as it dries or be transpired by growing plants. It may percolate through the soil to ground water reservoirs (aquifers) to be stored or it may flow to wells or springs or back to streams by seepage. People tap the water cycle for their own uses. Water is diverted temporarily from one part of the cycle by pumping it from the ground or drawing it from a river or lake. It is used for a variety of activities such as households, businesses and industries; for irrigation of farms and parklands; and for production of electric power.

After use, water is returned to another part of the cycle: perhaps discharged downstream or allowed to soak into the ground. Used water normally is lower in quality, even after treatment, which often poses a problem for downstream users.

For the Līhu'e Kapa'a area, the Department of Water describes where the water comes from:

The water comes from ground water (underground) and surface water sources. Ground water comes from rain that falls in the mountain filters through the ground into formations called aquifers. Wells are drilled into these formations and the water is pumped out. These formations can also be found in the mountains. Tunnels are constructed to tap these sources. The quality of groundwater is very good and requires no treatment except for disinfection. The surface water source is the Kāpaia Reservoir. The water is pumped into a filter plant to remove all the suspended material from the water. The water is then disinfected and fed into the distribution system.

In 1987, the State enacted the Water Code (HRS Chapter 174C) in order to protect, control, and regulate the use of the State's water resources. The Code is implemented through the Hawai'i Water Plan which addresses water conservation and supply issues throughout the state. The Hawai'i Water Plan has various components, among them Water Use and Development Plans to be prepared by each county.

The State Department of Land and Natural Resources (DLNR), Commission on Water Resource Management (CRWM) has established ground-water hydrologic units to provide a consistent basis for managing ground water resources. The units are primarily determined by subsurface conditions. In general, each island is divided into regions; each

5.0 ALTERNATIVES TO THE PROPOSED ACTION

5.1 No Action Alternative

A “no action” alternative should not be considered as the existing and future potable water needs could not be transmitted from the Waiahi Water Treatment Plant.

5.2 Alternative #1

The aforementioned “Water Treatment and Delivery Agreement” describes that a portion of the County of Kaua‘i, Board of Water Supply’s (BWS) existing water transmission line on Kūhiō Highway in the Hanamaulu Area from Kāpaia Bridge to Wilcox Hospital is undersized and may require upsizing or replacement in order to accept additional supplies from the Waiahi Water Treatment Plant. This Kūhiō Highway transmission alternative was evaluated against the Kāpaia Haul Cane Road alternative and found to be inferior. The Kāpaia Haul Cane Road alignment was determined to be superior rather than the Kūhiō Highway alignment because it provides more transmission capacity to the water system. Additionally, the Kāpaia Haul Cane Road alignment has lower per unit construction costs due to the much lower flow of traffic.

5.3 Preferred Alternative #2

The preferred alternative is described in the above Section 1.0 of this document. Additional information about this preferred alternative is outlined and described in the *Department of Water, Water Plan 2020* and the *Capital Improvement Projects (2015)*. This project will provide safe, affordable, and sufficient drinking water through the wise management by the Department of Water.

6.0 SIGNIFICANT IMPACTS DETERMINATION

The impacts of the proposed action have been assessed. The proposed project is not anticipated to cause significant negative impacts to the environment. Therefore, a Finding of No Significant Impact (FONSI) is found. The determination of a FONSI is based on the following:

- 1. The proposed action does not involve an irrevocable commitment to loss or destruction of any natural or cultural resources;***

The 18-inch water transmission line is proposed to be constructed along the existing Kāpaia Cane Haul Road and under the existing 'Ehiku Street. There are no known

rare, threatened, or endangered plants or animal species, or their habitats within or near the proposed project site. No adverse impacts to historic resources are anticipated. The proposed project will not result in the loss or destruction of any natural cultural resource.

2. *The proposed Action will not curtail the range of beneficial uses of the environment;*

The proposed project will benefit and is compatible with the uses and zoning of the nearby areas. The temporary inconvenience during construction should be offset by the improved water service.

