DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
345 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

June 20, 2002

Ms. Genevieve Salmonson, Director
State of Hawaii
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

FINAL ENVIRONMENTAL ASSESSMENT (FEA)
FINDING OF NO SIGNIFICANT IMPACT (FONSI)
KONA COASTVIEW/WONDERVIEW SUBDIVISION
WATER SYSTEM IMPROVEMENTS
KALAOA 2ND AND 3RD, NORTH KONA DISTRICT, ISLAND OF HAWAII

The County of Hawaii, Department of Water Supply (DWS), has reviewed and responded to comments received during the 30-day public comment period, which began on April 23, 2002. The DWS has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the July 8, 2002, OEQC Environmental Notice.

We have enclosed a completed OEQC Bulletin Publication Form and four copies of the Final Environmental Assessment for your use.

If there are any questions, you may contact Mr. Glenn Ahuna of our Water Resources and Planning Branch at (808) 961-8070, extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:dms

Encs.

copy – Inaba Engineering, Inc.

FINAL ENVIRONMENTAL ASSESSMENT
Finding of No Significant Impact (FONSI)

KONA COASTVIEW/WONDER VIEW SUBDIVISION WATER SYSTEM IMPROVEMENTS

DWS JOB No. 2001-790

Kalaoa 2nd & 3rd, District of North Kona
Island of Hawaii
State of Hawaii

June 2002

Prepared in Partial Fulfillment of the Requirements
of the National Environmental Policy Act

Prepared For:

DEPARTMENT OF WATER SUPPLY
County of Hawaii
345 Kekuanaoa Street, Suite 20
Hilo, Hawaii 96720

Prepared By:
Inaba Engineering, Inc.
273 Waianuenue Avenue • Hilo, Hawaii 96720
Ph. 808.961.3727 • Fx. 808.935.8033

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SUMMARY SHEET

Project:	KONA COASTVIEW/WONDER VIEW SUBDIVISION WATER SYSTEM IMPROVEMENTS
Applicant:	Department of Water Supply County of Hawaii 345 Kekuanaoa St., Suite 20 Hilo, Hawaii 96720
Land Owner:	Public Right-of-Way, County of Hawaii
Proposing Agency:	Department of Water Supply, County of Hawaii
Project Location:	Kalaoa 2nd and 3rd, North Kona District, County of Hawaii
Tax Map Key:	3rd Div. 7-3-22, 23, & 28 - Kona Coastview Subdivision 7-3-13, 14, 15, & 16 - Kona Wonder View Subdivision 7-3-22:46 Proposed Tank Site # 1 7-3-05:90 Proposed Tank Site # 2 7-3-23:88 Alternate Proposed Tank Site # 2
Land Area:	Water Line Alignment Approximately 24,000 L.F. Tank Sites Approx. 18,000 s.f. Each Lot.
Existing Use:	Residential Subdivision, Public Right-of-Way
State Land Use Designation:	Urban
County General Plan:	Urban Expansion
Existing Zoning:	Agricultural (A-5a)
SMA:	Outside County SMA area.
Contact Person:	Mr. Glenn Ahuna, P.E. Department of Water Supply County of Hawaii 345 Kekuanaoa St., Suite 20 Hilo, Hawaii 96720 Phone: 808.961.8070 x260 Fax: 808.961.8080

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GENERAL INTRODUCTION

The following Environmental Assessment has been prepared in conjunction with an application for a loan and grant to be submitted by the County of Hawaii Department of Water Supply to the United States Department of Agriculture (USDA), Rural Development (RD), Rural Utilities Water and Waste Disposal Loan And Grant Program. A Preliminary Engineering Report and an Environmental Report has been prepared and submitted with the application to the USDA on March 29, 2002. The Environmental Report and this Environmental Assessment review process through the State of Hawaii Office of Environmental Quality Control (OEQC) is intended to fulfill the USDA Rural Development and Rural Utilities Water and Waste Disposal Loan And Grant Program's requirements of the National Environmental Policy Act.

These funds are being requested for the installation of a County of Hawaii dedicable standard water system for the existing Kona Coastview and Kona Wonder View Lots Subdivisions. (See Figure 4) Under the RD program, portions of the funding for this project will be from a loan which is to be repaid by the applicant (Department of Water Supply) and a grant portion which does not have to be repaid. As part of this process, the Hawaii County Council will initiate an Improvement District (ID) process to ensure repayment of the loan portion by the lot owners of these two subdivisions. The two existing subdivisions consists of 415 residential lots of which approximately 80% have been improved with homes. In addition, there are 23 condominium property regime (CPR) lots bringing the total assessable units to 438. These lots are currently serviced by a combination of individual water catchment systems, two separate private water companies and the DWS. These distribution methods are typically unreliable, high in maintenance, expensive and non conforming to County of Hawaii standards. As a result, residents of these subdivisions are working towards getting a water system installed that the County of Hawaii Department of Water Supply will accept, operate and maintain.

PART 1

DESCRIPTION OF PROPOSED ACTION

A. Project Location

The Kona Coastview (KCS) and Kona Wonder View Lots (KWS) subdivisions are located in Kalaoa 2nd and 3rd in the North Kona District on the Island of Hawaii. This is approximately 2.5 miles north of the Mamalahoa Highway and Palani Road intersection, located on the west or makai side of the highway. Kona Coastview subdivision Tax Map Keys are 7-3-22, 23, & 28, and Kona Wonder View Lots subdivision Tax Map Keys are 7-3-13, 14, 15, & 16. To the north of the subject project is the Kona Highlands Subdivision and to the south is the Kona Palisades Subdivision. The subdivisions are located approximately 3.5 miles east or mauka of the Keahole International Airport on the lower slopes of Hualalai Mountain. See Figures 1, 2, & 3.

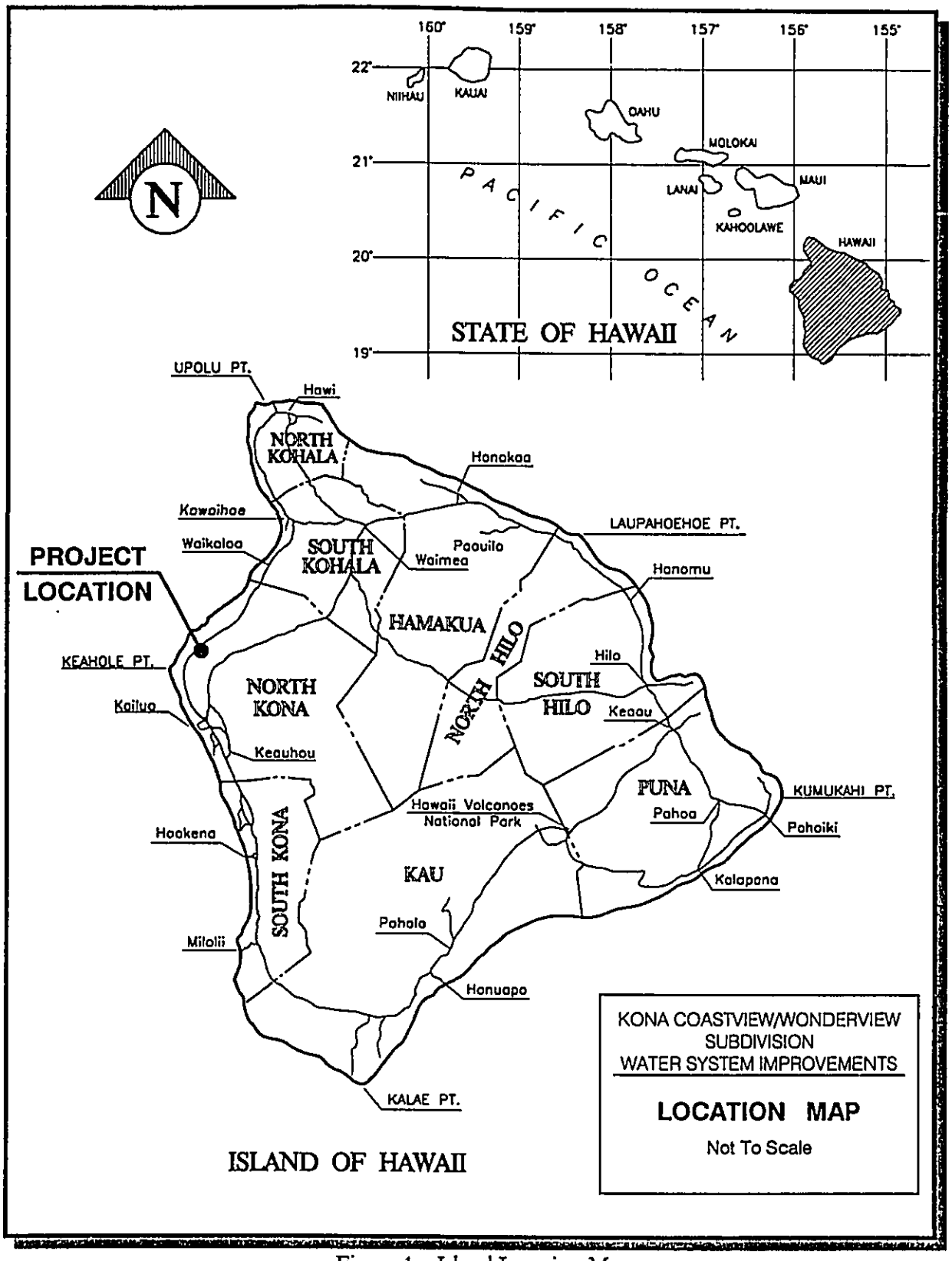

Figure 1 - Island Location Map

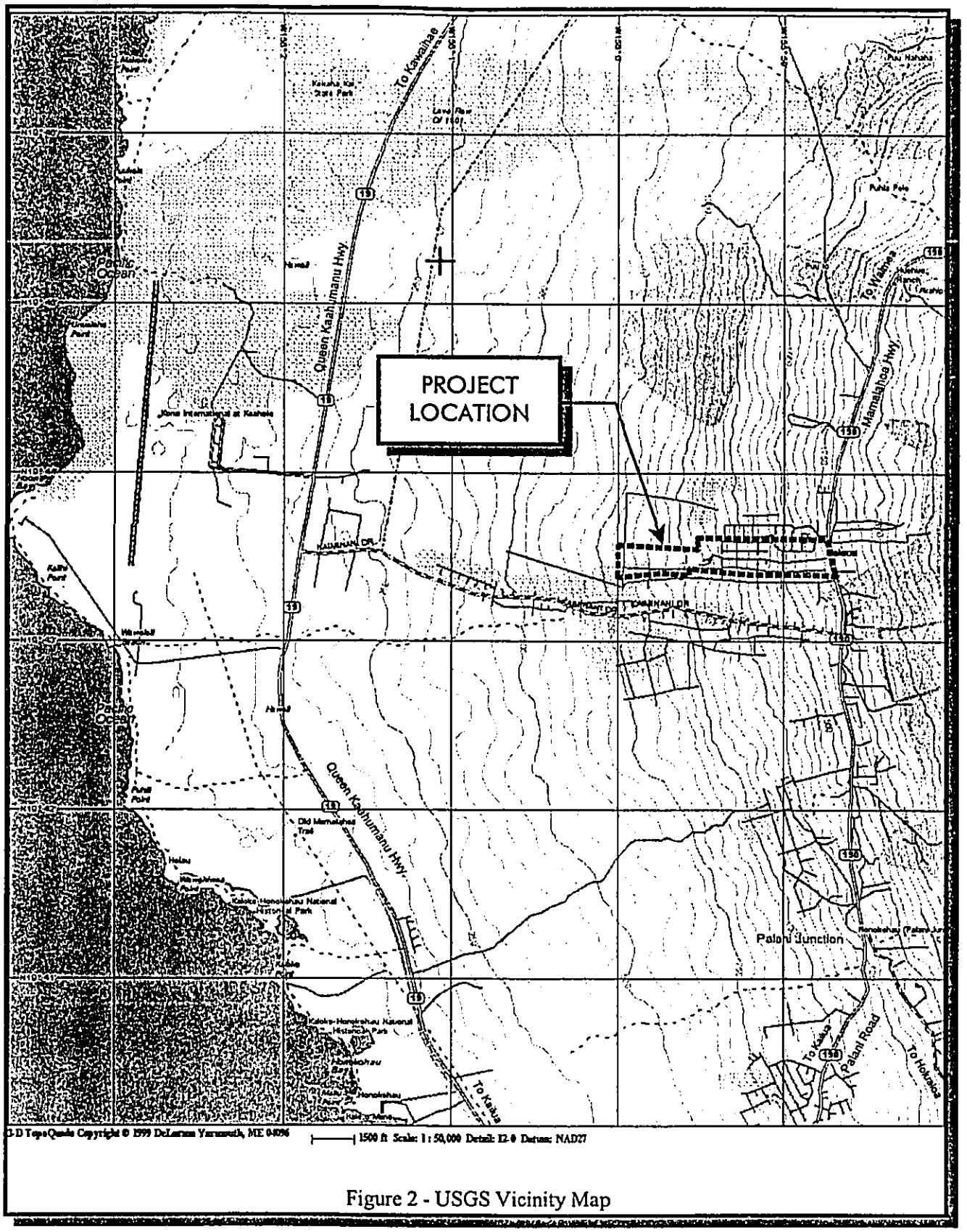

Figure 2 - USGS Vicinity Map

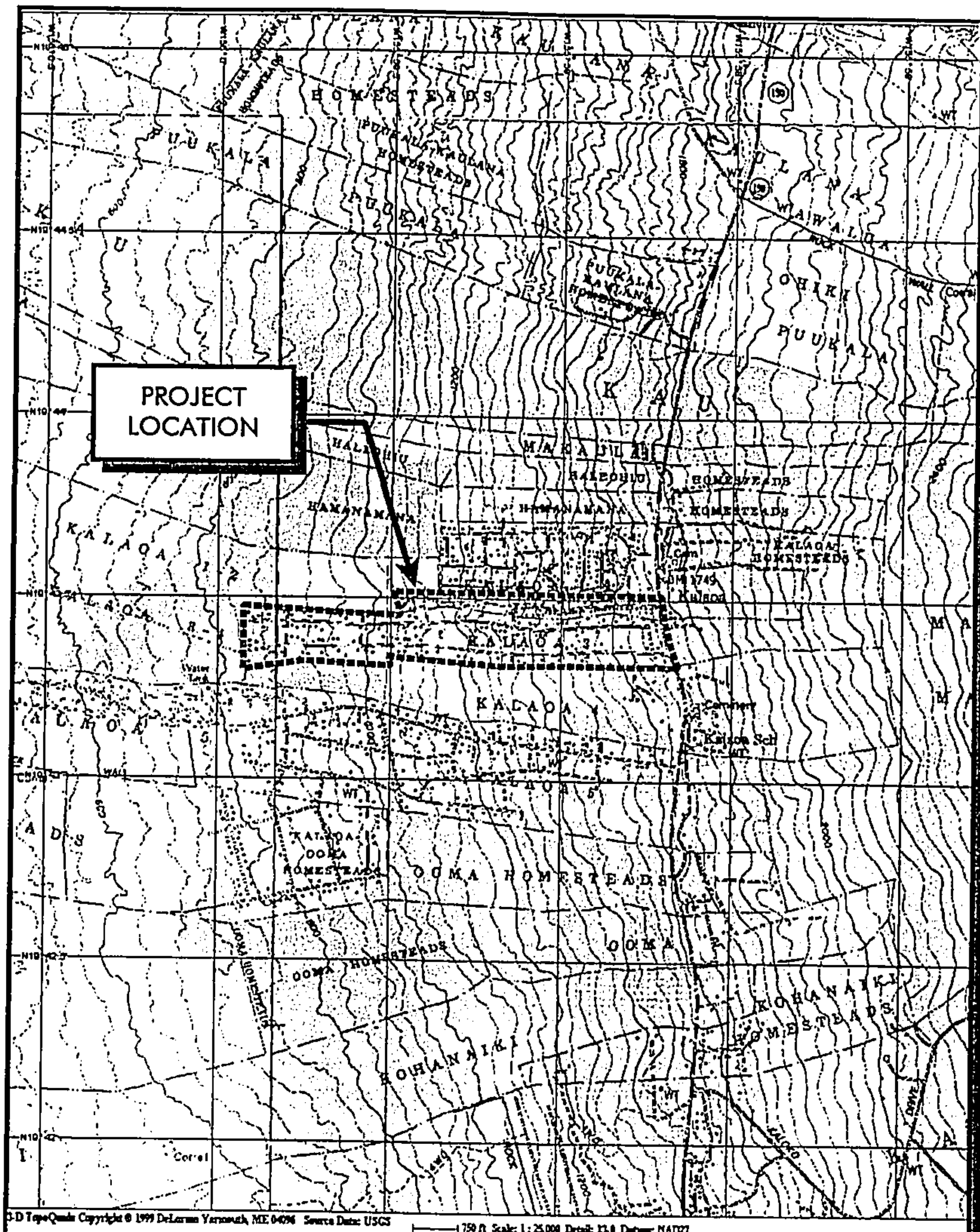

Figure 3 - USGS Vicinity Map

B. Project Description, Purpose and Objectives of Project

Project Description

The proposed new water distribution system will be built to County of Hawaii Department of Water Supply dedicable standards. All work shall conform to the current Water System Standards Volumes 1 & 2 as amended. Generally, the work shall include but not be limited to the following:

- Two 0.10 million gallon reinforced concrete reservoirs
- 14,900 lineal feet 6-inch ductile iron waterline
- 9,200 lineal feet 8-inch ductile iron waterline
- Three pressure reducing valve units (PRV)
- Thirty three fire hydrants
- 211 Type "C" service laterals

New water lines will be connected to a 12" waterline which runs along Mamalahoa Highway which is fed by the Kalaoa 0.30 MG reservoir and the Honokohau Production Well. The waterlines will be installed within existing roadways and new easements.

Fire hydrants will be installed and spaced in accordance with Hawaii County Fire Department and Department of Water Supply requirements and standards. Service laterals, prv units and other related work will conform to Department of Water Supply requirements and standards.

Reinforced concrete reservoirs will also be constructed to DWS standards and seismic zone 4 requirements. Reservoir site work will include grading, paving, inlet and outlet piping controls and valves, chain link fencing and landscaping. The sites for the reservoirs will be acquired by the DWS.

See Figure 4 for schematic layout of proposed water system improvements.

Purpose and Need for Project

Availability of Water to Subdivisions:

In the early 1960's, as part of the subdivision approval processes for both subdivisions, the County Planning and Traffic Commission, predecessor to the Planning Department, did not require any water system improvements because of the financial hardship of extending the existing waterline 2- ½ miles from the intersection of Palani Road and Mamalahoa Highway. In lieu, potable water to each lot was provided by individual catchment systems.