3. *The proposed action does not conflict with the State's long-term goals or guidelines as expressed in Chapter 344, HRS, State Environmental Policy;*

The purpose of the proposed project is to meet the projected water demands, and maintain the public health and welfare for the future community needs. The proposed project will not involve actions or activities that would adversely affect the natural resources of the project site, and in consistent with the State's long-term environmental goals to conserve natural resources and enhance the quality of life. The proposed project will not conflict with the State's long-term goals or guidelines as expressed in Chapter 344, HRS, State Environmental policy.

4. *The proposed action does not substantially affect the economic or social welfare of the community or state;*

Consistent with the Department of Water's Capital Improvement Project for Fiscal Year 2015, the economic impacts on the community and state will not be negatively affected. The budget for the proposed project will not substantially affect the economy adversely while providing a public utility. Some short-term economic benefits will occur during the construction phase. The jobs created will temporarily boost the economy.

5. *The proposed action does not substantially affect public health;*

Construction activities will be regulated to minimize noise, dust and erosion concerns. The purpose of the proposed project is to meet the projected water demand, and maintain the public health and welfare for residents in the nearby area. The proposed project will not negatively affect long-term public health.

6. *The proposed action does not involve substantial secondary effects;*

The proposed action will assist in meeting the goals of the Kaua'i General Plan, Kaua'i Water Plan, and the current and future needs of the growing development and population within the general area.

7. *The proposed action does not involve substantial degradation of environmental quality;*

There are no known rare, threatened, or endangered plants or animal species, or their habits within or near the proposed project site. Short-term impacts include disruption to the project site and an increase in noise levels from construction activities. Implementation of Best Management Practices for all construction will ensure that the proposed project activities will not substantially degrade the site's environmental quality.

8. *The proposed action does not cumulatively have a considerable effect on the environment or involve a commitment to larger actions;*

No cumulative impacts as a result of the proposed project are anticipated.

9. *The proposed action does not affect a rare, threatened, or endangered species or its habitat;*

There are no known rare, threatened, or endangered plant or animal species, or their habitats within or near the proposed project site area.

10. *The proposed action does not detrimentally affect air or water quality or ambient noise levels;*

Short-term impacts include disruption to the project site, decline in air quality and an increase in noise levels from construction activities. These impacts will be mitigated by normal construction practices and will be regulated by the project plans and specifications. Once construction is completed, no long-term effects on air or noise are anticipated.

11. *The proposed action does not affect an environmentally sensitive area;*

The proposed project is not located adjacent to the shoreline and is outside the flood hazard area and tsunami inundation line. There are no natural drainageways draining

onto the project site and there are no conditions that would classify the project site as a wetland. Implementation of Best Management Practices will be employed to property manage potential stormwater runoff or soil erosion. The proposed project site will not affect an environmentally sensitive area and no damages to the facilities or surrounding areas are expected as a result of the project.

12. The proposed action does not substantially affect scenic vistas and view planes; and

The area included in the proposed project has not been identified as a scenic resource. Following the final construction of the project, no view planes will be impacted.

13. The proposed action does not require substantial energy consumption.

The demand for both the construction and needs for the proposed transmission line is small and will not result in substantial energy consumption.

7.0 DISTRIBUTION LIST

State of Hawai'i

Department of Health – Solid and Hazardous Waste Branch
Department of Health – Safe Drinking Water Branch
Department of Health – Clean Water Branch
Department of Health – Clean Air Branch
Department of Transportation, Highways Division
Department of Land and Natural Resources, State Historic Preservation Division

Līhu'e Public Library

County of Kaua'i

Department of Planning
Department of Public Works
Fire Department
Transportation Agency

Others

Hawaiian Telcom
Kaua'i Island Utility Cooperative

Oceanic Time Warner Cable
Sandwich Isle Communications
Waiahi Water Co.

8.0 REFERENCES

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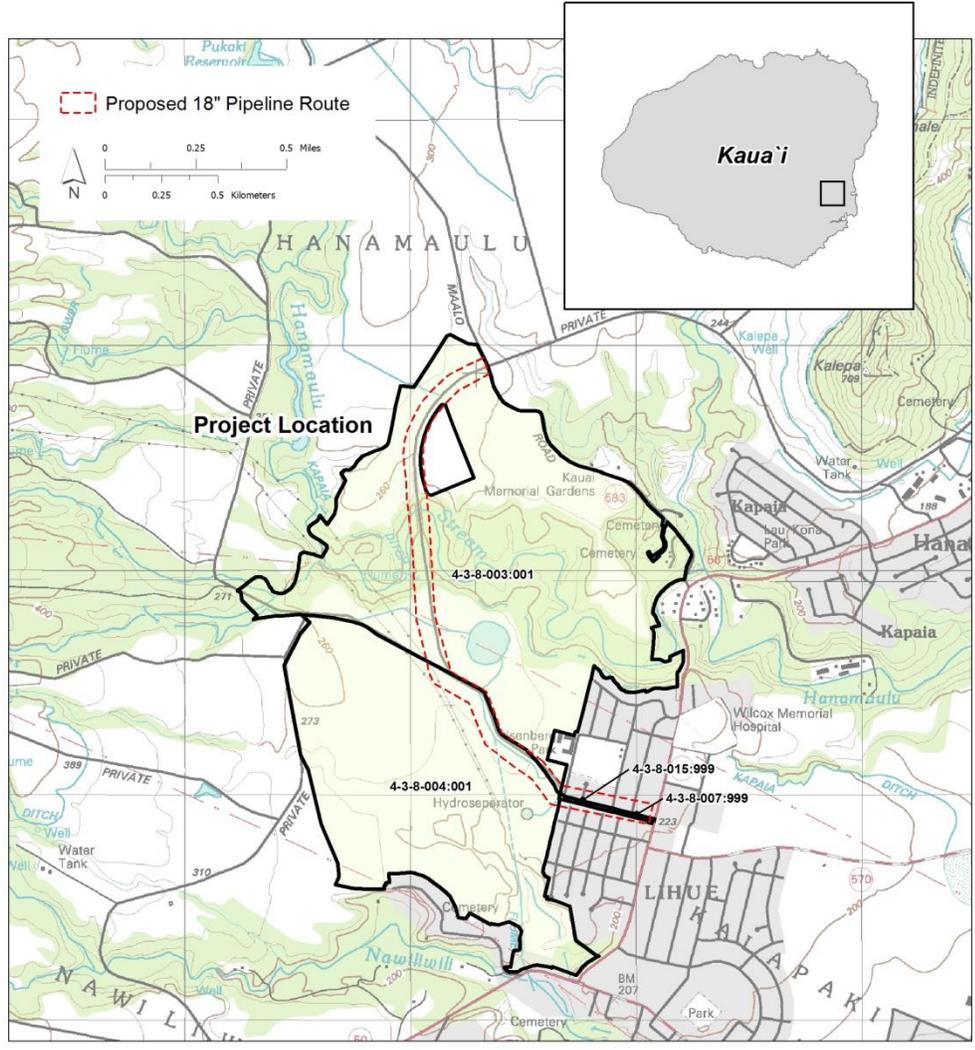
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9.0 EXHIBITS