The Department of Water Supply (DWS) extended a 12-inch waterline in the early 1970's from the intersection of Palani Road and Mamalahoa Highway to Kalaoa, thereby, making water available to both subdivisions. As such, the Kona Highlands Subdivision(KHS), directly adjacent and to the north of the KWS was developed with a County dedicable water system in 1971. Consequently, water became available to KWS/KCS and Carl Matsumoto, proprietor of the Matsumoto Water Company, Inc. (MWC), acquired eight (8) meters, consisting of seven(7) 5/8-inch and one 2-inch meters. In order to provide services to KWS/KCS residences, MWC constructed with its own funds a private water system that consisted of nonstandard polyvinyl(PVC), copper and galvanized pipelines ranging in sizes from 1 1/4-inch to 2-inches; along with 6-inch ductile iron pipelines. This system presently

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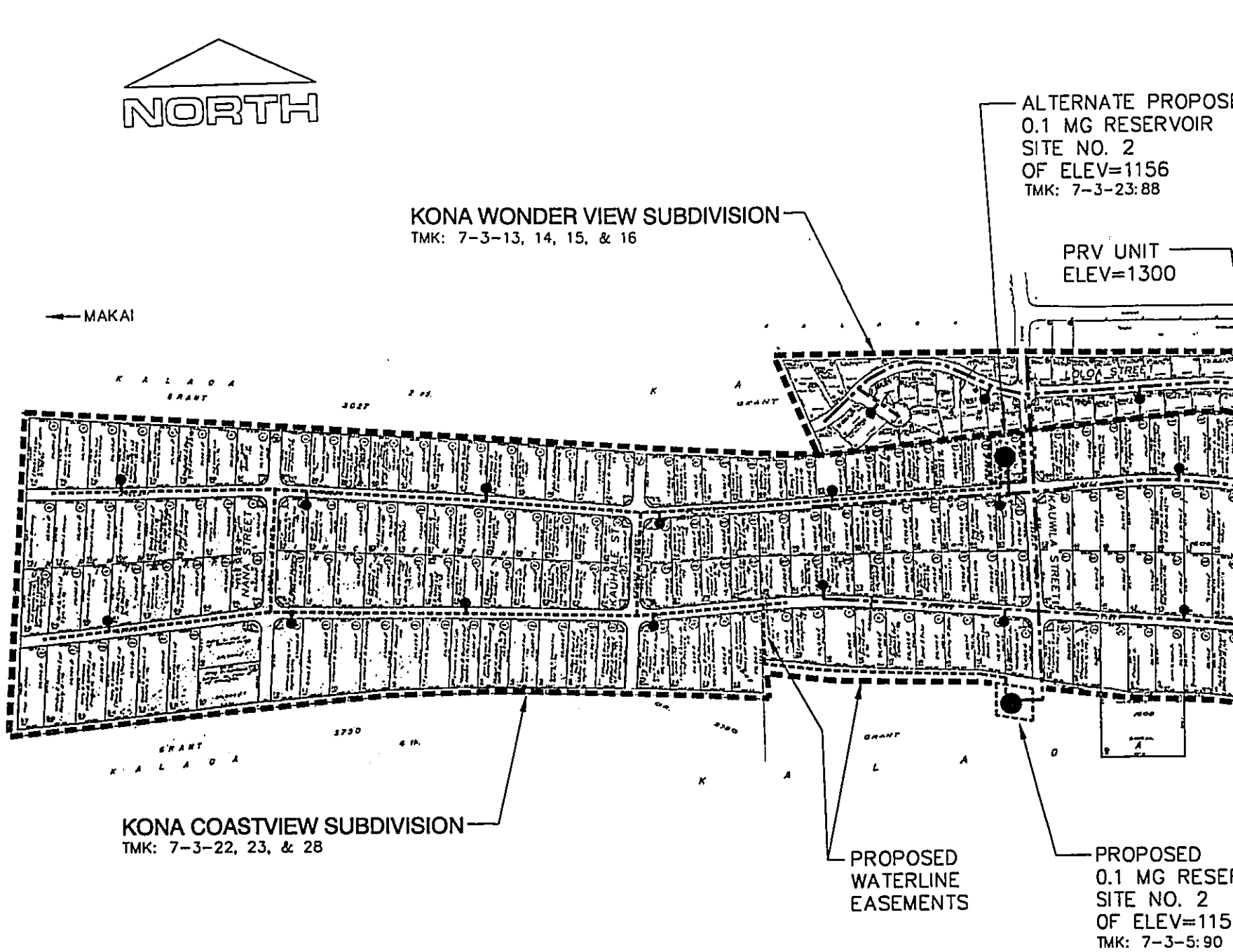

WATERLINES

PRESSURE ZONE 1
ELEV. 1740 TO 1520

PRESSURE ZONE 2
ELEV. 1628 TO 1300

PRESSURE ZONE 3
ELEV. 1300 TO 1156

PRESSURE ZONE 4
ELEV. 1156 TO 810

0.10 M.G. CONCRETE RESERVOIR

PRESSURE REDUCING VALVE UNIT

FIRE HYDRANTS

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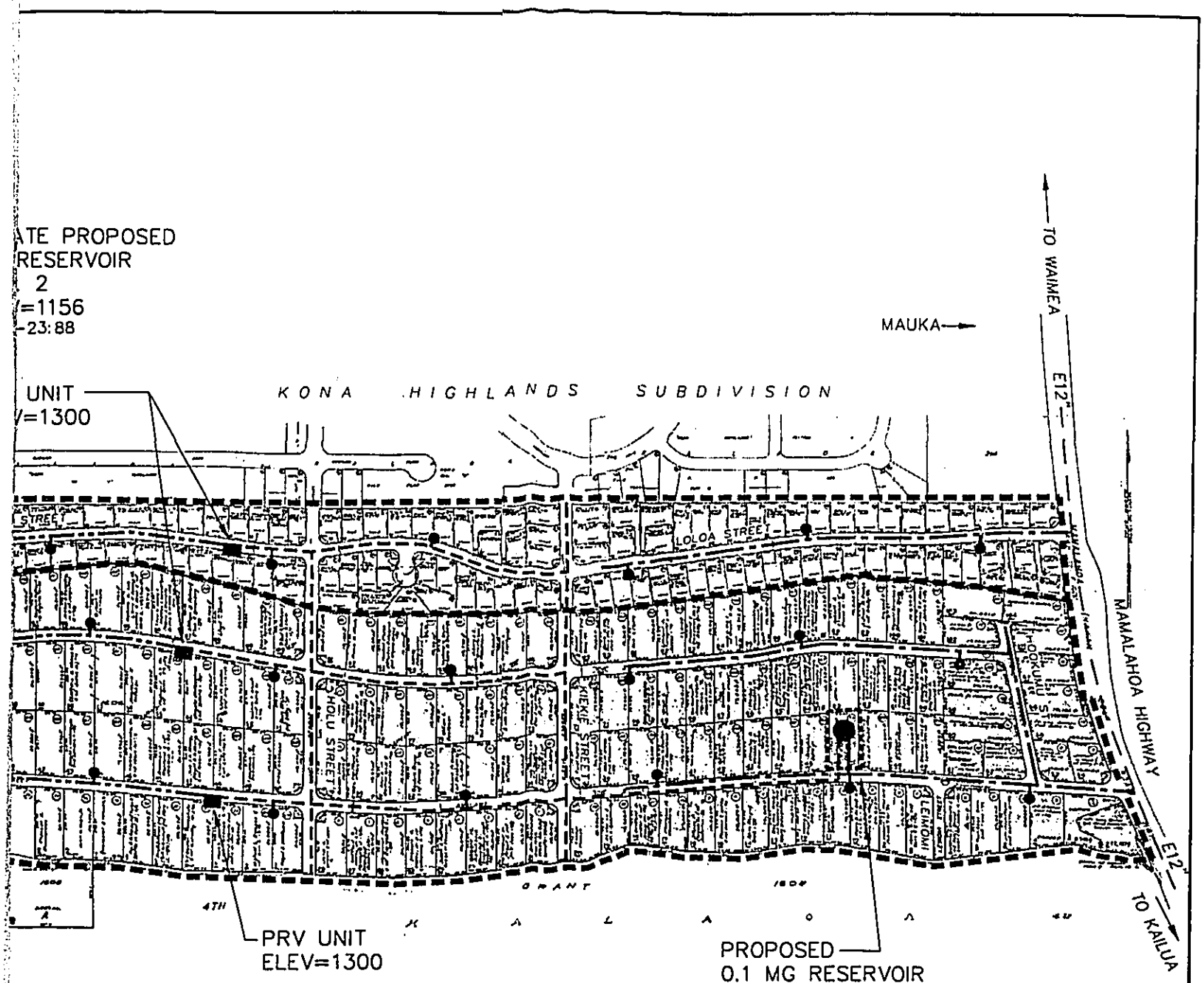

NOT TO SCALE

DEPARTMENT OF WATER SUPPLY COUNTY OF HAWAII	
PROJECT: KONA COASTVIEW/WONDER VIEW SUBDIVSION WATER SYSTEM IMPROVEMENTS	SHEET NO.
SCHEMATIC LAYOUT WATER SYSTEM IMPROVEMENTS	OF SHEETS
JOB NO. 2001-790	

FIGURE 4

services approximately 158 residences within KWS/KCS.

Another private water system, Kalaoa Water Company (KWC), acquired a 1 1/2-inch meter in 1971 and began service to residences in KCS that presently services 58 residences. Beginning in 1971, DWS also began issuing meters along the Mamalahoa Highway and KHS and presently there are 123 residences that have service through the DWS. As of November 1991, DWS has limited the availability of meters connected to the 12-inch waterline along Mamalahoa Highway and only if space is available along the highway. Further, only one (l) meter was allowed per lot of record and no meters were available for 'ohana' or 'second dwellings'.

As a consequence of the meter being so far removed from the actual residence it services for all these water systems, a myriad of consumer waterlines traverse private property, roadways, drainage ditches, culverts and driveways. These waterlines or aggregation of waterlines, consisting mostly of PVC or high density polyethylene (HDPE) pipelines, are more commonly referred to as "spaghetti lines." See photos in Appendix D. For DWS meters that front the applicant's lot, a "Policy & Conditions for Water Service (Premises not within service limits of the Department)" agreement must be executed by the applicant. This agreement basically notifies the applicant that they are responsible to obtain all necessary easements and permits from any governmental agency or private individual that would be affected by the installation of the applicant's waterline.

Since 1973, when MWC began acquiring meters from the DWS, MWC has been simultaneously granting private meters to lots within KCS/KWS and charging monthly consumption fees. DWS has no concrete knowledge on the collection of these fees, and their corresponding rate schedule.

Delinquencies owed DWS began to appear as early as 1987and DWS has been consistently sending billings in a prompt manner. In addition, DWS, realizing that the public health and safety of MWC's customers was at stake, has attempted to cooperate with MWC to ensure that its water bills were kept current. On July 18, 1991, a Stipulated Agreement (Civil No. 90-046K), between DWS and MWC, was issued by the Third Circuit Court. This agreement basically noted that all bills were current as of July 31, 1990; no additional customers were to be hooked up; all applicable fees and charges retroactive to April 6, 1987 were to be paid; and bills were to be current. Unfortunately, MWC's delinquencies continued.

In an effort to assist MWC since then, DWS has proposed and instituted payment plans, and attempted to secure financing through the mortgaging of MWC's real estate assets, all to no avail. Delinquencies have still continued. Finally, as a last resort, DWS filed and was granted a Summary Judgement (Civil No. 97-197K) against MWC on May 10, 1998 that authenticated DWS's claims against MWC and enabled DWS the right to demand payment of delinquencies and penalties. More importantly, this further allowed DWS, in accordance with Rule 3, Section 3-11(2), DWS Rules and Regulations, the authority to discontinue service for nonpayment of bills.

However, the DWS, realizing that discontinuance of service to MWC would ultimately affect the health, welfare and safety of MWC's 158 customers, is reluctant to resort to this final action. As a result of this and the recent untimely expiration of Carl Matsumoto, owner of MWC, the situation remains unresolved.

Government and Private Efforts:
Since the inception of both subdivisions in the 1960's, water service has either been provided through private catchment, private water systems or from DWS on a limited basis. Realizing that these sources are unreliable, high in maintenance, expensive and in most cases non-conforming to County standards, efforts have been directed towards installing a County dedicable water system by private and governmental entities.

Numerous public/private meetings, Water Commission meetings and discussions / correspondences were held between DWS and concerned residents of KCS/KWS since 1981 in an effort to resolve these issues, with no concerted initiative as a result. The overriding issue remained that the residents, collectively, were not willing to finance on their own, or the DWS was not obligated by its policies to install a dedicable water system at its own expense. Further, residents took issue to DWS's standards for such a system including the type of construction material, and design specifications. However, it should be noted that these materials and specifications, while making construction costly, have been developed through long term experience, and are specific to our island conditions. To accept anything less would compromise DWS's ability to provide efficient long term and economic cost effective water service.

Formal efforts were first initiated by the County Council with their adoption of Resolution No. 149-93 on January 26, 1994, relating to the construction of permanent water system improvements to County of Hawaii standards by an Improvement District (ID) process, in accordance with Chapter 12 of the Hawaii County Code. This resolution instructed the Chief Engineer to prepare and submit a report that outlined the required affected area, method of assessment, required improvements, and related costs.

However, due to administrative concerns, Ordinance No. 95-22, approved by the Mayor on February 9, 1995, amended Chapter 12 of the Hawaii County Code to instead direct the Manager of DWS to prepare and submit such a report. The report (Communication No. 1216) was submitted by the Manager on May 31, 1996. The estimated cost of the improvements was $5.8 million to be assessed equally among the lot owners in both subdivisions. The assessment pro-rata share for each lot under this proposal was approximately $13,700.

As a result, the Council adopted Resolution No. 352-96 on September 6, 1996, proposing to implement these improvements through a Council initiated ID. This resolution specified the method of assessment, assessment bond requirements, and affected area. As also required by the resolution, the County Council held a Public Hearing at the King Kamehameha Kona Beach Hotel on November 1, 1996 to discuss this proposal, to gain public input, and to determine the resident's willingness to proceed with the improvement district process. If the public hearing did not receive a 50% objection, the improvement district would proceed pursuant to Section 12-18 of the Hawaii County Code.

Public reaction was diverse and residents that already have water service objected to any additional assessment, since they have already made substantial investment to get water service. Several residents, realizing the tenuous condition of the private water systems were in favor of proceeding with the improvement district. Other residents were concerned about the high cost to implement the improvement district and the method of assessment.

No real resolution was gained as a result of the public hearing and efforts to continue with the improvement district stalled, especially since there was a change in council membership. However, DWS, realizing the resident's apathy to the improvement district due to the high pro-rata assessment, the unwillingness of the residents that already have water service, and the imminent demise of the MWC system, took it upon itself to develop a strategic plan to first, reduce the pro-rata assessment and secondly to ensure the repayment of the improvement district bond.

As a result of this effort, a two pronged plan was developed with funding through the USDA's Rural Utilities Water and Waste Disposal Loan and Grant Program administered by Rural Development (RD) of USDA, and a Council initiated ID process to ensure the repayment of the loan. Under the RD program, respective portions of the funding would be from a loan, which is to be repaid by the applicant and a grant portion which does not have to be repaid. Eligibility for these funds and the respective portions of the funding, if eligible, are based on the median household income of the residents in KCS/KWS. Eligible applicants include any public entity or non-profit organization that can obtain the legal authority to own, construct, operate, maintain, and be able to ensure the repayment of the loan portion.

Based on a determination by RD in 1999, the water system improvements within KCS/KWS were eligible for their program and the median household income for CS/KWS at the time qualified them for a 45% grant and 55% loan. The applicant would be DWS and it would be responsible for the repayment of the loan portion. The RUS loan terms are very attractive with a maximum term of 35 years as required by State Statute at a current rate of 4.5% to 5% interest rate. Based on these terms and a loan of approximately $2.4 million, 416 residents, the pro-rata assessment for each lot owner would be approximately $39 per month, with the understanding that lot owners that already have service with DWS would pay a discounted amount. The ID process would be the legislation authorizing DWS the power to lien any lot that with delinquent assessments. These amounts are subject to change pending finalization of estimates and applications to the USDA.

The aspects of this dual plan were presented at a Special Informational Public Meeting, sponsored by the Water Commission on May 25, 1999 at the King Kamehameha Hotel. Presentations were made by a representative from RD and Big Island Resource Conservation Development (RCD) of the USDA, DWS, and a private planning consultant versed in the RD loan/grant program.

Given the eminent demise of the private water systems (MWC and KWC) within KCS/KWS, the untimely expiration of Carl Matsumoto and the need for fire protection; it is imperative that a county dedicable water system be constructed within these subdivisions. Also, given that all measures and alternatives have been proposed, and discussed, and that the only feasible, enforceable and affordable plan to implement such a system is through a combined USDA loan grant program and a Council initiated ID; it is incumbent on the County Council, DWS, and the residents to ensure that this effort goes forward.

Unless this program is implemented in its entirety, there is a strong possibility, if not an eventuality, that service from these private water systems will likely be more expensive or non-existent. The health and safety of the subdivision residents and possibly the adjoining subdivisions are jeopardized by the current old and substandard water distribution system. The distribution system provides water

mainly for household use and does not meet required fire flow requirements. This system also subjects the users to severe fluctuations in pressure and supply. The age and fragile nature of exposed plastic piping causes ongoing problems with a high frequency of service disruptions due to breakage and leaks. When the pipes fail there is potential for contamination and backflow and possible sanitation issues within the homes.

C. Ownership

The two 0.10 million gallon concrete reservoirs, waterline and appurtenances will be owned by the Department of Water Supply, County of Hawaii. The two parcels for the proposed tank sites will be acquired by the Department of Water Supply. Necessary easements for waterline improvements will be acquired by the DWS as well. The distribution waterlines will be installed in the road rights of ways which are owned by the County of Hawaii and the State of Hawaii.

D. Project Schedule and Cost

The County and the Department of Water Supply is proceeding to move forward with the Improvement District requirements and apply to the USDA for the grant and loan. The following timeline will be used as a guide for implementation of this project.

Milestone Event	Target Completion Date
RD Application/EA/Preliminary Engineering Report	April 2002
RD Letter of Conditions	April 2002
Resolution Proposing Improvement District	June 2002
Public Hearing	July 2002
Resolution of Determination	August 2002
Construction Documents	November 2002
Bid	December 2002
Assessment Ordinance	February 2003
Issue I.D. Bond	August 2003
Close RD Loan	August 2003
Start Construction	August 2003
Substantial Completion	February 2005
Hookup	April 2005

The latest preliminary cost estimates for the project are as follows:

Construction Cost	$3,800,000
Land Acquisition	$ 300,000
Other costs	$ 500,000
TOTAL	$4,600,000

E. Consultation with Agencies, Organizations and Individuals

The following have been contacted during the preparation of this environmental assessment.

County Department of Water Supply
County Department of Public Works
County Planning Department
State Department of Land & Natural Resources Historic Preservation Division
United States Department of the Interior, Fish and Wildlife Service
United States Department of Agriculture, Natural Resources Conservation Service

This environmental assessment was prepared using information gathered from previously published documents (See Reference Listing) and formal and informal contacts with the agencies listed above.

A public hearing of the Hawaii County Council regarding the Water Improvement District for the Kona Coastview and Kona Wonder View Subdivisions was held on November 1, 1996 at the King Kamehameha Kona Beach Hotel. Transcripts of this hearing may be viewed at the County of Hawaii Council Office or the Department of Water Supply.

A Special Informational Public Meeting, sponsored by the Water Commission was held on May 25, 1999 at the King Kamehameha Kona Beach Hotel. Presentations were made by a representative from RD and Big Island Resource Conservation Development (RCD) of the USDA, DWS, and a private planning consultant versed in the RD loan/grant program

A Community meeting presenting the proposed Water Improvement District for Kona Coastview and Kona Wonder View Subdivisions was held on Thursday March 21, 2002, at Kealakehe Intermediate School Cafeteria. In a straw poll taken at the meeting, residents in attendance overwhelmingly supported the County's recommendation to initiate the Improvement District process and apply for the USDA grant and loan program. See Appendix B for a copy of the meeting agenda and informational handouts on the improvement district process.

PART 2

ENVIRONMENTAL SETTING

Physical Environment Characteristics

A. Soils

A. Affected Environment

Soils in the area are classified as *rPYD & rKED* per the "Soil Survey of Island of Hawaii, State of Hawaii," by the Soil Conservation Service.

Symbol *rPYD* represents "Punaluu extremely rocky peat, 6 to 20 percent slopes" soil series, with erosion factor K =0.02, and falls in hydrologic group "D." The Punaluu series consists of well-drained thin organic soils over pahoehoe lava bedrock. These soils are gently sloping to moderately steep. They are generally at an elevation ranging from near sea level to 1,000 feet and may receive 20 to 50" of rainfall annually. These areas are characterized by rock outcrops occupying 40 to 50 percent of the surface of this soil. This soil is low on the leeward side of Mauna Loa. The peat is rapidly permeable whereas the pahoehoe is very slowly permeable. Runoff is slow and the erosion hazard is slight. These soils are generally used for pasture. The natural vegetation might consist of koa haole, Christmas berry, guinea grass, natal redtop, and sand bur.