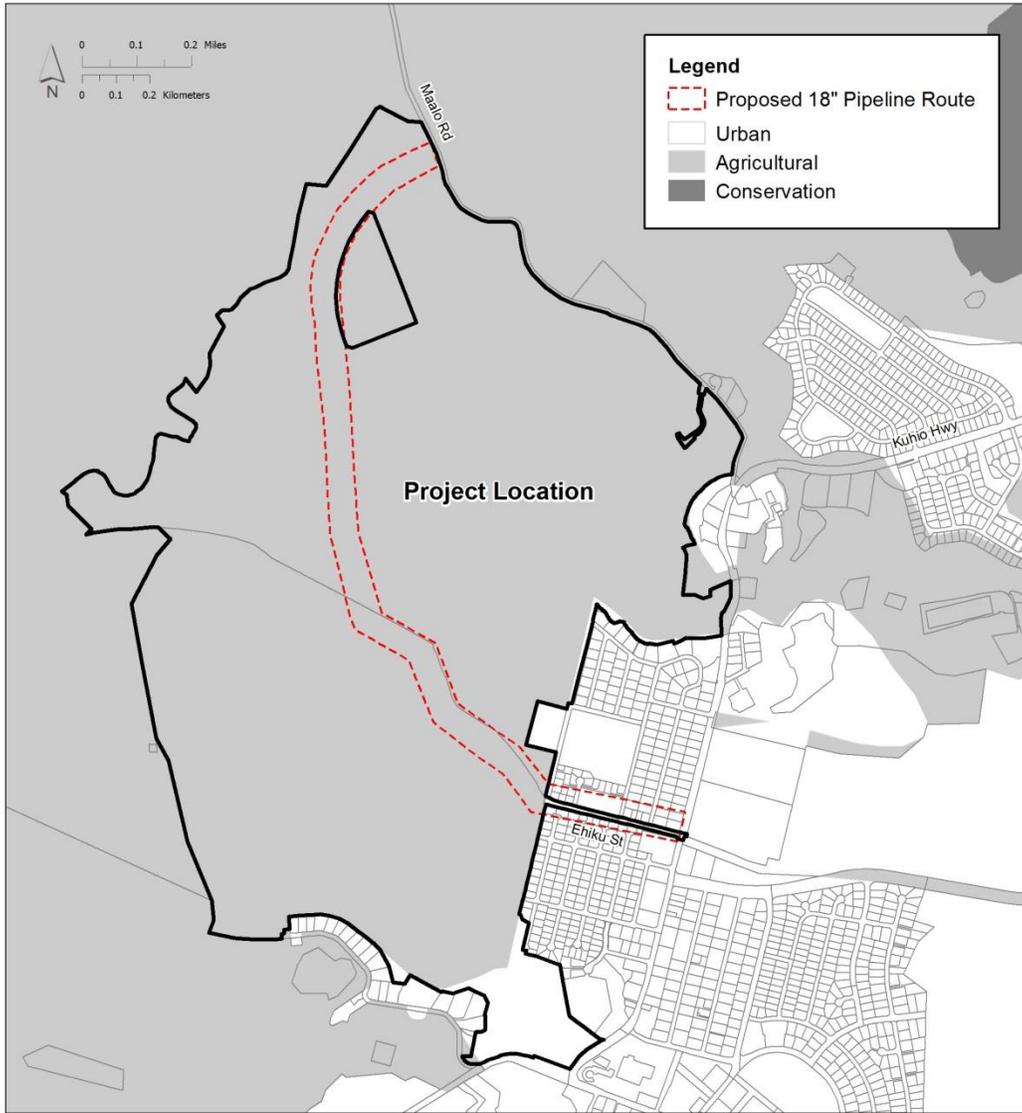
- A. Location Map
- B. State Land Use Map
- C. County General Plan Map
- D. County Zoning Map TMKs (4) 3-8-003:001 and (4) 3-8-004:001
- E. Proposed Project Site Map
- F. Flood Zone Map TMK (4) 3-8-003:001
- G. Flood Zone Map TMK (4) 3-8-004:001

EXHIBITS A – G



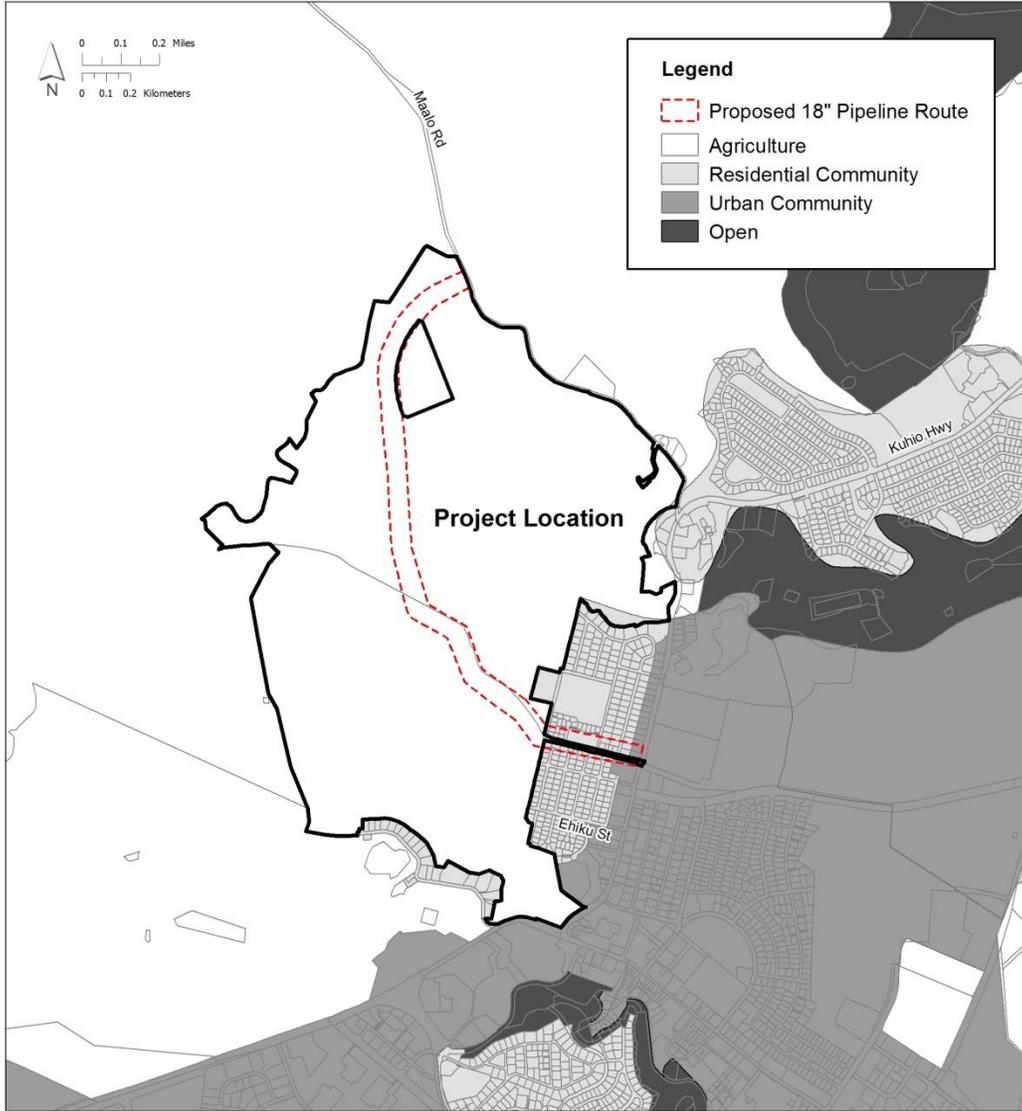
Kodani & Associates Engineers, LLC
3126 Akahi Street
Līhu'e, HI 96766