Symbol *rKED* represents "Kaimu extremely stony peat, 6 to 20 percent slopes" soil series, with erosion factor K =0.02, and falls in hydrologic group "A.". The Kaimu series consists of well-drained thin organic soils over Aa lava. These soils are gently sloping to moderately steep. They are generally at an elevation ranging from near sea level to 1,000 feet and receive 40 to 60" of rainfall annually. Permeability is rapid, runoff is slow, and the erosion hazard is slight. This soil is not suited for cultivation. Small areas are used for pasture. The natural vegetation might consist of Christmas berry, guava, guinea grass and lantana.

No agricultural lands information was provided by NRCS in its response letter dated March 22, 2002.

2. Environmental Consequences

Pipelines and appurtenances are proposed to be installed in existing right-of-ways (approx. 24,000 lineal feet). The existing roadways consist of approximately 16' wide pavements with grassed shoulders, and drainage ditches along the roadways. One water tank is proposed to be located on a vacant lot (Tmk: 7-3-22:46, 18,280 sf) and on a portion of property adjacent to Kona Coastview subdivision, south end of Kauwila Street. (Tmk: 7-3-05:90 portion, tank site will require approximately 18,000 sf). These reservoir sites would need to be acquired by the DWS. This project will not cause a change in the existing use of the land which is already subdivided and in use as residential subdivisions. The installation of a new water system will provide a dependable and safe distribution network and fire protection which will complement and enhance the existing land use. There will not be adverse impacts to existing land use as a result of this project.

3 Mitigation

No mitigation measures are anticipated.

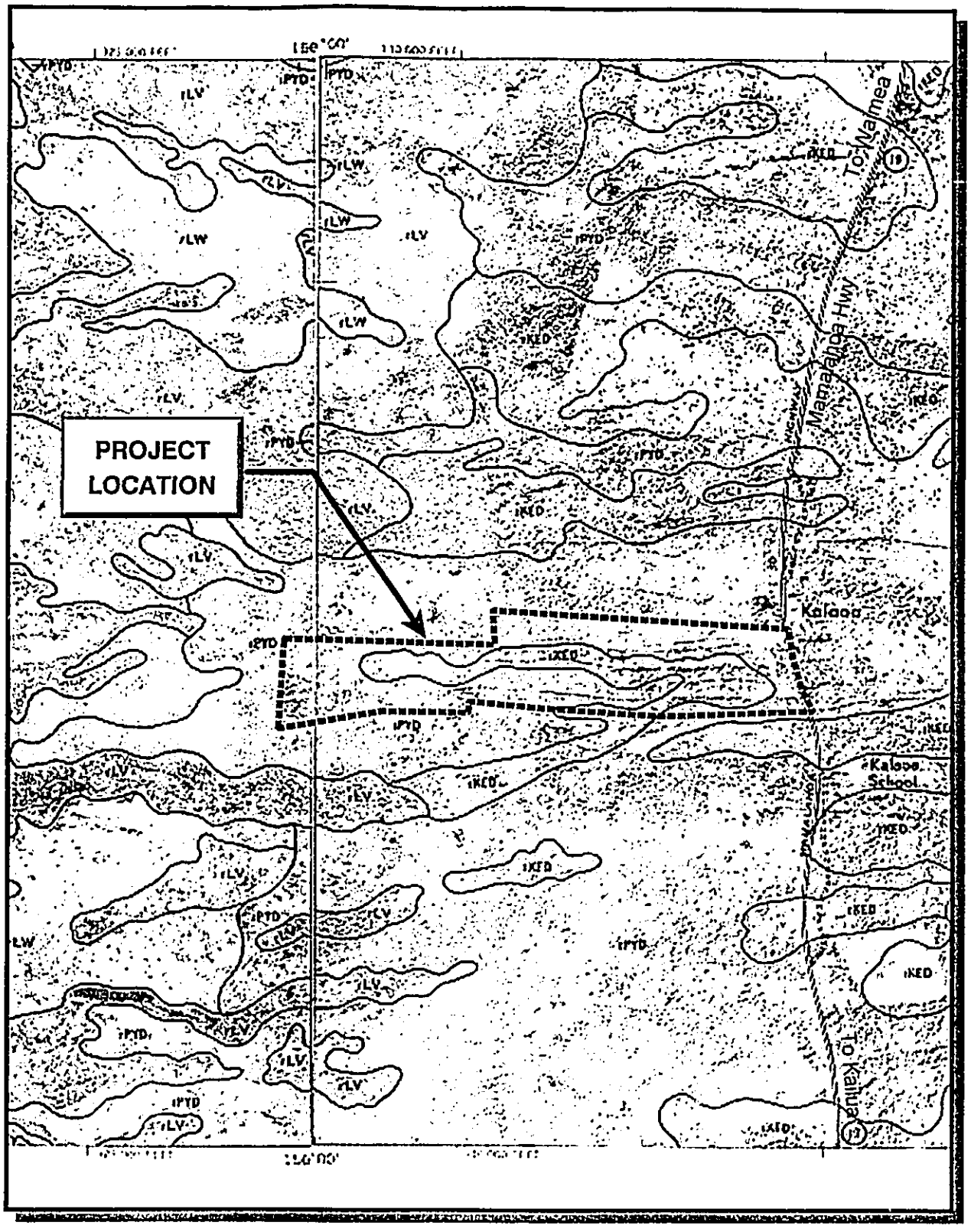

Figure 5 - Portion SOIL SURVEY MAP
Sheet 66 & 67, Soil Survey of Island of Hawaii

B. General Climate

Ground elevations slope downward from Mamalahoa Highway at the mauka or east boundary to the makai or western boundary of the subdivisions. For Kona Wonder View, the elevation varies from approximately 1,740 to 1,040 feet, and for Kona Coastview the variation is approximately 1,730 to 810 feet above sea level.

Rainfall in the Kalaoa area may average between 40 to 50 inches per year with the higher rainfalls occurring during the summer months. Daily rainfall maximums usually occur in late afternoon and evening, from showers that form within sea breezes which move onshore and upslope during the day. Temperature in degrees Fahrenheit range from the 60's to the 80's. Winds are light and variable generally from the south west.

C. Flood Hazards

1. Affected Environment

Project site is likely located in Panels *0682 C and *0701 C of the Flood Insurance Rate Maps. For these panels, the Federal Emergency Management Agency (FEMA) notes , "*Panel not printed - Area All in Zone X." These areas are considered "Other Areas Zone X" and are defined as Areas determined to be outside 500-year flood plain.

Per Atlas of Hawaii, the area is categorized as Hualalai Undissected Upland, which is defined as slopes with little or no established surface drainage.

No major drainage structures are evident within the two existing subdivisions. Existing facilities include unpaved swales and ditches along the paved roadway and culvert (18" to 24" diameter) crossings at intersections. Runoff would appear to be generated from local areas such as roadways and house lots. The surface runoff runs along the roadways downhill west and probably percolates and ponds along the way and then flows off the properties at the western or makai end of the subdivisions. Properties downslope of the project are undeveloped.

2. Environmental Consequences

The installation of pipelines within the existing roadways will not alter any drainage ways or flood plains. The reservoir sites will be designed and graded to minimize effects to adjoining properties due to rainfall runoff. Negative effects such as silt and debris runoff after rainfall would be related to construction activity and will be short term and temporary in nature.

3. Mitigation

Construction of improvements will be required to conform to all State environmental and pollution control requirements, County of Hawaii grading ordinances, erosion and pollution control requirements and best management practices plans. No impacts to flood plains or drainage ways are anticipated as a result of this project.

The County of Hawaii Department of Public works commented that waterlines be placed a minimum of 12-feet from the property lines to provide clearance for possible future drainage structures within the road right-of-ways. Installation of the proposed improvements does not present a flood hazard to surrounding areas, nor will it be susceptible to flooding damage from the surrounding area.

D. Volcanic and Seismic Hazard

Kalaoa is located on the western slopes of Hualalai Mountain which is one of five major volcanoes forming the island of Hawaii. The slopes of Hualalai are located in Volcanic Hazard Zone 4. The island of Hawaii is divided into zones according to the degree of hazard from lava flows. Zone 1 is the area of greatest hazard and Zone 9 is of the least hazard.

Per the Uniform Building Code, the entire Island of Hawaii has been classified to be in Seismic Zone 4. Design of buildings and structures must comply with seismic Zone 4 criteria. The design of the concrete reservoir will comply with seismic zone 4 requirements.

E. Flora and Fauna

1. Affected Environment

The natural vegetation of the area and in the vacant lots consist of koa haole, Christmas berry, guinea grass, natal redtop, and sand bur guava and lantana. Approximately 335 of the 416 total lots or about 80 percent of the lots in the two subdivisions are developed with homes. As such, much of the vegetation on the houselots are plants and grass planted as landscaping by the residents.

Since the area is highly residential in nature and about 80% built out, faunal presence would be typical of highly developed areas. Cats, dogs, mongoose, rats, mice and common birds would likely make up the types of animals present. A resident of the Kona Coastview Subdivision has noted that wild turkeys are occasionally seen roaming within the subdivision.

No formal biological or faunal survey was conducted for this report.

2. Environmental Consequences

Most of the work will occur within existing roadways and previously cleared or graded areas. Reservoir Site 1 will be located in a vacant subdivision lot and Reservoir Site 2 will be located in property that has previously been cleared and graded for farming. It is currently planted with macadamia nut trees. No adverse impacts to biological resources are anticipated as a result of this project.

In its comment letter dated March 27, 2002, the USFWS indicated that there are no federally endangered, threatened, or candidate species, nor any designated or proposed critical habitat directly within the proposed project sites and because these areas are already developed, the Service does not anticipate significant adverse project related impacts to fish and wildlife resources.

3. Mitigation

No mitigation measures are anticipated.

F. Historic Sites

1. Affected Environment

No archaeological or cultural features are known to exist within the road right of ways and easements, and reservoir sites where the proposed improvements are to be installed. These areas have been previously disturbed and therefor the presence of archaeological features are unlikely.

The proposed reservoir site TMK: 7-3-22:46 is vacant and will be checked for previous disturbance. Based on the draft environmental review by State Historic Preservation Officer the following is recommended. If the location has not been grubbed/graded, it should be checked by an archaeologist to determine the presence/absence of historic sites. If historic sites are present, an archaeological inventory survey will need to occur to document the site, evaluate the significance, and propose mitigation recommendations for any significant sites. If the site has been determined to be previously disturbed, no further action would be required.

Funding for the project will be obtained through the United States Department of Agriculture (USDA). The use of federal funds requires compliance of Section 106 of the National Historic Preservation Act. The above are key steps for compliance.

2. Environmental Consequences

Waterlines will be installed in existing road right-of-ways which have been previously disturbed. The concrete water tanks will be approximately 37-feet in diameter and 16-feet high located on a vacant subdivision lot and on adjoining property that has been cleared and graded for farming. The reservoir site # 1 is currently vacant may be disturbed for the first time. Reservoir Site # 2 has been previously graded and is used as macadamia orchard. Tank installation will likely affect about six or less macadamia nut trees.

3. Mitigation

To minimize the visual effects of the concrete reservoir, it will be painted with a color to blend in with the environment and the site will be landscaped to provide planting screens. If during the course of clearing and excavation work any evidence is uncovered indicating bones, cultural or archaeological significance, work shall be stopped immediately and the Department of Water Supply and the State Historical Preservation Division shall be notified.

G. Existing Land Use

1. Affected Environment

Land use of the properties are existing residential subdivisions. Current zoning for Kona Wonder View subdivision is Agricultural five acres (AG-5a) with lots of 7,500± square feet, and consists of 132 lots. Current zoning for Kona Coastview subdivision is Agricultural five acres (AG-5a), with lots of greater than 15,000± square feet and consists of 283 lots. State land use designation is "U" or urban. The County General Plan classifies the area for urban expansion. The project is located outside the Special Management Area (SMA).

Approximately 322 of the 415 lots or about 80% of the two subdivisions are currently developed with residential structures. Some of the lots include additional "ohana" cottages. There are also 23 additional condominium (Condominium Property Regime, CPR) units within the Kona Coastview subdivision.

Contacted agencies have not indicated the project area to be located in or near Formally Classified Lands to include national parks, natural landmarks, national historic sites and battlefields, state parks, wildlife refuges, or land administered by federal, state, and county agencies.

2. Environmental Consequences

Pipelines and appurtenances are proposed to be installed in existing right-of-ways (approx. 24,000 lineal feet). The existing roadways consist of approximately 16' wide pavements with grassed

shoulders, and drainage ditches along the roadways. One water tank is proposed to be located on a vacant lot (Tmk: 7-3-22:46, 18,280 sf) and on a portion of property adjacent to Kona Coastview subdivision, south end of Kauwila Street. (Tmk: 7-3-05:90 portion, tank site will require approximately 18,000 sf). These reservoir would need to be acquired by the DWS. This project will not cause a change in the existing use of the land which is already subdivided and in use as residential subdivisions. The installation of a new water system will provide a dependable and safe distribution network and fire protection which will complement and enhance the existing land use. There will not be adverse impacts to existing land use as a result of this project.

3. Mitigation

No mitigation measures are anticipated.

H. Cultural Resources

1. Affected Environment

No archaeological or cultural features are known to exist within the road right of ways and easements, and reservoir sites where the proposed improvements are to be installed. These areas have been previously disturbed and in use as a residential subdivision for about 40 years and therefore the presence of cultural resources are unlikely.

The proposed reservoir sites Tmk: 7-3-22:46 and alternate Tank Site No. 2, Tmk:: 7-3-23:88 are vacant and may not have been disturbed. Based on the draft environmental review by State Historic Preservation Officer the following is recommended. If the location has not been grubbed/graded, it should be checked by an archaeologist to determine the presence/absence of historic sites. If historic sites are present, an archaeological inventory survey will need to occur to document the site, evaluate the significance, and propose mitigation recommendations for any significant sites. Funding for the project will be obtained through the United States Department of Agriculture (USDA). The use of federal funds requires compliance of Section 106 of the National Historic Preservation Act.

2. Environmental Consequences

Waterlines will be installed in existing road right-of-ways which have been previously disturbed. The concrete water tanks will be approximately 37-feet in diameter and 16-feet high located on a vacant subdivision lot and on adjoining property that has been cleared and graded for farming. The reservoir site # 1 is currently vacant may be disturbed for the first time. Reservoir Site # 2 has been previously graded and is used as macadamia orchard. Tank installation will likely affect about six or less macadamia nut trees.

In terms of cultural resources, this project is not expected to significantly affect traditional native Hawaiian cultural practices or other traditional cultural practices that might be occurring in the surrounding areas. This project would not restrict access to surrounding areas which may be used for cultural practices. This project will not restrict access to makai shoreline areas or mauka mountain areas which might be used for cultural practices.

3. Mitigation

If during the course of clearing and excavation work any evidence is uncovered indicating bones, cultural or archaeological significance, work shall be stopped immediately and the Department of Water Supply and the State Historical Preservation Division shall be notified.

I. Scenic Resources

1. Affected Environment

The proposed Waterlines will be installed in existing road right-of-ways which have been previously disturbed in a highly developed residential subdivision. Reservoirs will be located on a vacant subdivision lot and on adjoining property that has been cleared and graded and is currently planted with macadamia nut trees.. There are many homes and many large trees within the subdivisions. There are both single story and two story homes in the subdivision. See photos in Appendix D.

These tax map keys are not listed in the county general plan as areas that have visual significance.

2. Environmental Consequences

The waterlines will installed under existing roadways and will not affect scenic resources. The proposed project will result in two new 0.10 m.g. concrete reservoirs potentially being visible from various points makai of the site along the Queen Kaahumanu Highway. The concrete water tanks will be approximately 37-feet in diameter and 16-feet high. The reservoirs will likely not be visible from the Mamalahoa Highway to the east or mauka of the project site since the site slopes down and away form the highway. Due to the steep slopes of the terrain (10- 20%), there will likely be substantial excavation on the sites to accommodate the footprint of the tank. This would result in the tank being set into the slope of the terrain which helps to obscure the tank. The size of the tank, about 37 feet wide by 16 feet high is comparable to a typical two story home. Therefore, the tank is not likely to stand out would likely fit in with the residential nature of the area

3. Mitigation

To minimize the visual effects of the concrete reservoir, The use of tall, spreading tropical planting to screen the tank site and painting the tank to match the surroundings will be considered in the design process.

J. Water Quality Issues

1. Affected Environment

There are no known water quality issues associated with this project. The project area is within the Keauhou aquifer which along with the Kiholo aquifer makes up the Hualalai Aquifer Sector. The estimated sustainable yield of the Hualalai aquifer is 56 mgd. This includes the Kiholo (80902, 18 mgd) and Keauhou (8901, 38 mgd) aquifer systems. The current consumption for the DWS North Kona Water System, with its source being the Hualalai Aquifer, averages 9.2 million gallons per day for 7,900 customers. Based on consumption data from the last 30 years, the projected 2020 demand for this system is 14.9 million gallons per day, substantially less than the estimated sustainable yield of the source aquifer. Potable water is supplied from the Honokohau Production Well and is distributed through the DWS water system up to the water meters.

2. Environmental Consequences

Hydrotesting and chlorinated water will be discharged following pressure testing and disinfection of the new pipelines and reservoir. There will also be a drainage sump at each tank site which will be used to dispose of site rainfall runoff, reservoir overflow, and reservoir washout during reservoir maintenance procedures. The drainage sump will not exceed 8-feet in depth. These activities are not anticipated to adversely impact environmental resources along the pipeline alignment and at the tank sites.

The Department of Water Supply standards for disinfection include flushing the system adequately with chlorinated water of at least 50 mg/l concentration, retaining the chlorinated water inside the pipe overnight, and exposing interior surfaces of the pipe with chlorinated water 300 mg/l for three hours.

As new homes are built there will be an increase in wastewater generated. In this area, there is no municipal sewage collection system so each land owner will be responsible to dispose of his own wastewater.

3. Mitigation

The discharge and disposal procedure of flushing, hydrotesting and chlorinated water will be performed by the contractor in accordance with current State of Hawaii Department of Health environmental requirements.

To minimize soil erosion, runoff, and sedimentation, the contractor will be required to employ necessary measures to insure compliance with the county of Hawaii grading ordinance, and the applicable State Department of Health Pollution Control Standards. The contractor shall also be required to implement and maintain a Best Management Practices Plan (BMP) to minimize effects to the environment.

The State of Hawaii Department of Health (DOH) is responsible for administering wastewater requirements for the State of Hawaii. Each land owner would be required to handle his own wastewater in compliance with applicable DOH rules and regulations. This would likely be with a DOH approved individual wastewater system. Under the DOH Environmental Management Division wastewater program, there should not be significant adverse environmental consequences.

K. Coastal Resources

1. Affected Environment

This project is located approximately 3 1/2 miles away from the shoreline and is not located within the Special Management Area (SMA).

2. Affected Environment

Impacts to coastal resources are not anticipated.

3. Mitigation

No mitigation measures are anticipated.

L. Socio-economic

1. Affected Environment

The project site is located in the Kalaoa Census Designated Place (CDP) identified as Census Tract 215.01 of which the area generally starts just north of Kailua and proceeds north to about the North Kona district boundary and is bounded by Mamalahoa Highway and the shoreline. Data from the 2000 census indicates a population of 9,505 and 2,541 households. Income data is not yet available for the 2000 census. Based on 1990 census income data for the whole Hawaii County, median income in 1989 dollars for households was $29,712 and 14.2% of persons below poverty level. For Census tract 215.01, median income in 1989 dollars for households was $37,500 and 9% of persons below poverty level.

2. Environmental Consequences

The overall social and economic impacts associated with the proposed action are expected to be positive as the proposed infrastructure improvements will benefit the health, welfare and safety of all existing and future residents of the KCV and KWS subdivision.

Construction of the proposed infrastructure will not generate any direct increase in population since the project area is already developed and subdivided to its zoned density. The future population of the project area will be limited by the maximum build out of the subdivisions lots.

During public meetings much of the concern by residents were about the pro-rata cost to be assessed to each lot owner. The proposed program of funding through the USDA's Rural Utilities Water and Waste Disposal Loan and Grant Program administered by Rural Development (RD) of USDA, and a Council initiated ID process to ensure the repayment of the loan greatly reduces the pro-rata share of each lot owner. Since this project is being funded by the end users of the water system, a majority of the people affected must give their approval for the project to proceed.

The proposed project will have positive direct impact upon the economy of the area in terms of short term construction jobs and economic benefits related to a large construction project in the area.

3 Mitigation

No mitigation measures are anticipated.

M. Air Quality

1. Affected Environment

There are no known air quality monitoring stations in the vicinity of the proposed project. The State Dept. of Health operates a monitoring station in Kealakekua over 10 miles away. Generally, air quality in the project area would be considered good. Depending upon climatic conditions, the area may be affected by "vog" or volcanic smog caused by emissions from Hawaii's active volcanoes. These intermittent vog conditions vary and may affect large portions of the island at any given time. Other sources of air pollution are motor vehicle emissions from nearby and local roadways and agricultural activities. Agricultural sources of air pollution may include the burning of vegetation, spraying of insecticides and herbicides and farm equipment emissions.

2. Environmental Consequences

Short term impact to air quality will occur either directly or indirectly as a result of construction activity. Ambient air quality will be affected by equipment emissions and construction generated dust.

3. Mitigation

Fugitive dust will be managed by the contractor using water sprinkling, limiting exposed areas and covering the exposed trench areas with trench plates as soon as practicable. Equipment must be properly maintained to assure efficient operation in terms of fuel combustion to assure the cleanest possible exhaust emissions. The contractor will also be required to comply with pollution control regulations of the State Department of Health and the County of Hawaii.

N. Transportation

1. Affected Environment

Kona Coastview and Kona Wonder View Subdivisions each have a primary access from the Mamalahoa Highway (State Highway) on the eastern or mauka end of the project. As you proceed makai or west, the two subdivisions are connected by three cross connector roads, Kiekie, Holu, and Kauwela Streets, with Kiekie also connecting to the Kona Highlands subdivision to the north. Ahikawa and Ahilani Street runs the length of the Coastview subdivision and are dead ends at the makai or east boundary, and Loloa Drive runs the length of Wonder View subdivision and also dead ends at the makai or east boundary. The roadways generally consist of pavement widths of 16-feet with unpaved shoulders and drainage ditches along the roadways. While the roadway widths are considered narrow by current standards, access to lots would be considered good with the multiple cross connector roads and a connection to Kona Highlands subdivision.

2. Environmental Consequences

Short term unavoidable impacts to transportation will occur due to the construction activities in the right-of-ways. These activities will lead to traffic detours, result in travel delays, and general inconvenience to local traffic within the subdivision. During working hours, typically only one lane of through traffic will be allowed while work is being done in the roadway. Residents might take alternate routes with possible delays in access to homes to avoid the work areas.

3. Mitigation

Traffic impacts will be mitigated by instituting a traffic control plan approved by the County of Hawaii Department of Public works and the State Department of Transportation for work within their respective jurisdictions. Construction road work and material deliveries need to be scheduled to minimize disruption to traffic. Other measures to be used include traffic cones and/or directional devices to guide vehicles around work areas, posting of flagmen for traffic control, backfilling and/or covering trenches daily, posting adequate safety barricades and devices for the duration of construction and coordinating driveway crossings with affected homeowners. These impacts would be construction related, unavoidable, and temporary in nature, and once the project is complete there will be no impact.

The County of Hawaii Dept. of Public Works indicated that a permit for work within the County right-of-way is required and that at least one lane be open to public traffic at all times and two lanes shall be open from the hours of 3:30 pm to 8:00 am, and that property owners should receive one week notice prior to disruption of driveway access.

O. Noise

1. Affected Environment

Existing noise levels would be typical of a single family residential setting which is affected primarily by vehicular traffic on residential roadways. Some traffic noise would come from the Mamalahoa Highway to the east which is a two lane roadway having a speed limit of 45 mph. To the west is the Keahole Kona International Airport located over three miles away. There does not appear to be any other significant noise generating activity near by.

2. Environmental Consequences

Noise impacts will occur from general construction activities of the proposed project and are unavoidable. The right-of-way is bounded by residential uses. Construction noise will vary by the type

equipment used for the different phases of work being done. Noise sources would include heavy equipment and machinery, pneumatic impact equipment, construction and delivery vehicles. Maximum noise exposure would likely occur during the site excavation, trench excavation and backfilling stages of the work.

3 Mitigation

Mitigation measures by the contractor would include maintaining all equipment with appropriate mufflers and sound suppressors/attenuators, keeping equipment with motors in good operating condition. Exposure to excessive noise may be mitigated by allowing heavy equipment operations only during normal working hours (8:00 am to 3:30 pm) Mondays through Fridays. If necessary, the contractor will be required to obtain a noise permit from the State of Hawaii Department of Health and be responsible to comply with all conditions and requirements attached to the permit.

PART 3

SUMMARY POTENTIAL IMPACTS AND MITIGATION MEASURES

A. Short Term Construction Impacts

Impacts to the surrounding environment as a result of this project will temporary and short term in nature and related to construction activities. Construction of the proposed waterlines, concrete water tanks and appurtenances will create such temporary impacts as noise, fugitive dust, potential silt and debris runoff after rainfall and traffic flow and access delays. These impacts would occur only during the construction phase and would cease at the completion of the project.

Construction documents will require the contractor conform to all State environmental and pollution control requirements, County of Hawaii grading ordinances, erosion and pollution control requirements and implement and maintain a best management practices plans (BMP) for the duration of the project.

The contractor will be required to discharge and dispose of all flushing, hydrotesting and chlorinated water in accordance with current State of Hawaii Department of Health environmental requirements for water pollution control to protect the environment and public health. To minimize soil erosion, runoff, and sedimentation, the contractor will be required to employ necessary measures to insure compliance with the County of Hawaii grading ordinance, and the applicable State Department of Health Pollution Control Standards. If construction dewatering is to be done, the contractor shall obtain necessary permits for the discharge of construction dewatering. The Contractor shall also be required to implement a Best Management Practices Plan as prescribed by the National Pollution Discharge Elimination System (NPDES) permit as administered by the State Department of Health, if required.

Fugutive dust will be managed by the contractor using water sprinkling, limiting exposed areas and covering the exposed trench areas with trench plates as soon as practicable. Equipment will be properly maintained to assure efficient operation in terms of fuel combustion to assure the cleanest possible exhaust emissions.

Traffic impacts will be mitigated by instituting a traffic control plan approved by the County of Hawaii Department of Public works and the State Department of Transportation from work within their respective jurisdictions. Construction road work and material deliveries need to be scheduled to minimize disruption to traffic. Other measures to be used include traffic cones and/or directional devices to guide vehicles around work areas, posting of flagmen for traffic control, backfilling or covering trenches daily, posting adequate safety barricades and devices for the duration of construction and coordinating driveway crossings with affected homeowners. Construction road work and material deliveries shall be scheduled to minimize the disruption to traffic

Noise impact mitigation would include maintaining all equipment with appropriate mufflers and sound suppressors/attenuators, keeping equipment with motors in good operating condition. Limit noise exposure by allowing heavy equipment operations only during normal working hours (8:00 am to 3:30 pm) Mondays through Fridays. If necessary, the contractor will be required to obtain a noise permit from the State of Hawaii Department of Health and be responsible to comply with all conditions and requirements attached to the permit

B. LONG TERM IMPACTS

Subdivision Water System Improvements will not substantially change land use, is not in a flood plain, wetlands and area of known cultural resources. No known rare, threatened or endangered flora or fauna are anticipated to be affected by the improvements. The pipeline will be underground within existing rights-of-ways and will not affect scenic resources or vistas. The construction of two 0.10 mg concrete reservoirs will not substantially affect scenic resources or vistas.

No significant long term major negative impacts are expected as a result of this project. This project will benefit the local community by increasing the dependability of the North Kona water system.

C. PERMITS AND APPROVALS

Construction plans will submitted to the following agencies for review and approval:

Department of Water Supply
Department of Public Works
Planning Department
State Department of Health
State Dept. of Transportation (For work within State ROW only)

The following is a list of permits that may be required:

State of Hawaii Dept. Of Health
NPDES General Permit Coverage:
Hydro Testing Water
Community Noise Permit for Construction.
County Grading Permit
County Building Permit
Work Within County Right-of-Way

PART 4

ALTERNATIVES TO THE PROPOSED ACTION

A. No Action

The no action alternative would maintain the status quo for the distribution of water within these two subdivisions. The problems described in Section 1.0 regarding the two private water companies will not be resolved. MWC's financial instability would continue and might eventually shut down. This would leave the approximately 152 residences serviced by MWC with out potable water supply. The questionable future maintenance and viability of the private systems would lead to probable disruption in services putting the health and welfare of the residents at risk. Fire protection would also not be available in the no action scenario.

Based upon the current status of the existing water delivery systems, the dire financial condition of the private water company, and the desire to provide fire protection, the Department of Water Supply and most of the existing residents do not consider the "No Action" alternative to be a viable option.

B. *New Water System - Total Improvement District (ID)*

Once the decision to go for new county dedicable water system was made, project funding became the controlling issue. The DWS is not obligated, by its policies to install a dedicable water system and the consensus of the residents was that they were not willing to pay for a new system on their own. County efforts to finance the project through an Improvement District process did not gain support of the residents due to the high pro-rata share of assessment. Therefore, the ID process was dropped.

C. New Water System - Combination USDA Funding with ID

The DWS, realizing the resident's apathy to the improvement district due to the high pro-rata assessment, the unwillingness of the residents that already have water service, and the imminent demise of the MWC system, took it upon itself to develop a strategic plan to first, reduce the pro-rata assessment and secondly to ensure the repayment of the improvement district bond.

As a result of this effort, a plan was developed with funding through the USDA's Rural Utilities Water and Waste Disposal Loan and Grant Program administered by Rural Development (RD) of USDA, and a Council initiated ID process to ensure the repayment of the loan. Under the RD program, respective portions of the funding would be from a loan, which is to be repaid by the applicant and a grant portion which does not have to be repaid. Under the ID process, the loan portion will be paid back by the 438 property owners within the subdivisions.

The DWS is in the process of proceeding with this plan to fund the project.

PART 5

RELATIONSHIP TO PLANS AND POLICIES

A. Kona Regional Plan (1982):

Some of the goals and policies of the Kona Regional Plan for Water Infrastructure, Chapter V, include the following:

- Ensure that adequate, efficient and dependable public utility services will be available to users.
- Maximize efficiency and economy in the provision of utility services.
- Improve and replace inadequate systems.
- The fire prevention distribution system shall be coordinated with water distribution systems in order to ensure water supplied for fire-fighting systems.

Recommendations of the plan included:

- Implement the improvements proposed for Kona by the Water Master Plan, dated December 1980, and
- The location and timing of major water system improvement should be coordinated with other infrastructural improvement and with overall community priorities.

Implementation of this project meets objectives of the Kona Regional Plan Goals, Policies and Standards listed above. Construction of this project will ensure that adequate, efficient and dependable utility services such as water will be available to users.

B. The General Plan Hawaii County, November 1989:

Under Section 4. Council Policies, Statement of Development Objectives, Standards and Principles; J. Public Utilities, (1) WATER, POLICIES, The following is noted:

- Water system improvements and extensions shall promote the County's desired land use development pattern.
- All water systems shall be designed and built to Department of Water Supply standards
- Improve and replace inadequate systems.
- Water system improvements should be first installed in areas which have established needs and characteristics, such as occupied dwellings and other uses, or in areas adjacent to them if there is need for urban expansion, or to further the expansion of the agricultural industry.
- The fire prevention systems shall be coordinated with water distribution systems in order to ensure water supplies for fire protection purposes.

Under STANDARDS, the following:

- Water Systems shall meet the requirements of the Department of Water Supply and the Subdivision Control Code.

And under Section 5; G. NORTH KONA, (5) PUBLIC UTILITIES, (a) WATER, Courses of Action, the following:

- Construct new reservoirs as needed.

Under (8) LAND USE, Courses of Action, the following:

(e) SINGLE FAMILY RESIDENTIAL

- Improve and develop roadways, water and sewerage systems, and other basic facilities necessary to encourage development of lands suitable for residential use.

Implementation of this project would comply with objectives of the General Plan Goals, Policies and Standards listed above.

PART 6

DETERMINATION

This project proposes to improve the health and safety of many residents of the Kona Coastview and Wonder View subdivisions by providing a new reliable and low maintenance water distribution system. It will also provide needed storage and fire protection.

Based on the last community meeting on Thursday March 21, 2002, the residents in attendance overwhelmingly supported the County's recommendation to initiate the Improvement District and apply for the USDA grant and loan.

The County and the Department of Water Supply will proceed to move forward with the Improvement District requirements and apply to the USDA for the grant and loan.

Any impacts resulting from this project will likely be short term and minimal, and generally be related to construction activity. No significant long term major negative impacts are expected as a result of this project Therefore, it is determined that the issuance of a Finding of No Significant Impact (FONSI) declaration is appropriate for this project.

PART 7

FINDINGS AND REASONS

In determining the issuance of a Negative Declaration and Finding of No Significant Impact (FONSI), the proposed action was reviewed and found to have no significant impact on the following significance criteria.

- Involves the loss or destruction of any natural or cultural resource;
  The State Historic Preservation Division Office indicated it has no record of archaeological sites in the subject parcels. SHPD does note that the subdivisions were built in the 1960's and archeological surveys were not usually done at that time. SHPD recommends potential undisturbed areas be checked for prior disturbance and an archeological assessment be made.

- Curtails the range of beneficial uses of the environment.
  This project will not curtail beneficial use of the environment. The area is developed and the project purpose is to provide a new water distribution system within existing subdivision roadways.

- Conflict with the State's long-term goals or guidelines and expressed in Chapter 344 HRS.
  This proposed project is consistent with the Environmental Policies established in Chapter 344 HRS.

- Substantially affect the economic or social welfare of the community or state.
  The proposed project is intended to help provide dependable uninterrupted water flow and fire protection. The existing private distribution system is old, unreliable and subject to frequent breakage. Installation of the water tanks and waterlines will enhance the conditions of the area. Short term economic benefits will be realized by construction employment and spending in the area. Water users in the area will be assured of higher reliability and comfort in the delivery of water by the upgraded system including fire protection and lower fire insurance rates.

- Substantially affects public health.
  This project will not substantially affect public health. Any probable public health effects would be related to construction activity which is temporary and short term in nature. The contractor is required to comply with all Department of Health environmental rules and regulations related to his actions.

- Involves substantial secondary effects such as population changes or infrastructure demands.
  The proposed new water system is replacing private waterlines which already partially services the project area. This project is intended to provide dependable uninterrupted water flow and fire protection because the existing system is currently unreliable. These improvements are intended to satisfy existing water usage demands and to accommodate eventual build out of the subdivisions. There will not be substantial secondary effects.

- Involves substantial degradation of environmental quality.
  Once completed, the waterline will not affect environmental quality. Any effects on environmental quality will be short term and related to construction activity. The contractors are required to comply with all Department of Health environmental and pollution control rules and regulations.

- Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment to larger actions.
  The installation of the new water system in existing subdivisions does not involve a commitment to larger actions.

- Substantially affects a rare, threatened or endangered species or its habitat.
  There will be no known effect to rare, threatened or endangered species or its habitat as a result of the proposed improvements.

- Detrimentally affects air or water quality or ambient noise levels.
  Once completed, the reservoir and waterline will not detrimentally affect air or water quality or ambient noise levels. Any effects to be noted will be short term and related to construction activity. During construction the contractor is required to comply with all state and county regulations related to air and water quality and to mitigate noise levels related to his construction equipment and activity.

- Affects an environmentally sensitive area, such as a flood plain, tsunami zone or erosion prone area, geologically hazardous land, estuary, freshwater area, or coastal waters.
  The improvements will not affect any environmentally sensitive area.

- Substantially affects scenic vistas and view planes identified in county or state plans or studies.
  This project will not substantially affect scenic vistas or view planes.

- Requires substantial energy consumption.
  This project will not require substantial energy consumption.

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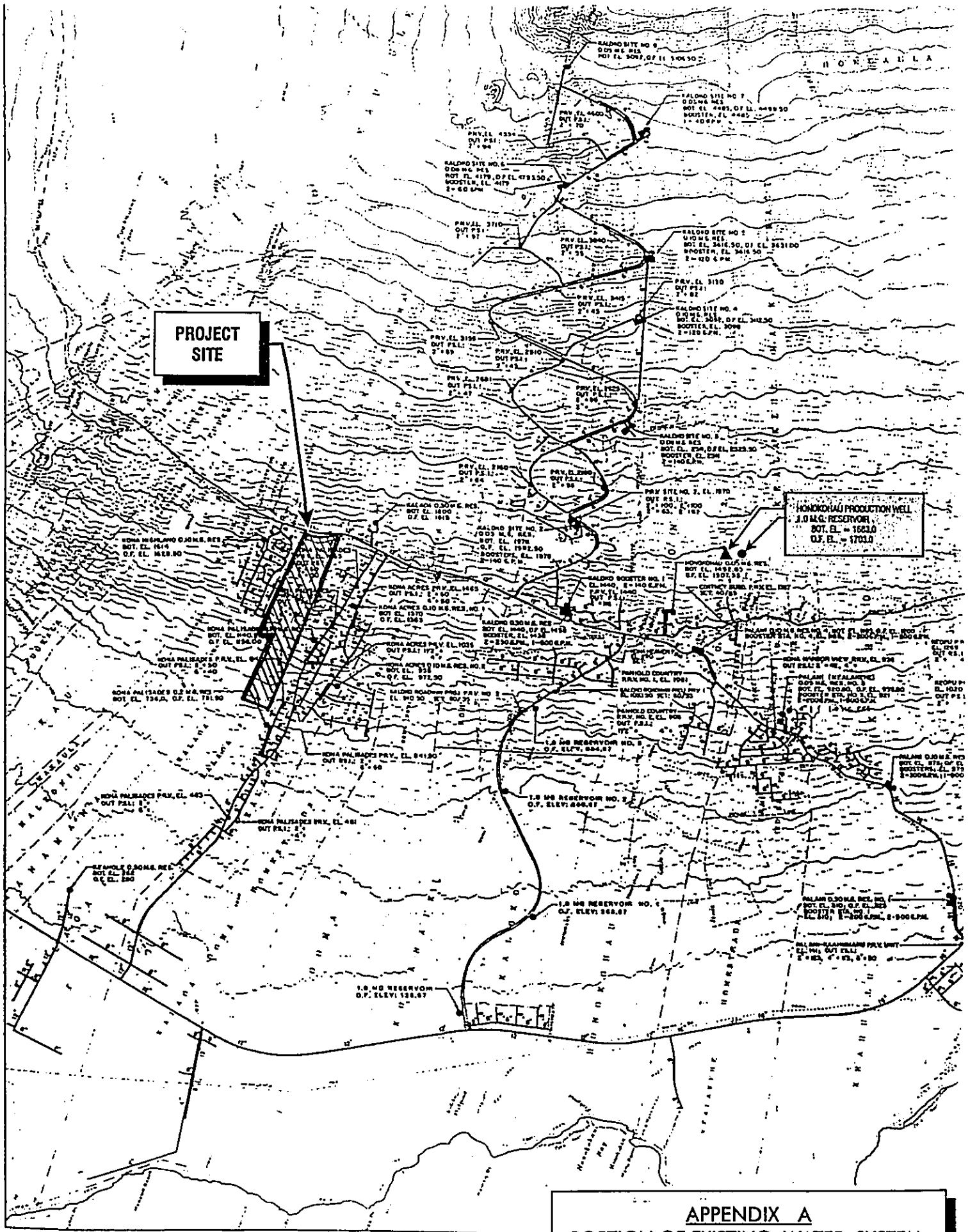


APPENDIX A

PORTION OF EXISTING WATER SYSTEM

NORTH KONA

Not to Scale

APPENDIX B

Community Meeting Agenda & Informational Handouts:
March 21, 2002

DEPT. OF WATER SUPPLY

Water Brings Progress!

aloha kākou

You are cordially invited to a community meeting presenting a proposed Water Improvement District for Kona Coastview and Kona Wonderview

~ Department of Water Supply
Hawai'i County Council

Kealakehe Intermediate School
Thursday, March 21, 2002
6:00 - 8:00 p.m.