EXHIBIT A:
Kauai Location Map
TMK 4-3-003:001
TMK 4-3-004:001



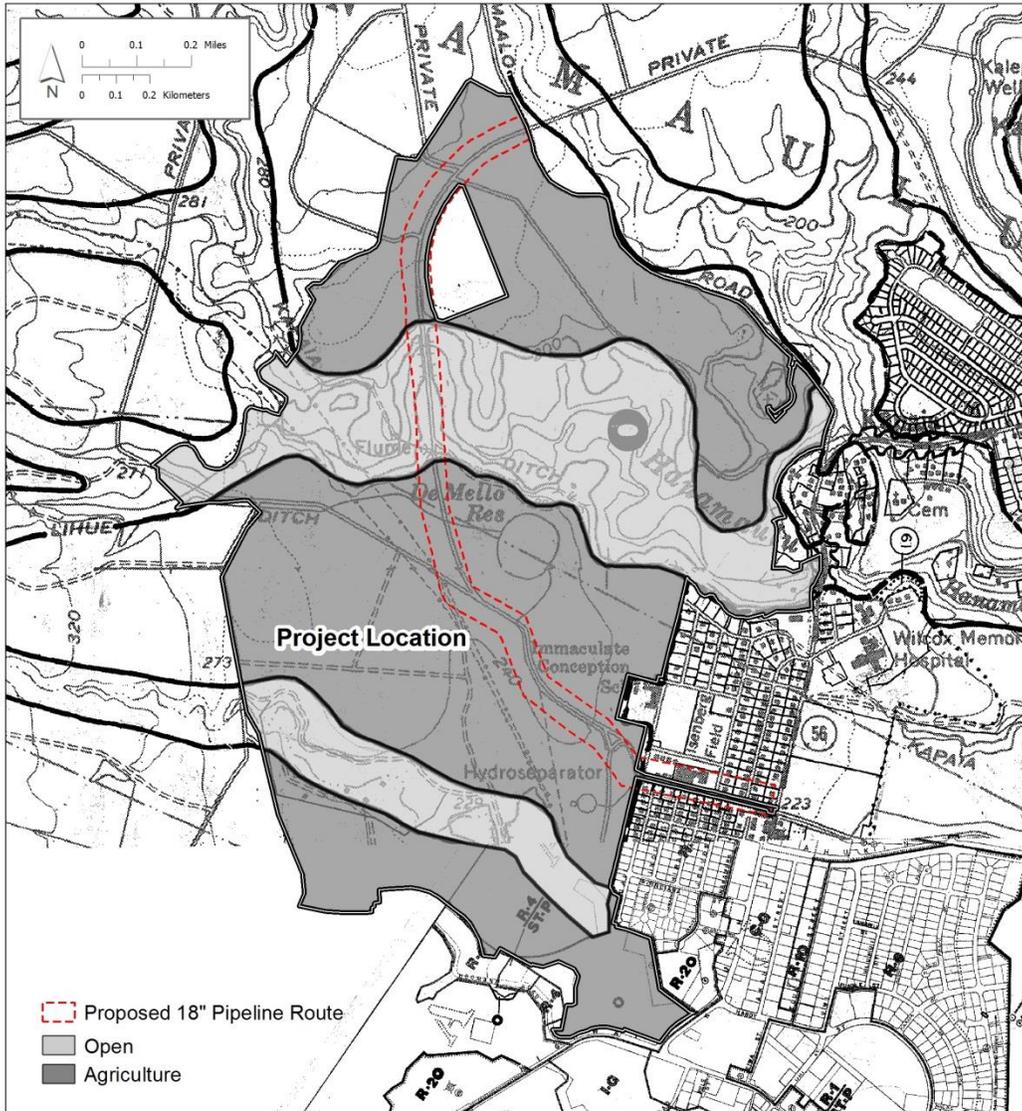
Kodani & Associates Engineers, LLC
3126 Akahi Street
Līhu'e, HI 96766

EXHIBIT B:
State Land Use Map



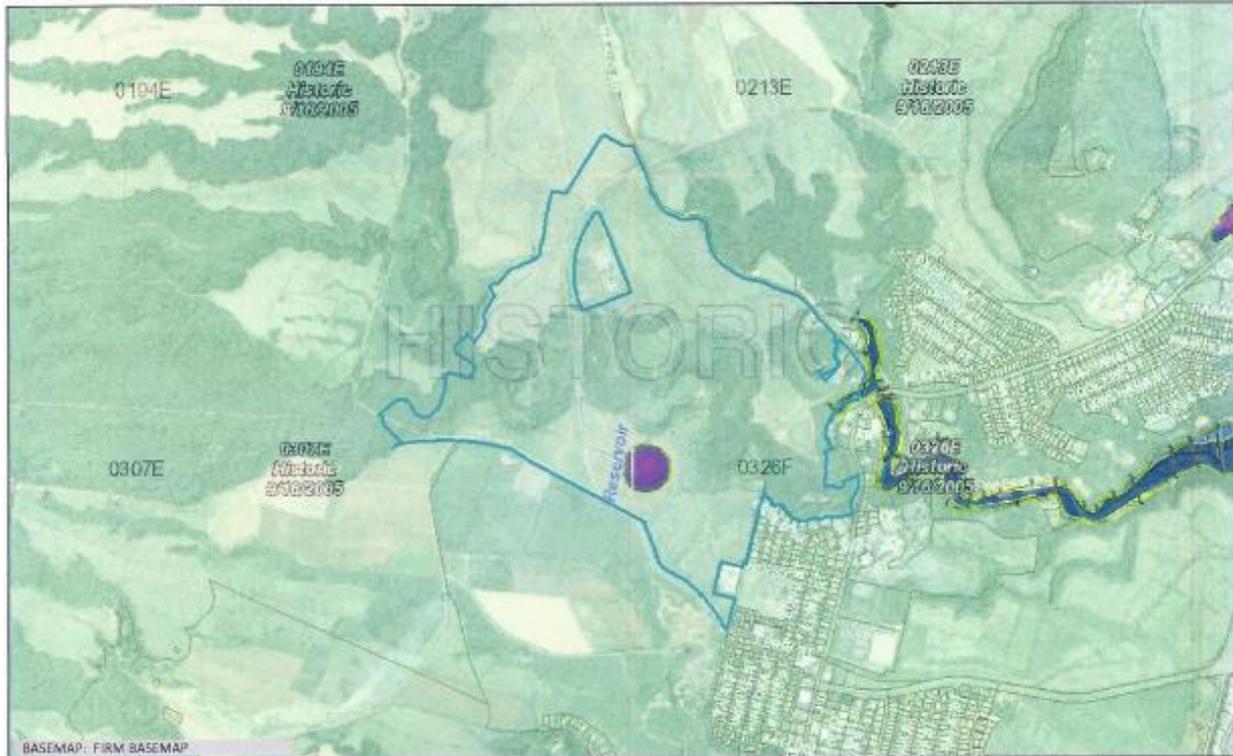
Kodani & Associates Engineers, LLC
3126 Akahi Street
Līhu'e, HI 96766