AGENDA

6:00 p.m.	Welcome	*Councilman Curtis Tyler*
6:10 p.m.	Remarks	*Mayor Harry Kim*
6:20 p.m.	Project Presentation	*Milton Pavao & Glenn Ahuna* *Department of Water Supply*
6:40 p.m.	USDA/RUS Loan/Grant Program ...	*Lorraine Shin & Ted Matsuo* *USDA Rural Development Office*
6:55 p.m.	Improvement District Process	*Rory Flynn* *Legislative Auditor's Office*
7:10 p.m.	Questions from community residents	
7:50 p.m.	Closing Remarks	*John Tolmie* *Water Commission* *James Y. Arakaki, Chair & Curtis Tyler* *Hawai'i County Council*

KONA COASTVIEW/WONDERVIEW SUBDIVISION

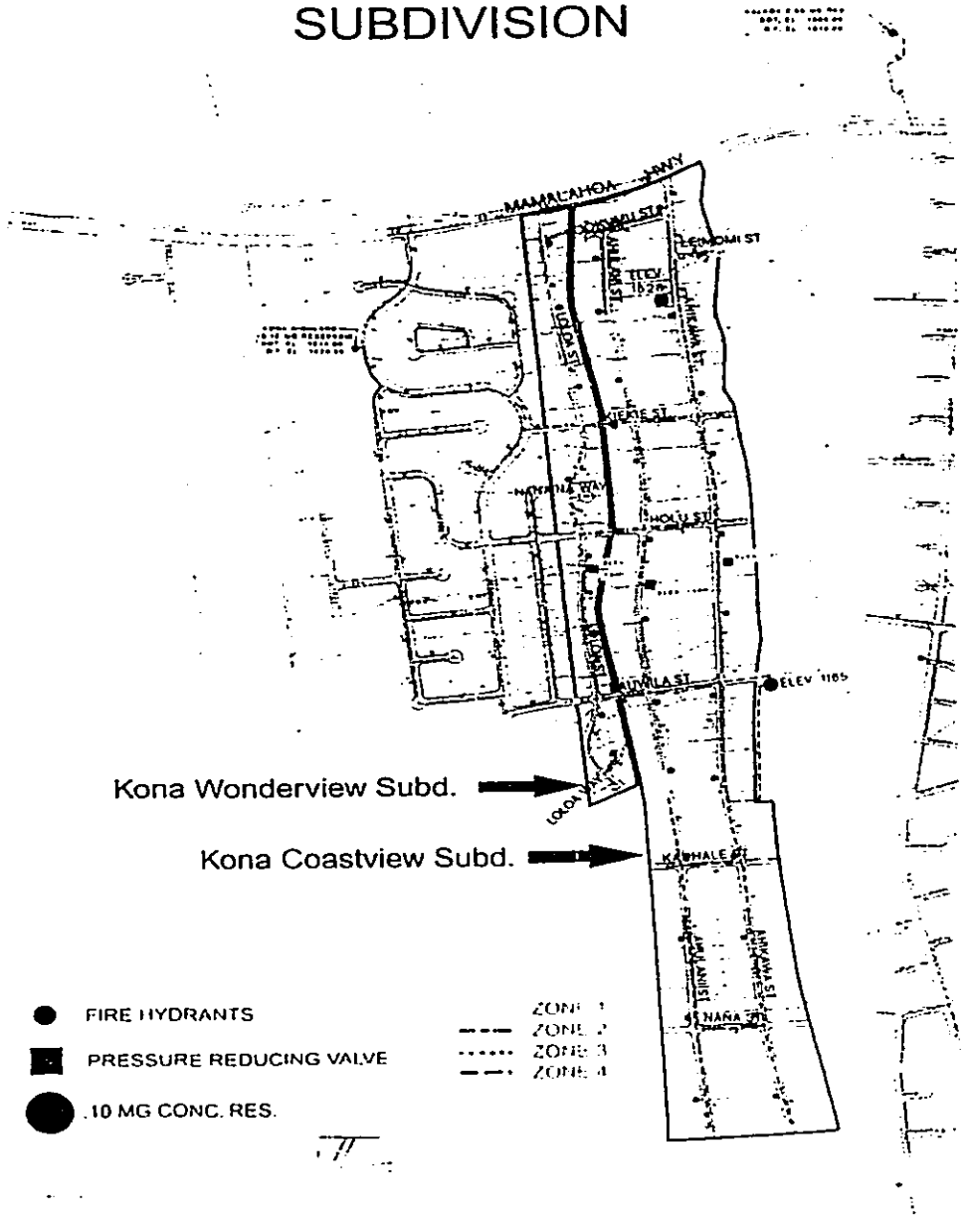


TABLE 1
WATER SYSTEM INSTALLATION COST ESTIMATE
Kona Coastview & Kona Wonderview Subdivisions
TMK 7-3-013, 014, 015, 016, 022, 023, & 028

ITEM	QTY	UNITS	UNIT PRICE	AMOUNT
A. CONSTRUCTION COST				
Zone I (Elevation 1615' to 1628')				
6" DI pipeline	3,000	lf	80	$240,000
8" DI pipeline	2,200	lf	90	198,000
Appurtenances (5%)				21,900
Zone II (Elevation 1628' to 1300')				
4" DI pipeline	100	lf	60	6,000
6" DI pipeline	1,400	lf	80	112,000
8" DI pipeline	5,000	lf	90	450,000
0.10 mg reservoir	1	ea	300,000	300,000
Appurtenances (5%)				43,400
Zone III (Elevation 1300' to 1165')				
6" DI pipeline	3,800	lf	80	304,000
8" DI pipeline	2,000	lf	90	180,000
PRV	3	ea	20,000	60,000
Appurtenances (5%)				27,200
Zone IV (Elevation 1165' to 840')				
6" DI pipeline	6,800	lf	80	544,000
0.10 mg reservoir	1	ea	300,000	300,000
Appurtenances (5%)				42,200
For entire subdivision				
Fire hydrants	33	ea	4,000	132,000
Type "C" service laterals	219	ea	2,000	438,000
Chlorination	1	ea	50,000	50,000
CONSTRUCTION COST				$3,448,700
Contingency (10%)				344,900
TOTAL CONSTRUCTION COST				$3,800,000
B. RIGHT-OF- WAY ACQUISITION				
Land for 2 reservoir sites & transmission line (includes appraisals & title search)				300,000
TOTAL RIGHT-OF-WAY ACQUISITION				$300,000
C. OTHER COSTS				
Design and survey (8%)				304,000
Engineering and inspection (0%)				0
Environmental Assessment				20,000
Reserve fund (12%)				360,000
Legal fees (3%)				90,000
Bond printing				3,000
Miscellaneous costs (3%)				114,000
TOTAL OTHER COSTS				$900,000
D. TOTAL ESTIMATE IMPROVEMENT DISTRICT COST				$5,000,000

PRO-RATA SHARE OF IMPROVEMENT DISTRICT ASSESSEES
Kona Coastview & Kona Wonderview Subdivisions

TABLE 2
100% RD GRANT / LOAN

ITEM	AMOUNT
ESTIMATE OF IMPROVEMENT DISTRICT COSTS	$5,000,000
ESTIMATE OF MONTHLY ASSESSMENT	
RD Grant (42%)	
RD Bond	$2,100,000
Annual Debt Service (35 year term @ 4.75% interest)	$2,900,000
Monthly Debt Service	$169,100
Number of Assessees	$14,100
	439
Monthly Assessment	$32
FACILITIES CHARGE FOR IMPROVEMENT DISTRICT ASSESSEES	
Existing Customers of Dept. of Water Supply	$0
or	
New Customers of Dept. of Water Supply	
Facilities Charge (Subject to change)	$1,190
Drop-in Meter Fee	$75
	$1,265

TABLE 3
100% MARKET RATE ID BOND

ITEM	AMOUNT
ESTIMATE OF IMPROVEMENT DISTRICT COSTS	$5,000,000
ESTIMATE OF MONTHLY ASSESSMENT	
Bond Amount	
Annual Debt Service (20 year term @ 7% interest)	$5,000,000
Monthly Debt Service	$469,100
Number of Assessees	$39,000
	439
Monthly Assessment	$90
FACILITIES CHARGE FOR IMPROVEMENT DISTRICT ASSESSEES*	
Existing Customers of Dept. of Water Supply	$0
or	
New Customers of Dept. of Water Supply	
Facilities Charge (Subject to Change)	$1,190
Drop-in Meter Fee	$75
	$1,265

The Improvement District Process

Presentation by the Legislative Auditor's Office
(Contact: Rory Flynn – 961-8564)
Kealakehe Intermediate School
March 21, 2002

What is an improvement district? An improvement district is a way for one or more property owners in an area to pay for necessary infrastructure to be built to current government standards using the County's financial borrowing powers, whether it's floating a bond or applying for grants and loans with favorable interest rates and conditions. Examples of shared improvements include roads, sidewalks, street lighting, a sewage system or a water system.

The underlying premise of an improvement district is the idea that certain improvements will *specially benefit* certain property owners, as opposed to all the people of the island. A neighborhood-specific water delivery system is a good example. It brings water to your neighborhood for your use exclusively. Each beneficiary of an installed water system pays an equal share of its cost. However, because the improvement district uses the County's credit, the County Council must conclude that creating the improvement district is in the public interest.

The lawful authority for making improvement districts is found in Hawaii Revised Statutes, Section 46-80. The state statute says that "any county may enact an ordinance ... providing for the making and financing of improvement districts ... and may issue and sell bonds to provide funds for such improvements." Such bonds may include bonds "when the only security therefor is the properties benefited or improved or the assessments thereon ..."

The County authority is found in Chapter 12 of the Hawaii County Code. It allows the County Council to assess each property owner within an improvement district an equal share of the total cost of the proposed improvement. These assessments create the security or collateral for an improvement district bond by placing a lien against each parcel to be assessed.

Creating an improvement district is a serious business. It's important to note that a group of individual property owners -- or even a community association -- may find it difficult, if not impossible, to finance major capital projects. However, our county finance department has the experience and ability to structure an improvement district bond with help from a bond attorney. Examples of past county improvement districts include Keaau Ag Lots, Kaloko subdivision, and Discovery Harbor in Ka'u . Each of these improvement districts was initiated by one or a handful of landowners. In each instance, the county's excellent bond/credit rating and its ability to be the vehicle to issue and sell bonds enabled communities to successfully finance needed capital projects.

What are the steps to create an improvement district and what can you expect as a landowner?

The steps to create an improvement district are spelled out in the Hawaii County Code, Chapter 12. It can be accessed on the County's website at http://www.hawaii-county.com/countycode/haw12-tx.html.

Step One. The first step has been completed, whereby the Council adopts a resolution to determine that the improvements will specially benefit certain lands and will be in the public interest. That resolution (Res. No. 270-00), introduced by Councilman Tyler and adopted in June 2000, requested Mr. Pavao, the Water Manager, to prepare a report assessing the present state of water services in your subdivisions and to estimate the costs for the design and installation of a water delivery system built to county standards. That report has been prepared and was outlined in the presentation given by Milton Pavao and Glenn Ahuna. It will be transmitted to the County

Council when the Council takes up consideration of a resolution to create an improvement district for Kona Wonderview and Kona Coastview.

Step Two. The next step in creating an improvement district is for the County Council to adopt a resolution "proposing to make" the improvement district. The information, data and surveys contained in the Water Manager's report must be included in the resolution. The resolution also sets the date of a public hearing. At present, the resolution has been drafted, but has not yet been introduced by Mr. Tyler. Before bringing it to the Council, it was felt that it should be informally shared with you – the residents of Kona Coastview and Kona Wonderview – for your comments, recommendations, questions and feedback.

So, what does this Improvement District resolution propose?

- To "make" a water improvement district for Kona Coastview and Kona Wonderview for the installation of a water delivery system built to county standards and thereafter conveyed to the Department of Water Supply for operation and maintenance.

- The general boundaries of the assessed improvement district include all the existing lots of the Kona Coastview and Kona Wonderview subdivisions contained in Tax Map Keys:
  7-3-013 • 7-3-014 • 7-3-015 • 7-3-016 • 7-3-022 • 7-3-023 • 7-3-028

  One lot is exempt, TMK 7-3-022-001, a State of Hawaii highway remnant parcel.

- It calls for the relocation of all Department of Water Supply laterals and respective meters to front each property.

- It states that land and rights-of-way are to be acquired to construct two reservoir sites at elevations designated by the Department of Water Supply.

- It accepts the proposed materials and costs for construction of the system, as described in the Department of Water Supply manager's report.

- As required by Section 12-10(h)(1) of the County Code, the resolution states that the assessed tax valuation of the lands to be improved is at least twice the amount of the estimated cost of the proposed improvement. According to County's Real Property Tax roll, the total assessed land and building value is $61,278,990, far more than twice the amount of the estimated $5,000,000 improvement.

- It divides the total cost of the project equally among all assessees on a per parcel basis. In addition to the 415 TMK lots in your subdivisions, the resolution proposes that 23 condominium property regimes be included as assessed properties, as they will each have their own water meter and service. Accordingly, the resolution anticipates a total of 438 assessed properties within the improvement district – i.e., 415 lots plus 23 additional condominium units.

- The total estimated cost of the improvement district is $5 million.

- Based upon this estimated project cost, an equal assessment for the 438 fee simple parcel or condominium unit owners is $11,416, plus interest. This figure of $11,416 should be taken as an "approximate" cost. A final calculation of each pro rata assessment shall be determined upon receipt of bids for engineering, construction and the negotiation of proposed reservoir sites

- The maximum term of the assessment bonds to be issued shall be no more than twenty (20) years. Upon advice from counsel, the County Council may consider amending Chapter 12, Hawai'i County Code, to authorize longer term bonds utilizing federal financing for projects.

- The maximum rate of interest to be borne by the bonds shall not exceed 7%. This anticipated maximum rate has been established with counsel from the County's Finance Department. As interest rates have fallen in recent years, today's 7% interest rate is far better than the 10% rate cited when the Council last considered an improvement district for your subdivisions in 1996. At the same time, as Federal Reserve chairman Alan Greenspan and others have suggested, interest rates may rise as the economy rebounds.

- The maximum premium to be paid on the advance of installments or the call and redemption of any bond prior to its maturity shall not exceed 5%.

- All those homeowners who have previously paid or have evidence that they paid facilities charges (water meters) to the Department of Water Supply shall be exempt from the prevailing facilities charge due prior to hook-up to the new water system.

Step Three. If and when the resolution is adopted by the County Council, a formal public hearing shall be held within 60 days. The County Clerk must place a notice of the hearing in local newspapers. Each landowner within the improvement district will be sent a certified notice of the hearing together with the proposed assessment.

- The notice will outline the Council's resolution and summarize the Water Manager's report.

- It will describe the property of each owner and state the amount of proposed assessment for the cost of the proposed improvement.

- It will explain the owner and/or lessee's right to protest as outlined in Section 12-12 of the Hawaii County Code. A protest is recorded by a statement submitted in writing on or before the date of the public hearing. A homeowner may express verbal objection at the public hearing, *but only written objections shall be recorded as protests of record.*

If less than 50% of the proposed assessees file written objections before or on the date of the public hearing, the improvement by assessment may be approved by the Council. If 50% or more of the property owners register written protests, the project cannot proceed.

It's important to point out that this process is unlike an election by ballot. In an election, we typically vote yea or nay. However, the process for establishing an improvement district allows for the filing of written protests. Basically, such written protests must total 50% or more to "defeat" the proposed improvement district. To understand your rights of objection: if you fail to protest in writing, the law is written in a way that assumes you support the improvement district.

Step Four. After the hearing, the County Council must consider any protests, objections or suggestions that were made and then determine whether to abandon any part or all of the proposed improvements. If the Council chooses to proceed, it must consider a third resolution creating the improvement district, defining the details of the proposed improvements, describing any parcel of land to be acquired, describing the method of assessment, describing the kinds of materials to be used, and directing the Water Manager to prepare final specifications to be used as the basis for calling of bids and awarding a contract for the work.

Step Five. Upon reaching a final decision, the Council by ordinance (not resolution) must fix the portions of the cost to be assessed against the properties in the improvement district The ordinance incorporates the assessment roll of homeowners as approved by the Council.

Assuming community support, here is a timeline for the proposed water project.

Milestone Event	Target Completion Date
RD Application/EA/Preliminary Engineering Report	April 2002
RD Letter of Conditions	April 2002
Resolution proposing I.D.	June 2002
Public hearing	July 2002
Resolution of determination	August 2002
Construction documents	November 2002
Bid	December 2002
Assessment ordinance	February 2003
Issue I.D. bond	August 2003
Close RD loan	August 2003
Start construction	August 2003
Substantial completion	February 2005
Hookup	April 2005

Based upon this timetable, there are implications of your community's response to this proposal.

The Department of Water Supply has contracted for a preliminary engineering report and environmental assessment. The work is already underway. These reports must be attached to the department's application for USDA grant funds to support this project. Presently, USDA has indicated that Hawaii's statewide allocation of grant funds is $2,100,000 during this current fiscal year. On April 26, 2002 half of that allocation will revert to the USDA National Office if it is not committed to this project or any other approved grant application. Consequently, the Department of Water Supply is working hard to complete its application for funds prior to April 26th.

What are the funding mechanisms being explored by the County?

Essentially, there are two funding options for this improvement district.

The first would be a bond at 7% market interest rate for the entire project cost of $5,000,000 or $11,416 per homeowner.

The second option is to apply for the maximum amount of USDA grant funds available – as much as $2,100,00 – thereby reducing the loan amount of the project to $2,900,000. This is an attractive option. However, it may require that the USDA loan portion be carried forward over 35 years, as opposed to a 20-year market rate bond.

Either way, it is critical that the "making" of an improvement district proceed, in order to lawfully establish security to construct a county bond to be converted to a USDA loan

FINANCING OPTION #1 - Market Rate Bond at 7% for 20 Years

Total Estimated I.D. Cost	$5,000,000
Annual Debt Service	$468,100
Monthly Debt Service	$39,000
Divided by 438 households = monthly payment:	$90.00
Average user charge per month:	$25.00
Total estimated monthly water bill per household:	$115.00

FINANCING OPTION #2 - USDA Grant of $2.1M and 4.5% Loan for 35 years

Total Estimated I.D. Cost	$5,000,000
Annual Debt Service	$169,100
Monthly Debt Service	$14,100
Divided by 438 households = monthly payment:	$32.00
Average user charge per month:	$25.00
Total estimated monthly water bill per household:	$57.00

BENEFITS OF AN IMPROVEMENT DISTRICT

- possibility of federal grant subsidy and low-interest loan
- reliable service and maintenance
- metered service to every lot
- 33 new fire hydrants and lower fire insurance premiums
- end of nonconforming and unreliable "spaghetti lines"
- end to awkward, unsightly easements and private easement agreements
- end to private surcharges on monthly water bills
- affordable monthly payments
- greater assurance of public safety and public health

APPENDIX C

Comment / Response Letters

UNIVERSITY OF HAWAI'I
ENVIRONMENTAL CENTER

May 23, 2002
EA: 284

Mr. Glenn Ahuna, P.E.
Department of Water Supply
County of Hawai'i
345 Kekuanaoa St. Suite 20
Hilo, HI 96720

Dear Mr. Ahuna:

Kona Coastview/Wonderview Subdivision
Water Systems Improvement
Draft Environmental Impact Statement
North Kona, Hawai'i

The County of Hawai'i, Department of Water Supply is proposing to install a water system for the existing Coastview and Wonderview subdivisions in the North Kona area of the Big Island. The two subdivisions consist of 415 residential lots of which approximately 80% have been improved with homes. There are an additional 23 condominium property regime lots in the area. A combination of individual water catchment systems, two separate private water companies and the DWS currently service these lots. The present distribution methods are typically unreliable, maintenance intensive and do not conform to County standards.

The proposed system would consist of two 0.10 million gallon reinforced concrete reservoirs, approximately 14,900 lineal feet 6-inch and 9,200 lineal feet 8-inch ductile iron waterlines, pressure reducing valve units, fire hydrants and service laterals. Waterlines and laterals will be placed in existing roadways and the water tanks will be placed on vacant land in the subdivision and on an adjoining parcel.

Dr. George Curtis of the University of Hawai'i at Hilo and Kevin Polloi of the Environmental Center assisted in the review of this document.

CRAUFURD TAYLOR 19 · 2500 DOLE STREET · HONOLULU, HAWAII 96822 · (808) 956-7361 · FAX (808) 956-3980

Glenn Ahuna
May 23, 2002
Page 2

General Comments

Our review has identified several general concerns. First, we note that the proposed project will utilize water from the existing Honokohau Production Well. The document addressed hydrotesting and water chlorination in the water quality issues section. However, it failed to address more general water issues, particularly with regard to the present condition of the affected Hualalai aquifer. We note that a recent study conducted by the US Geological Service shows that phenol, a semi-volatile organic compound, is present in the groundwater at the Kaloko-Honokohau National Historical Park. What is the park's proximity to DWS' Honokohau Production Well? Does phenol occur in water from the Honokohau Production Well, and if so, at what concentration? What are the effects of phenol on public health?

Furthermore, the draft EA fails to describe the sustainable yield for the Hualalai Aquifer. Does the projected water consumption rate of the two subdivisions place stress on the maximum sustainable yield? Will improved water delivery infrastructure lead to additional housing development in the area? What are the cumulative effects of the anticipated additional water demands compounded with current water usage?

Finally, the document did not address current and future wastewater treatment facilities for the subdivisions. It is relatively safe to assume that as more water is made available, there will be more wastewater that will need to be dealt with. What actions are to be taken to address the expected wastewater increase and what are the potential environmental consequences?

Thank you for the opportunity to review this draft Environmental Impact Assessment.

Sincerely,

John T. Harrison, Ph.D.
Environmental Coordinator

Data Source:

Assessment of Organic and Mercury Contamination at Kaloko-Honokohau National Historical Park, Island of Hawai'i, USGS, http://hi.water.usgs.gov/projects/project_kaloko.htm

Cc: OEQC
Jason Inaba
James Moncur
Kevin Polloi

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
345 KEKUANAOA STREET, SUITE 20 • HILO, HAWAII 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

June 18, 2002

John T. Harrison, Ph.D.
Environmental Coordinator
University of Hawaii, Environmental Center
Krauss Annex 19
2500 Dole Street
Honolulu, Hawaii 96822

DRAFT ENVIRONMENTAL ASSESSMENT
WATER SYSTEM IMPROVEMENTS
KONA COASTVIEW/WONDERVIEW SUBDIVISION
KALAOA, NORTH KONA, HAWAII

This is in response to your May 23, 2002 letter regarding the subject draft Environmental Assessment (EA) and offer the following response to your concerns:

What is the park's (Kaloko-Honokohau National Historic Park) proximity to DWS' Honokohau Production Well (HPW)?
The HPW is located approximately 4 ½ miles east or mauka of the Park. The well is situated at elevation 1,685'.

Does phenol occur in water from the HPW, and if so at what concentration?
See attached North Kona System Water Quality Data Tables for year 2000. The Department of Water Supply (DWS) regularly performs water quality testing in compliance with EPA standards and regulations as applicable to public water system operations. This table indicates that phenol (pentachlorophenols) was not detected in water tested from the HPW. Further questions or concerns regarding water quality may be directed to Keith Okamoto, P.E., of the Department of Water Supply at 961-8670

What are the effects of phenol on public health?
The DWS does not maintain information regarding the effects of chemicals on public health. Information regarding toxic substances may be obtained from the US Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (ASTDR). (Web Address http://www.atsdr.cdc.gov/toxfaq.html)

The draft EA fails to describe the sustainable yield from the Hualalai Aquifer.
The following information is obtained from: Hawaii County Water Use and Development Plan for the DWS by Megumi Kon, Inc., and Commission on Water Resource Management, Department of Land and Natural Resources, State of Hawaii, Draft February 1992.

HPW is located in the Keauhou system of the Hualalai Sector Aquifer 809. The estimated sustainable yield of the Hualalai aquifer is 56 mgd. This includes the Kiholo (80902, 18 mgd) and Keauhou (80901, 38 mgd) aquifer systems.

Discussion as to the sustainable yield will be inserted in the Final EA

...Water brings progress...

Does the projected water consumption rate of the two subdivisions place stress on the maximum sustainable yield? What are the cumulative effects of the anticipated additional water demands compounded with current water usage?
The current consumption for the DWS North Kona Water System, with its source being the Hualalai Aquifer, averages 9.2 million gallons per day for 7,900 customers. Based on consumption data from the last 30 years, the projected 2020 demand for this system is 14.9 million gallons per day, substantially less than the estimated sustainable yield of the source aquifer. (See Attached chart showing North Kona Water Demand) Based on this and the fact that there is at least 80% substantial build out of both subdivisions, the full build out of both subdivisions in relation to this project is not anticipated to stress the maximum sustainable yield.

Will improved water delivery infrastructure lead to additional housing development in the area?
This project is not anticipated to significantly promote additional housing development in the area. The primary purpose of this project is to replace the existing inadequate water delivery system and install a new county dedicable standard water system to provide reliable service and fire protection in a previously developed area. These two existing residential subdivisions are already over 80% built up with homes and future homes can be built on the remaining vacant lots regardless of this project's implementation. The infrastructure for adjoining subdivisions are already equipped with county dedicable water systems and stubouts and therefore additional housing development in the area is not contingent upon the water system improvements from this project.

What actions are to be taken to address the expected wastewater increase and what are the potential environmental consequences?
New homes can be built on existing vacant lots within the two existing subdivisions with or without this project going forward. In this area, there is no municipal sewage collection system. The State of Hawaii Department of Health (DOH) is responsible for administering wastewater requirements for the State of Hawaii. Each landowner would be required to handle his own wastewater in compliance with applicable DOH rules and regulations. This would likely be with a DOH individually approved wastewater system. Under the DOH Environmental Management Division Wastewater program, there should not be significant adverse environmental consequences.

Your concerns are appreciated and hopefully our responses will serve to mitigate them. A copy of your letter and this letter will be included in the Final EA document.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

GGA:pt

Enc.

copy- Ms. Genevieve Salmonson, OEQC
Mr. Jason Inaba, Inaba Engineering, Inc.
Mr. Ted Matsuo, USDA Rural Development

North Kona System Water Quality Data Tables

The table below lists the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Contaminant (units)	MCL	MCLG	Honokohau Well 1 Found	Honokohau Well 1 Detections	Honokohau Well 1 Date	Kalaoa Well 1 Found	Kalaoa Well 1 Detections	Kalaoa Well 1 Date	Kaloko Well (QLT) Found	Kaloko Well (QLT) Detections	Kaloko Well (QLT) Date	Kaloko Well 2 Found	Kaloko Well 2 Detections	Kaloko Well 2 Date	Kahaluu Well A Level	Kahaluu Well A Range of Detections	Kahaluu Well A Sample Date	Kahaluu Well B Level	Kahaluu Well B Range of Detections	Kahaluu Well B Sample Date	Kahaluu Well C Level	Kahaluu Well C Range of Detections	Kahaluu Well C Sample Date	Kahaluu Well D Level	Kahaluu Well D Range of Detections	Kahaluu Well D Sample Date	Kahaluu Shaft Level	Kahaluu Shaft Range of Detections	Kahaluu Shaft Sample Date	Kahaluu Well No. 1 Level	Kahaluu Well No. 1 Range of Detections	Kahaluu Well No. 1 Sample Date	Violation	Typical Source of Contaminant
REGULATED CONTAMINANTS																																		
Inorganic Contaminants																																		
Chromium (ppb)	100	100	2.0	2.0 - 2.0	2000	2.0	N/A	1999	ND	N/A	1999	ND	N/A	1998	ND	N/A	1999	No	Discharge from steel and pulp mills; erosion of natural deposits.															
Fluoride (ppm)	1.4	1.4	0.46	0.40 - 0.52	2000	0.24	N/A	2000	0.17	ND - 0.24	2000	ND	N/A	1998	0.23	0.21 - 0.24	2000	No	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.															
Nitrate (ppm)	10	10	0.97	0.96 - 0.97	2000	1.2	N/A	2000	0.96	0.83 - 1.0	2000	0.89	N/A	1997	1.0	1.0 - 1.0	2000	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.															
Organic Contaminants																																		
Chlordane (ppb)	2	0	0.1	ND - <0.3 (NQ)	2000	ND	N/A	1996	ND	N/A	1997	0.1	ND - <0.3 (NQ)	2000	ND	N/A	1997	No	Residue of banned termiticide.																
Toxaphene (ppb)	3	0	0.5	ND - <1.5 (NQ)	2000	ND	N/A	1996	ND	N/A	1997	0.5	ND - <1.5 (NQ)	2000	ND	N/A	1997	No	Runoff/leaching from insecticide used on cotton and cattle.																
Total Trihalomethanes (TTHMs) (ppb)	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.7	7 - 12.1	2000	4.46	ND - 12.0	2000	14.89	9.1 - 24.0	2000	No	By-product of drinking water chlorination.																
UNREGULATED CONTAMINANTS																																		
Bromodichloromethane (ppb)	N/A	N/A	ND	N/A	2000	ND	N/A	2000	ND	N/A	2000	1.27	ND - 3.6	2000	ND	N/A	2000	No	N/A																
Bromoform (ppb)	N/A	N/A	ND	N/A	2000	ND	N/A	2000	9.7	9.6 - 12.1	2000	0.64	ND - 1.8	2000	14.89	9.1 - 24	2000	No	N/A																
Chloroform (ppb)	N/A	N/A	ND	N/A	2000	ND	N/A	2000	ND	N/A	2000	0.68	ND - 2.7	2000	ND	N/A	2000	No	N/A																
Dibromochloromethane (ppb)	N/A	N/A	ND	N/A	2000	ND	N/A	2000	ND	N/A	2000	1.87	ND - 4.7	2000	ND	N/A	2000	No	N/A																
Isophorone (ppb)	N/A	N/A	0.1	ND - 0.6	2000	ND	N/A	2000	ND	ND - ND	2000	ND	ND - ND	2000	ND	ND - ND	2000	No	Used in herbicides, pesticides, and solvents.																

Key definitions of terms used in this report

MCLG = Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL = Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

ND = Not Detected - If a contaminant is not measured at or above its minimum detection limit, it is reported as Not Detected. detection limits are available upon request.

NQ = Non Quantifiable

ppm = Parts per million. One ppm corresponds to a single penny in $10,000 or about one minute in two years.

ppb = Parts per billion. One ppb corresponds to a single penny in $10,000,000 or about one minute in two thousand years.

N/A = not applicable

New Address for Hilo Main Office

We have relocated from the County Building to our new address at:

Department of Water Supply
345 Kekuanaoa Street, Suite 20
(Waiakea Office Plaza)
Hilo, Hawaii 96720

What is a public water system?

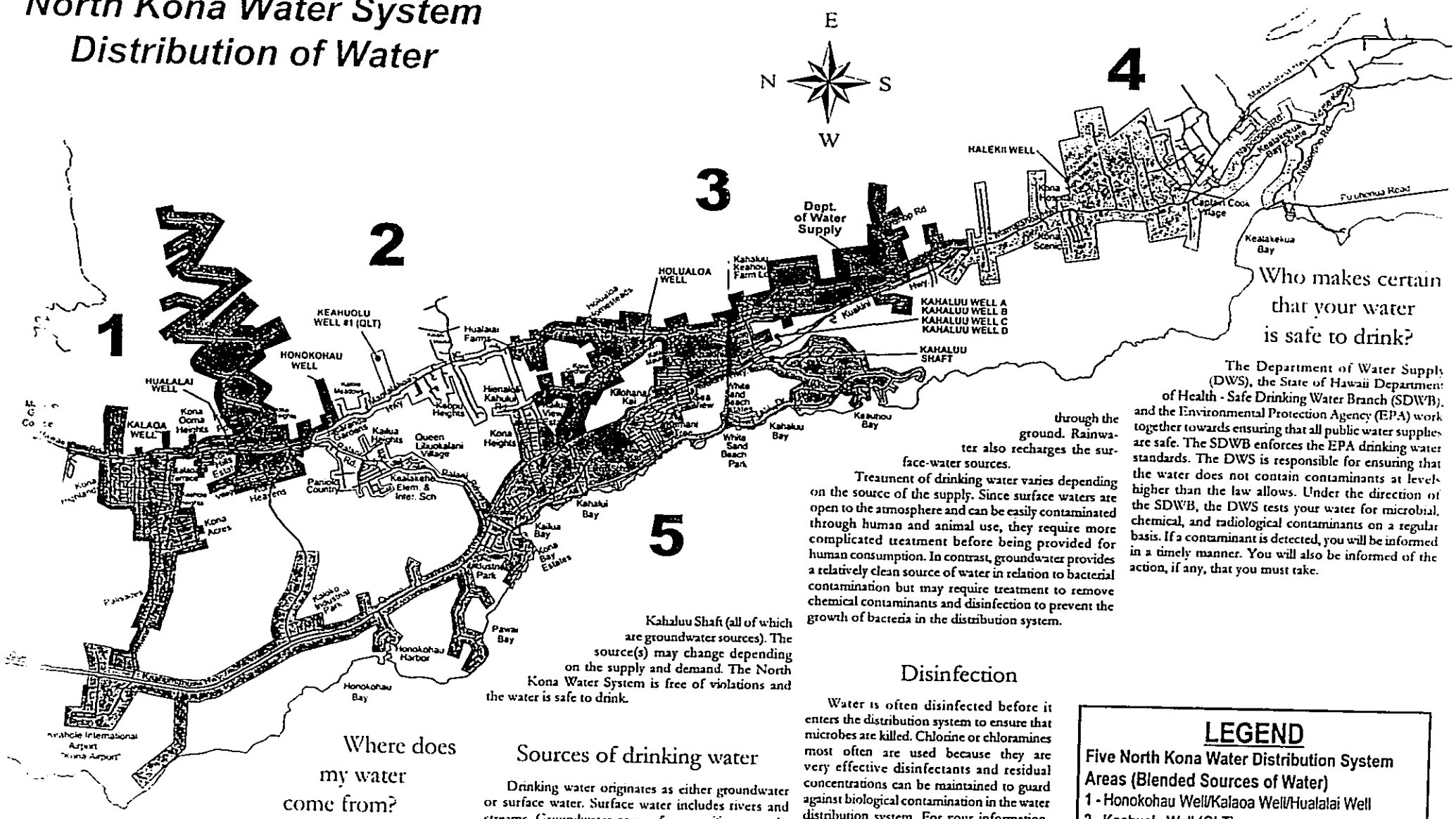
The Safe Drinking Water Act defines a public water system as one that serves water to at least 25 persons or 15 service connections for at least 60 days per year. Water that does not come from a public water supply, and which serves one or only a few homes is called a private supply.

Why does the EPA allow any contaminants in drinking water?

All sources of drinking water contain some naturally occurring contaminants. Because water is the universal solvent, many materials are easily dissolved upon contact. At low levels, these contaminants generally are not harmful in our drinking water. Removing all contaminants would be extremely expensive and in nearly all cases, would not provide greater protection of health. A few of the naturally occurring substances may actually improve the taste of drinking water and may have nutritional values at low levels.

If you have any questions on this Water Quality Report, *call Keith Okamoto, P.E., at 961-8670.*

North Kona Water System Distribution of Water



Where does my water come from?

The sources of water for the North Kona Water System are Honokohau Well, Kalaoa Well, Hualalai Well, Keahuolu Well No. 1 (QLT), Kahaluu Wells A, B, C, and D, Holualoa Well, Halekii Well, and Kahaluu Shaft (all of which are groundwater sources). The source(s) may change depending on the supply and demand. The North Kona Water System is free of violations and the water is safe to drink.

Sources of drinking water

Drinking water originates as either groundwater or surface water. Surface water includes rivers and streams. Groundwater comes from aquifers, tunnels, and springs. Aquifers are underground water-bearing formations of sand, gravel, or other porous material.

Wells are drilled to tap underground aquifers. Aquifers are recharged by the seepage of rainwater through the ground. Rainwater also recharges the surface-water sources.

Treatment of drinking water varies depending on the source of the supply. Since surface waters are open to the atmosphere and can be easily contaminated through human and animal use, they require more complicated treatment before being provided for human consumption. In contrast, groundwater provides a relatively clean source of water in relation to bacterial contamination but may require treatment to remove chemical contaminants and disinfection to prevent the growth of bacteria in the distribution system.

Disinfection

Water is often disinfected before it enters the distribution system to ensure that microbes are killed. Chlorine or chloramines most often are used because they are very effective disinfectants and residual concentrations can be maintained to guard against biological contamination in the water distribution system. For your information, chlorine is used to disinfect the North Kona Water System.

Who makes certain that your water is safe to drink?

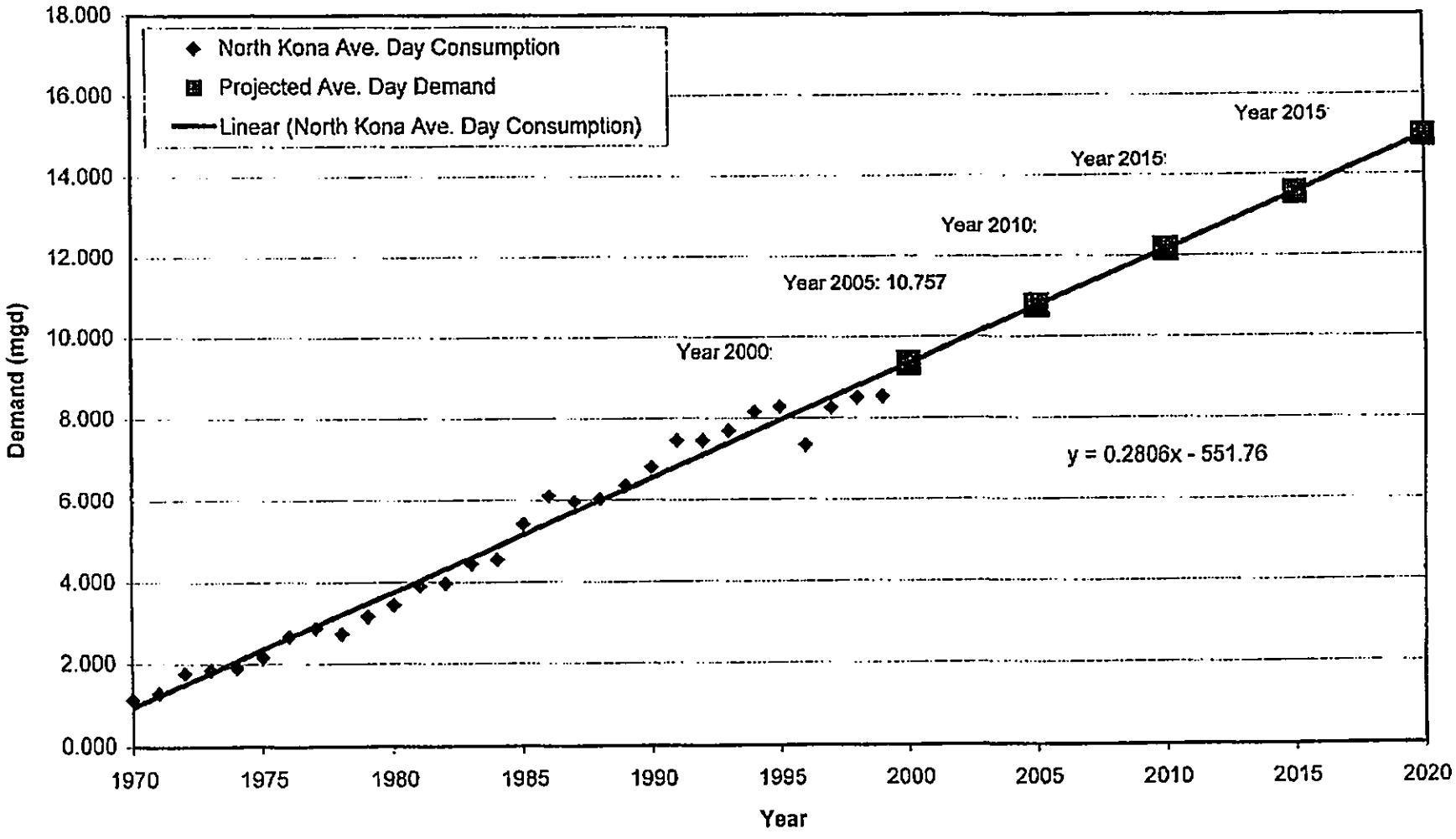
The Department of Water Supply (DWS), the State of Hawaii Department of Health - Safe Drinking Water Branch (SDWB), and the Environmental Protection Agency (EPA) work together towards ensuring that all public water supplies are safe. The SDWB enforces the EPA drinking water standards. The DWS is responsible for ensuring that the water does not contain contaminants at levels higher than the law allows. Under the direction of the SDWB, the DWS tests your water for microbial, chemical, and radiological contaminants on a regular basis. If a contaminant is detected, you will be informed in a timely manner. You will also be informed of the action, if any, that you must take.