EXHIBIT C:
County General Plan Map



Kodani & Associates Engineers, LLC
3126 Akahi Street
Lihu'e, HI 96766

EXHIBIT D:
County Zoning Map



BASEMAP: FIRM BASEMAP



Flood Hazard Assessment Report

www.hawaiiinfip.org

FEMA Map

Property Information

COUNTY: KALIAI
 TMK NO: (4) 3-8-003:001
 WATERSHED: HANAMAULU; NAWIUIWI
 PARCEL ADDRESS: KUJID HWY
 LIHUE, HI 96766

Notes:

Flood Hazard Information

FIRM INDEX DATE: NOVEMBER 26, 2010
 LETTER OF MAP CHANGE(S): NONE
 FEMA FIRM PANEL - EFFECTIVE DATE:
 1500020194E - SEPTEMBER 16, 2005
 1500020213E - SEPTEMBER 16, 2005
 1500020307E - SEPTEMBER 16, 2005
 1500020326F - NOVEMBER 26, 2010

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If this map has been identified as "PRELIMINARY", please note that it is being provided for informational purposes and is not to 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.

FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND

(Note: legend does not correspond with MFL)

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - The 1% annual chance flood (100-year), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AD, 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 AD:** 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

-moderate risk
 ements apply,

s flood; areas of
 less than 1 foot
 tile; and areas

1% annual chance

s are under-
 flood insurance

purchase apply, but coverage is available in participating communities.

EXHIBIT F: Flood Hazard Map TMK (4) 3-8-003:001





Flood Hazard Assessment Report
www.hawaiiifip.org

FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND
(Note: legend does not correspond with W/P)

Property Information

COUNTY: KAUAI

TMK NO: (4) 3-8-004-001

WATERSHED: HANAMAULILI; NAWILIWILI

PARCEL ADDRESS: 4538 HOOMANA RD
LIHUE, HI 96766

Notes:

Flood Hazard Information

FIRM INDEX DATE: NOVEMBER 26, 2010

LETTER OF MAP CHANGE(S): NONE

FEMA FIRM PANEL - EFFECTIVE DATE: 1500020307E - SEPTEMBER 16, 2005
1500020326F - NOVEMBER 26, 2010

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION ZONE: NO
FOR MORE INFO, VISIT: <http://www.scd.hawaii.gov/>

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: YES (KA-0012)
FOR MORE INFO, VISIT: <http://dmrreg.hawaii.gov/dam/>




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If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and it not to 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.

| | |
|--|--|
| | 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 AD: 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 X5 (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 apply, but coverage is available in participating communities. |

EXHIBIT G: Flood Hazard Map TMK (4) 3-8-004:001