LEGEND

Five North Kona Water Distribution System Areas (Blended Sources of Water)

- 1 - Honokohau Well/Kalaoa Well/Hualalai Well
- 2 - Keahuolu Well (QLT)
- 3 - Kahaluu Wells A, B, C, D/Holualoa Well
- 4 - Halekii Well
- 5 - Kahaluu Shaft/Kahaluu Wells A, B, C, D

North Kona Water Demand



BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCES MANAGEMENT

DEPUTIES
ERIC T. HIRANO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

April 17, 2002

LOG NO: 29662
DOC NO: 0204PM09

Mr. Jason K. Inaba
Inaba Engineering, Inc.
273 Waianuenue Avenue
Hilo, Hawaii 96720

RECEIVED
APR 26 2002
INABA ENGINEERING, INC.

Dear Mr. Inaba:

SUBJECT: **Draft Environmental Assessment for Kona Coastview Wonder View Subdivision Water System Improvements (DWS Job No. 2001-790)**
Kalaoa, North Kona, Hawaii Island
TMK: (3) 7-3-22, 23, & 28 and 7-3-13, 14, 15, and 16

Thank you for your letter of April 8, 2002 and the opportunity to participate in the environmental review process for the proposed project in the Kona Coastview and Wonder View Subdivisions. The purpose of the proposed project is to provide a new water system and fire protection for these two subdivisions.

The discussion of historic preservation concerns and commitments on pages 10-11 of the Draft Environmental Assessment accurately summarizes the recommendations made in our letter of March 27, 2002. We have no new comments to add to our earlier letter.

If you should have any questions about this project please contact our Hawaii Island archaeologist, Patrick McCoy (692-8029).

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

PM amk

c Chris Yuen, County of Hawaii Planning Department
Kai Embler, County of Hawaii Department of Public Works

United States Department of the Interior

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

In Reply Refer To: GCS

MAR 27 2002

Jason Inaba
Inaba Engineering
273 Waianuenue Ave.
Hilo, HI 96720

Re: Kona Coast View / Wonder View Water System Improvements, Kalaoa, North Kona, Hawaii

Dear Mr Inaba:

The U.S. Fish and Wildlife Service (Service) has reviewed the information you provided to us regarding proposed water system improvements for the Kona Coast View and Wonder View subdivisions. The project proponents are the U.S. Department of Agriculture Rural Utilities Service and the County of Hawaii Department of Water Supply. This letter has been prepared under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act of 1934 [16 U.S.C. 661 et seq.; 48 Stat. 401], as amended (FWCA), the Endangered Species Act of 1973 [16 U.S.C. 1531 et seq.; 87 Stat. 884], as amended (ESA), and other authorities mandating Service concern for environmental values. These comments are also consistent with the National Environmental Policy Act of 1969 [42 U.S.C. 4321 et seq.; 83 Stat. 852], as amended (NEPA). Based on these authorities, the Service offers the following comments for your consideration.

The project will generally involve installation of six-inch and eight-inch iron waterlines along existing roadways, construction of two 100,000-gallon concrete reservoirs, installation of fire hydrants, and other related work. The water system improvements will serve a total of 416 lots that make up the Kona Coast View and Wonder View subdivisions.

Based on our review of information contained in our files, including maps prepared by the Hawaii Heritage Program, there are no federally endangered, threatened, or candidate species, nor any designated or proposed critical habitat directly within the proposed project sites. Because the proposed project sites are located in areas that are already developed, the Service does not anticipate significant adverse project-related impacts to fish and wildlife resources.

The Service appreciates the opportunity to comment on the proposed project. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Gordon Smith at 808/541-3441.

Sincerely,

Paul Henson
Field Supervisor
Ecological Services

TELEPHONE:
808.961.3727

FACSIMILE:
808.935.8033

INABA ENGINEERING, INC.
CIVIL ENGINEERING ▪ STRUCTURAL ENGINEERING ▪ LAND SURVEYING
273 WAIANUENUE AVENUE
HILO, HAWAII 96720

April 4, 2002

Paul Henson, Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
Pacific Islands Ecoregion
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850-0001

Subject: Environmental Review for
KONA COASTVIEW / WONDER VIEW SUBDIVISION
WATER SYSTEM IMPROVEMENTS
DWS Job No. 2001-790
Kalaoa, North Kona, Island of Hawaii
TMK: 3rd Div. 7-3-22, 23, & 28 (Kona Coastview)
3rd Div. 7-3-13, 14, 15, & 16 (Kona Wonder View)

Gentlemen,

Thank you for your letter dated March 27, 2002 regarding U.S. Fish and Wildlife Service (USFWS) concerns for the subject project. We note that USFWS indicates there are no federally endangered, threatened, or candidate species, nor any designated or proposed critical habitat directly within the project sites. Since the sites are located in areas that are already developed, the Service does not anticipate significant adverse project-related impacts to fish and wildlife resources.

Should you have any additional questions or comments regarding this project please feel free to call me at 808-961-3727.

Very truly yours,

INABA ENGINEERING, INC.

Jason K. Inaba, P.E.

copy: Mr. Glenn Ahuna, DWS

NRCS Natural Resources Conservation Service

United States Department of Agriculture

P.O. Box 50004
Honolulu, HI 96850
Phone: 808-541-2600
FAX: 808-541-1335

Our People...Our Islands...In Harmony

March 22, 2002

RECEIVED
MAR 25 2002
INABA ENGINEERING, INC.

Mr. Jason K. Inaba, P.E.
Inaba Engineering, Inc.
273 Waianuenue Avenue
Hilo, Hawaii 96720

Dear Mr. Inaba:

Subject: Environmental Assessment (EA) - Environmental Review for Kona Coast View/Wonder View Subdivision ; Water System Improvements, DWS Job No. 2001-790; Kalaoa, North Kona, Island of Hawaii

We have reviewed the above mentioned document and offer the following comments:

We recommend that erosion and localized runoff control be installed in the event of high rainfall events during project implementation. Since the wet season starts in April and runs through August, caution should be exercised during that period when installing the water system improvements.

Thank you for the opportunity to review this document.

Sincerely,

Acting For

KENNETH M. KANESHIRO
State Conservationist

Cc:
Mr. Glenn Ahuna, Department of Water Supply, County of Hawaii, 25 Aupuni Street, Hilo, Hawaii 96720

TELEPHONE:
808.961.3727

FACSIMILE:
808.935.8033

INABA ENGINEERING, INC.
CIVIL ENGINEERING ▪ STRUCTURAL ENGINEERING ▪ LAND SURVEYING
273 WAIANUENUE AVENUE
HILO, HAWAII 96720

April 4, 2002

Kenneth M. Kaneshiro, State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
P.O. Box 50004
Honolulu, Hawaii 96850

Subject: Environmental Review for
KONA COASTVIEW / WONDER VIEW SUBDIVISION
WATER SYSTEM IMPROVEMENTS
DWS Job No. 2001-790
Kalaoa, North Kona, Island of Hawaii
TMK: 3rd Div. 7-3-22, 23, & 28 (Kona Coastview)
3rd Div. 7-3-13, 14, 15, & 16 (Kona Wonder View)

Gentlemen,

Thank you for your comment letter of March 22, 2002 regarding the environmental review for the subject project. We offer the following response to your comments.

During the construction phase, the project contractor will be required to employ necessary measures to insure compliance with the County of Hawaii grading and erosion control ordinance and the applicable State Department of Health Pollution Control Standards. The contractor shall also be required to implement and maintain a Best Management Practices Plan (BMP) to minimize effects to the environment.

Should you need any further information or have any questions regarding this project, please call me at 808-961-3727.

Very truly yours,

INABA ENGINEERING, INC.

Jason K. Inaba, P.E.

Copy: Mr. Glenn Ahuna, DWS

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

BOARD OF LAND AND NATURAL RESOURCES
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COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

March 27, 2002

Mr. Jason K. Inaba
Inaba Engineering, Inc.
273 Waianuenue Avenue
Hilo, Hawaii 96720

LOG NO: 29412 ✓
DOC NO: 0203PM13

Dear Mr. Inaba:

SUBJECT: Environmental Review for Kona Coastview/Wonder View Subdivision Water System Improvements
(DWS Job No. 2001-790)
Kalaoa, North Kona, Hawaii Island
TMK: (3) 7-3-22, 23, & 28 and 7-3-13, 14, 15, and 16

Thank you for your letter of March 7, 2002 and the opportunity to participate in the environmental review process for the proposed project in the Kona Coastview and Wonder View Subdivisions. The purpose of the proposed project is to provide a new water system and fire protection for these two subdivisions.

We have no record of archaeological sites in the subject parcels, which do not appear to have ever been surveyed, however. In a phone conversation with staff archaeologist Patrick McCoy on March 22, 2002 you indicated that both subdivisions were built in the 1960s. This might explain the lack of archaeological surveys, which were not routinely done at that time.

Your letter indicates that most of the proposed improvements will take place within existing right-of-ways, except for the two reservoirs. It is unlikely that the project would have an adverse effect on historic sites in the road right-of ways because of previous disturbance. On March 22, 2002 you indicated that one or perhaps both of the reservoir locations may be undisturbed. If these locations have not been grubbed/graded, they should be checked by an archaeologist to determine the presence/absence of historic sites. If no historic sites are present, an archaeological assessment will need to be submitted to our office documenting these findings. If historic sites are present, an archaeological inventory survey will need to occur to document the sites, evaluate their significance, and propose mitigation recommendations for any significant sites.

In your letter you indicate that funding for the project will be obtained through the United States Department of Agriculture (USDA). The use of federal funds means that the requirements of Section 106 of the National Historic Preservation Act must be complied with. The above site identification steps are key steps in this compliance.

If you should have any questions about this project please contact our Hawaii Island archaeologist, Patrick McCoy (692-8029).

Aloha,

GILBERT COLOMA-AGARAN
State Historic Preservation Officer

PM:amk

c. Chris Yuen, County of Hawaii Planning Department
Kai Embler, County of Hawaii Department of Public Works

TELEPHONE:
808.961.3727

FACSIMILE:
808.935.8033

INABA ENGINEERING, INC.
CIVIL ENGINEERING ▪ STRUCTURAL ENGINEERING ▪ LAND SURVEYING
273 WAIANUENUE AVENUE
HILO, HAWAII 96720

April 4, 2002

Gilbert Coloma-Agaran, State Historic Preservation Officer
Department of Land and Natural Resources
State Historic Preservation Division
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

Subject: Environmental Review for
KONA COASTVIEW / WONDER VIEW SUBDIVISION
WATER SYSTEM IMPROVEMENTS
DWS Job No. 2001-790
Kalaoa, North Kona, Island of Hawaii
TMK: 3rd Div. 7-3-22, 23, & 28 (Kona Coastview)
3rd Div. 7-3-13, 14, 15, & 16 (Kona Wonder View)

Gentlemen;

Thank you for your comment letter dated March 27, 2002 regarding the environmental review for the subject project. We offer the following responses to your comments.

We note your comment that improvements within the existing roadways will unlikely have adverse effects on historic sites due to previous disturbance.

The two reservoir sites will not be in road right-of-ways. Proposed tank site #2, Tmk: 7-3-5:90 has been disturbed by clearing and grading. Proposed tank site #1, Tmk: 7-3-22:46 is a vacant subdivision lot within the subdivision with homes on either side. This lot will be checked for previous disturbance and an assessment will be sent to your office.

An environmental report has been submitted to the USDA for review as part of the loan application package.

Should you need any further information or have any questions regarding this project, please call me at 961-3727.

Very truly yours,

INABA ENGINEERING, INC.

Jason K. Inaba, P.E.

Copy: Mr. Glenn Ahuna, DWS

Harry Kim
Mayor

County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

Dennis K. W. Lee
Director

Ronald Ueoka
Deputy Director

March 22, 2002

Jason K. Inaba, P.E.
Inaba Engineering, Inc.
273 Waianuenue Avenue
Hilo, HI 96720

Subject: Environmental Review for Kona Coastview/Wonderview Subdivision
Water System Improvements
DWS Job No. 2001-790
Lalaoa, N. Kona. HI
TMK: 7-3-22,23 & 28 (Kona Coastview)
TMK: 7-3-013, 14,15 & 16(Kona Wonder View)

We received your request for comments on the subject and they are as follows:

1. A permit is required for work within the County right-of-way, in compliance with Chapter 22 of Hawaii County Code. Among others, a condition of the permit requires that at least one lane be open to public traffic at all times and two lanes shall be open from the hours of 3:30 PM to 8:00AM. Property owners should receive one week notice prior to disruption of driveway access.

2. Excavations may encounter voids and private waterlines. Contingency plans should be made an item in the specifications regarding proper procedures to be followed by the contractor. Private waterline service should be maintained.

3. The water mains in the right-of-way shall be located at least 12 feet, preferably more from the property lines. This will provide for clearance to install drainage structures in the future. If possible, valve boxes should be located to prevent impact noise from vehicles.

4. If waterlines are to be substantially in the traveled way, resurfacing of entire County road traveled way should be included in the project.

Thank you for the opportunity to comment. If you have any questions, please contact Kiran Emler at our Kona office at 327-3530.

Ben Ishii, Acting Division Chief
Engineering Division
KE
c: ENG-HILO/KONA

TELEPHONE:
808.961.3727

FACSIMILE:
808.935.8033

INABA ENGINEERING, INC.
CIVIL ENGINEERING ▪ STRUCTURAL ENGINEERING ▪ LAND SURVEYING
273 WAIANUENUE AVENUE
HILO, HAWAII 96720

April 4, 2002

Mr. Dennis K. W. Lee, P.E., Director
Department of Public Works
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Subject: Environmental Review for
KONA COASTVIEW / WONDER VIEW SUBDIVISION
WATER SYSTEM IMPROVEMENTS
DWS Job No. 2001-790
Kalaoa, North Kona, Island of Hawaii
TMK: 3rd Div. 7-3-22, 23, & 28 (Kona Coastview)
3rd Div. 7-3-13, 14, 15, & 16 (Kona Wonder View)

Thank you for your letter dated march 22, 2002 regarding the environmental review for the subject project. We offer the following responses to your department comments.

1. The contractor will be required to obtain necessary permits for the construction of this project. During the design phase, construction plans will include typical traffic control plans and notes which will be submitted to DPW for review and approval. During the construction phase, the contractor will be required to coordinate his work with the subdivision residents.

2. Underground voids will be addressed during the design phase. The contractor will be required to maintain existing water service to residences.

3. The DWS will coordinate with DPW during the design phase regarding the location of the waterlines and appurtenances.

4. The DWS will coordinate with DPW during the design phase regarding resurfacing of the entire County road traveled way.

Should you have any questions, please call me at 808-961-3727 or contact Mr. Glenn Ahuna of the Department of Water Supply at 808-961-8070.

Very truly yours,

INABA ENGINEERING, INC.

Jason K. Inaba, P.E.

copy: Mr. Glenn Ahuna, DWS

Harry Kim
Mayor

Christopher J. Yuen
Director

Roy R. Takemoto
Deputy Director

County of Hawaii

PLANNING DEPARTMENT
25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

RECEIVED
MAR 29 2002
INABA ENGINEERING, INC.

March 27, 2002

Mr. Jason K. Inaba, P.E.
Inaba Engineering, Inc.
273 Waianuenue Avenue
Hilo, HI 96720

Dear Mr. Inaba:

SUBJECT: *Environmental Review for*
New Water System Improvements (DWS Job No. 2001-790)
Kalaoa, North Kona, Hawaii Island
TMK: 7-3-22, 23, 28 – Kona Coastview Subdivision
TMK: 7-3-13, 14, 15, 16 – Kona Wonderview Subdivision

This letter is in response to your request for comments on the zoning and land use of the proposed project. The following information is provided in our capacity as the agency responsible for implementing the Hawaii County General Plan, pursuant to Haw. Admin R. 11-200-9(a)(1).

The properties are not located in the County's Special Management Area (SMA); and are therefore, not subject to the regulatory criteria or review of the Hawaii County Planning Commission's SMA Rule 9.

Except where noted, the parcels of both subdivisions also have the same zoning, state land use, and County General Plan land use designation. These are listed below.

County Zoning: Agricultural (A-5a)

State Land Use:Urban
(Except for 2.009 acres where the State Land Use is Agriculture of TMK: 7-3-23: 10, Lot 78-A).

General Plan (GP) Designation: Urban Expansion (low, medium, high density, industrial, and open)

An urban state land use indicates that land use regulation is subject to the authority of the County of Hawaii.

Public utility and governmental agency transmission lines and public utility substations that supply water are authorized permitted uses in any zone district of Hawaii County, pursuant to County Zoning Code sec. 25-4-11. Consequently, the proposed installation of water lines and other water system improvements in both subdivisions to comply with County water standards of the Department of Water Supply (DWS) with the purpose of furnishing running water and fire *hydrants for fire protection are permitted uses consistent with sec. 25-4-11.*

The GP Urban Expansion designation allows for a mix of densities, described above, in areas where new settlements may be desirable but where the specific settlement pattern and mix of uses have yet to be determined. The proposed water system development is consistent with the urban expansion land use concept.

The proposal is also consistent with the GP's North Kona course of action for the public utility water element. GP at 38. The proposed water system is consistent with the course of action for water to pursue groundwater source development in areas like the given subdivisions that would provide for anticipated growth and efficient and economic system operation. Finally, the proposal is consistent with the GP's public utilities goals and policies and the policies and standards of its water element.

Thank you for the opportunity to comment on the proposed water system development. Any questions on this matter can be referred to staff planner Earl Lucero at 961-8288.

Sincerely,

CHRISTOPHER J. YUEN
Planning Director

EML:pak
W:\wp\wp51\CZM\Letters\InabaDWS

cc: Planning Department - Kona

APPENDIX D

Photographs

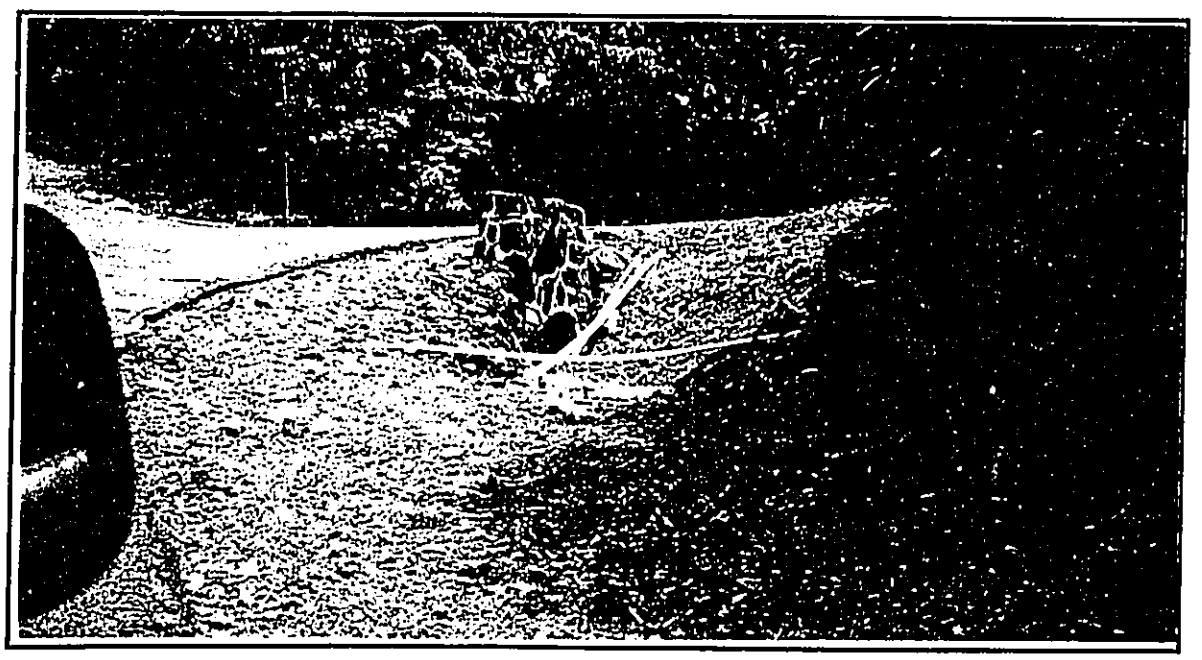
Photo 1 - Photo 5

KONA COASTVIEW
SUBDIVISION

Water Meters Along
Mamalahoa Highway

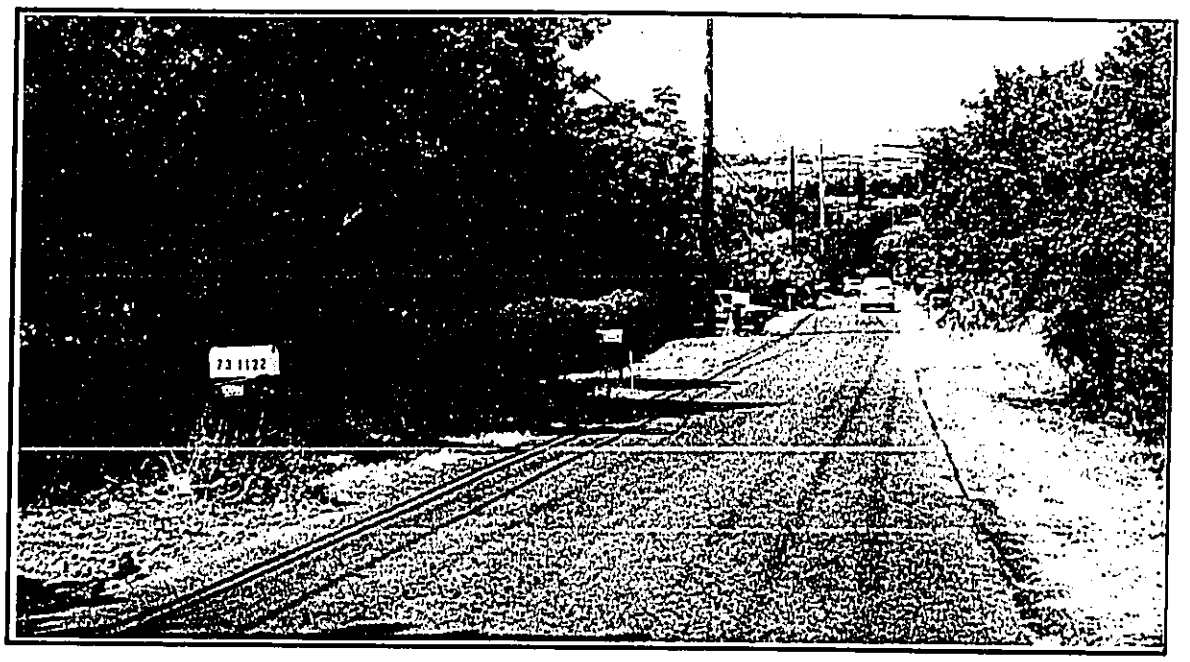
KONA COASTVIEW
SUBDIVISION

Private "Spaghetti"
Pipelines along
Roadway



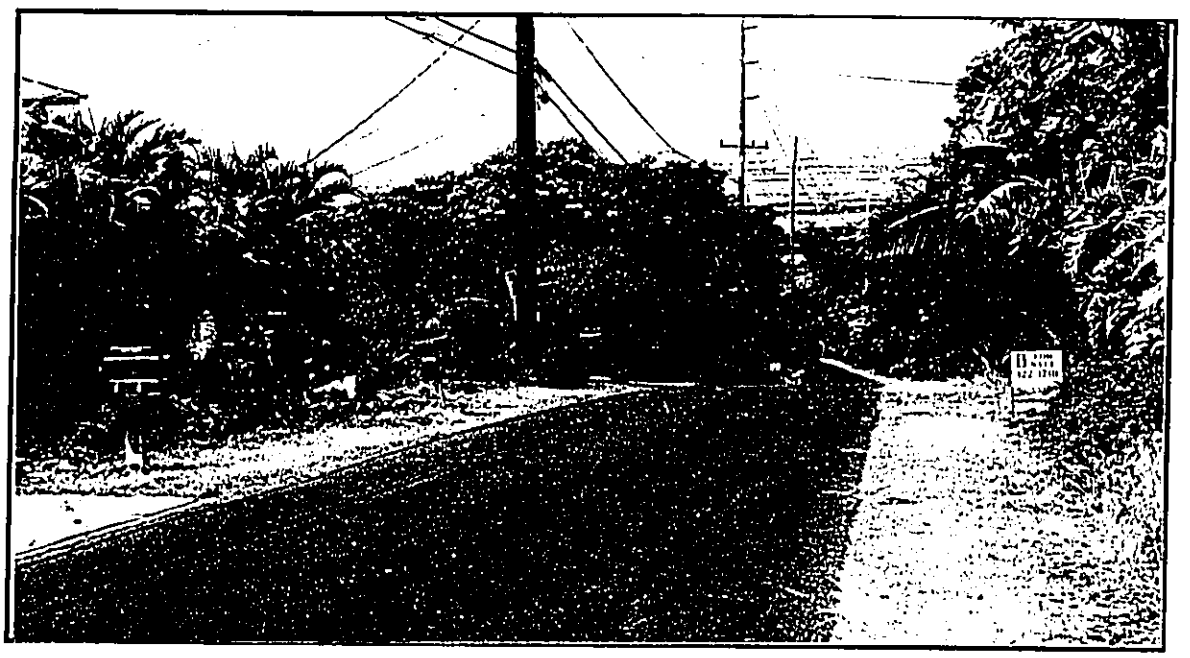
KONA COASTVIEW
SUBDIVISION

Private Pipelines
Affecting Drainage
Culverts



KONA COASTVIEW
SUBDIVISION

Ahikawa Street
View



KONA COASTVIEW
SUBDIVISION

Ahikawa Street
View

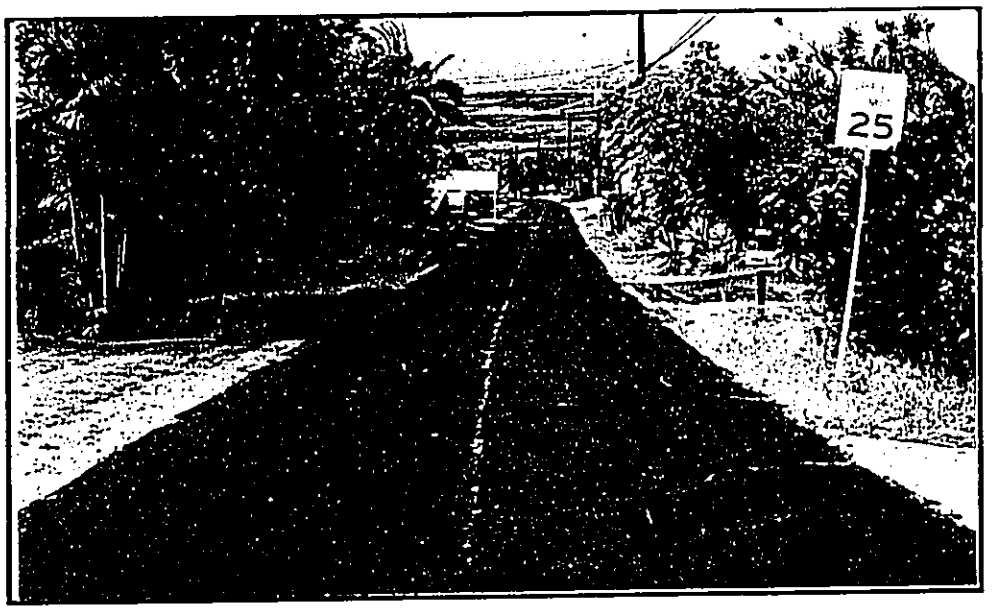
KONA COASTVIEW
SUBDIVISION

Ahikawa Street
View

PHOTO - 2

KONA WONDER
VIEW
SUBDIVISION

Loloa Street
View

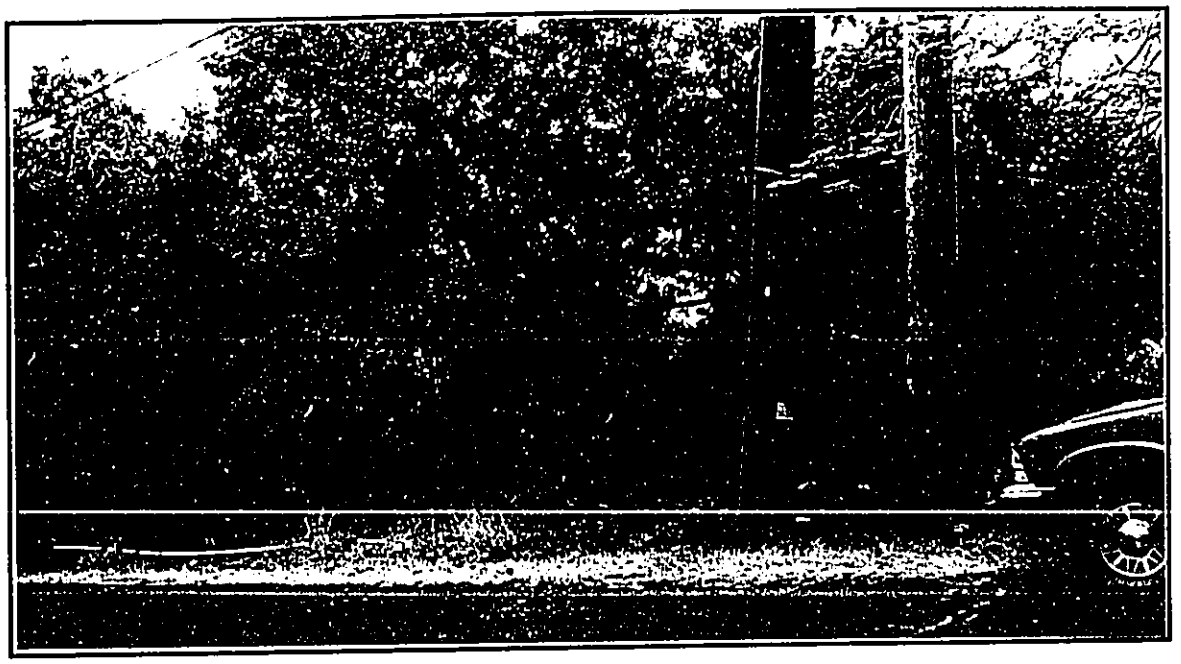


KONA WONDER VIEW
SUBDIVISION

Loloa Street
View

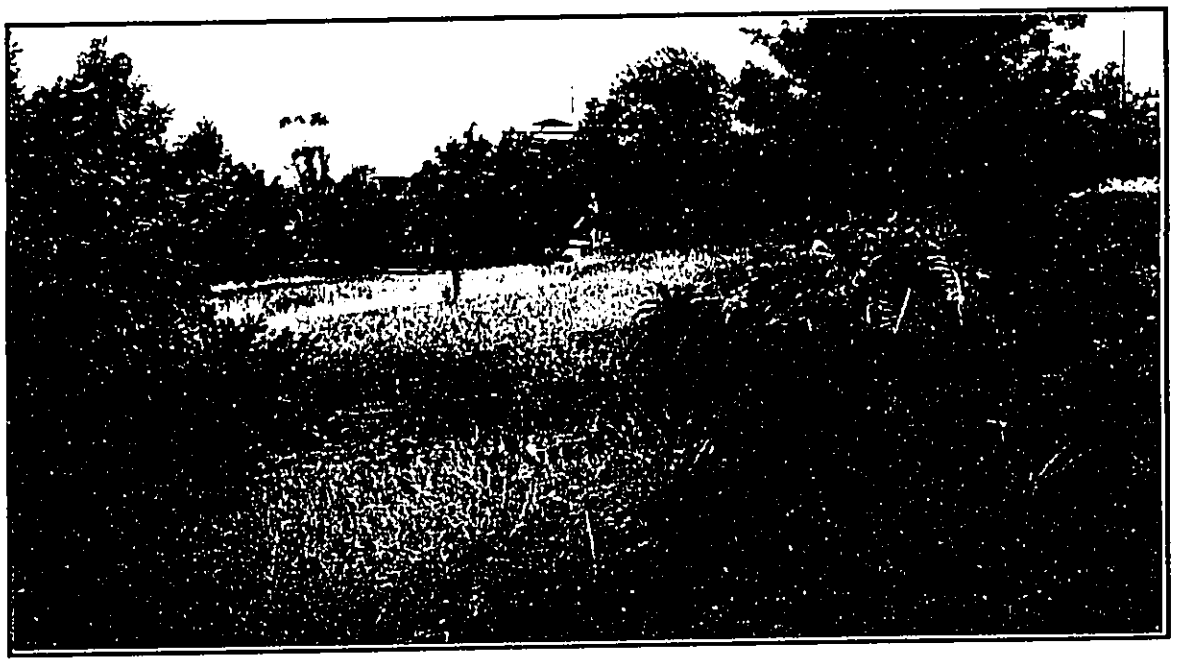
KONA WONDER VIEW
SUBDIVISION

Loloa Street
View



PROPOSED
RESERVOIR SITE #1

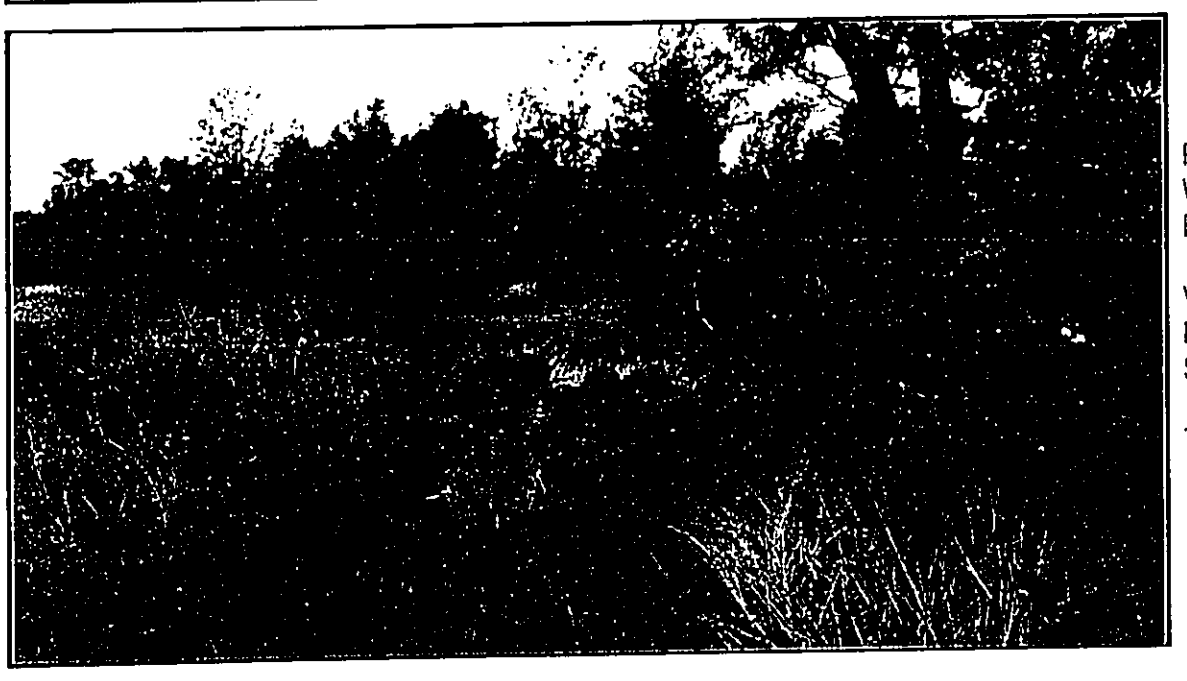
Vacant Lot
TMK: 7-3-22: 46



PROPOSED
RESERVOIR SITE #2

Portion of Lot
TMK: 7-3-05: 90

View Looking
Northwest
Toward Site



PROPOSED
WATERLINE
EASEMENT

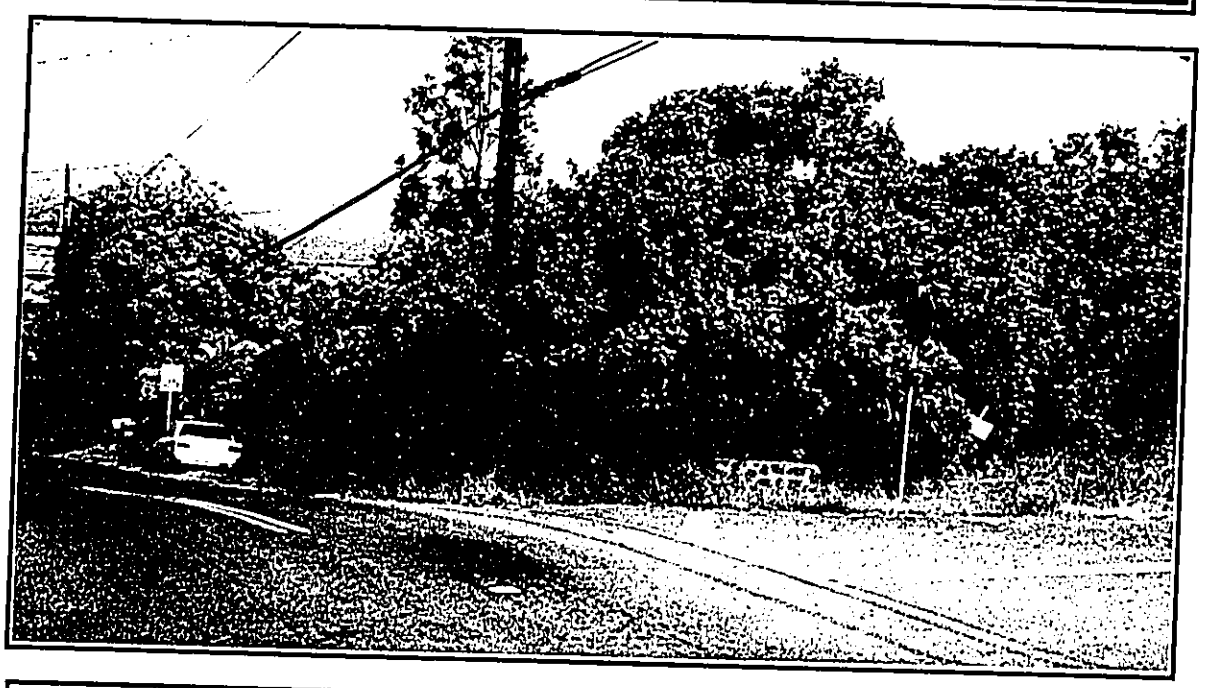
View West or Makai
From End of Kauwila
Street

TMK: 7-3-5:13 & 113

PROPOSED
WATERLINE
EASEMENT

View Looking South
From Ahikawa Street

TMK: 7-3-23: 21



ALTERNATE
PROPOSED
RESERVOIR
SITE #2

Vacant Lot
TMK: 7-3-23: 88

Along Ahulani St.

ALTERNATE
PROPOSED
RESERVOIR
SITE #2

Vacant Lot
TMK: 7-3-23: 88

Along Kauwila St.