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October 25, 2002

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OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

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

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR
OLA'A #6 EXPLORATORY WELL
TAX MAP KEY 3RD DIV-1-8-001:050
MOUNTAIN VIEW, HAWAII**

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

A completed OEQC Publication Form and four copies of the final Environmental Assessment for this project were submitted earlier by our consultant, Waimea Water Services, Inc.

If you have any questions, please call Mr. Bruce McClure at (808) 961-8070, extension 255.

Sincerely yours,


Milton D. Pavao, P.E.
Manager

BCM:dms

copy - Waimea Water Services, Inc.

... Water brings progress...

NOV 8 2002

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(
OLAA #6 EXPLORATORY WELL
EXPLORATORY WELL DRILLING
OLAA, HAWAII
)

FINAL ENVIRONMENTAL ASSESSMENT

Proposing Agency:
Department of Water Supply
County of Hawaii

OCTOBER 2002

By:
Waimea Water Services Inc.

TABLE OF CONTENTS

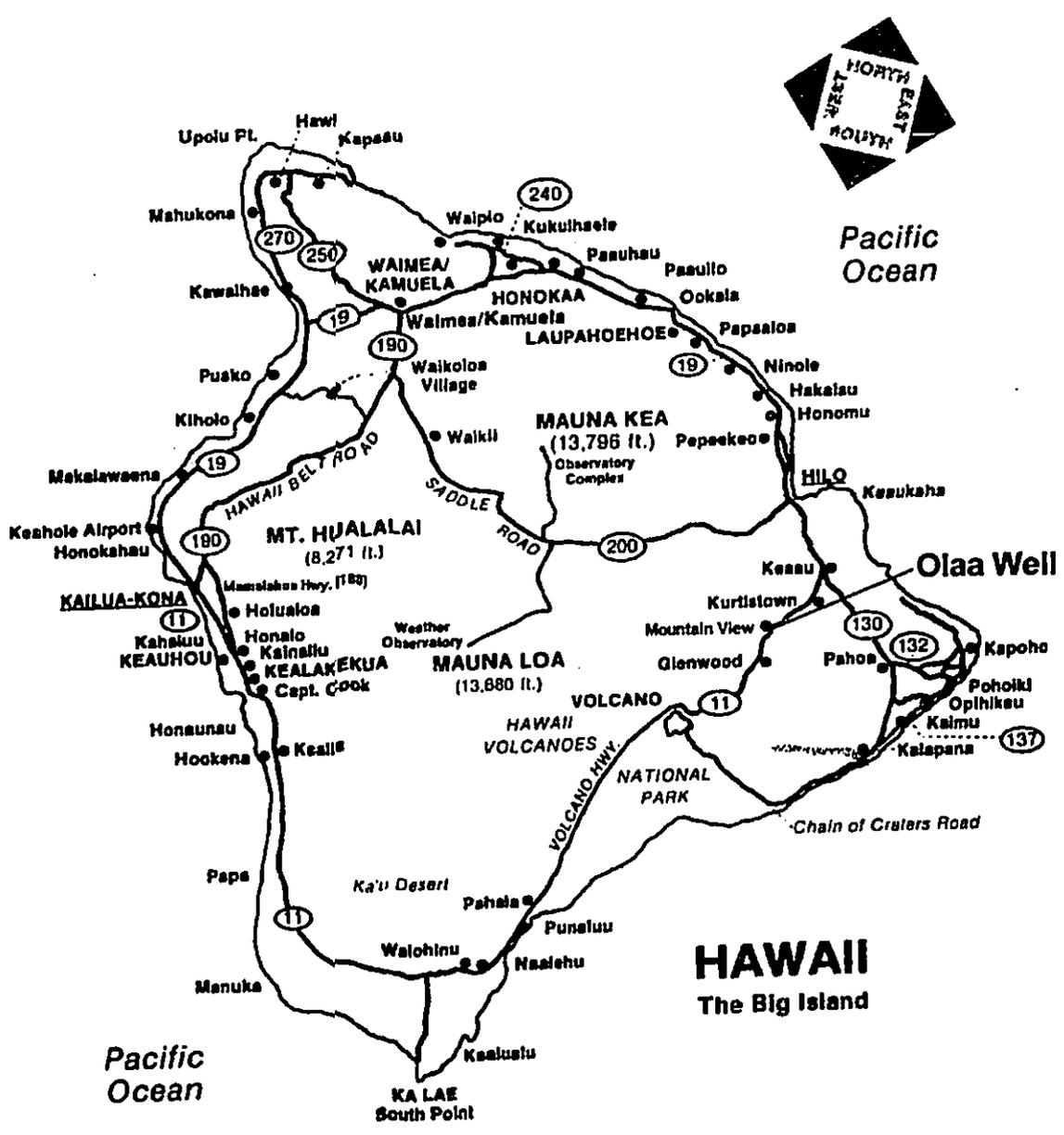
Section	Title	Page
1.	INTRODUCTION AND SUMMARY	4
	1.1 PROPOSING AGENCY	4
	1.2 AGENCIES CONSULTED IN MAKING THE ASSESSMENT	4
2.	PROJECT DESCRIPTION.....	5
	2.1 PROJECT SITE.....	5
	2.2 PROPOSED FACILITIES	9
	2.3 DEVELOPMENT SCHEDULE AND COST	11
	2.4 PROJECT NEED	11
3.	EXISTING CONDITIONS	12
	3.1 EXISTING LAND USE DESIGNATIONS	12
	3.2 SURROUNDING LAND USES	13
	3.3 CLIMATE	13
	3.4 GEOLOGY AND TOPOGRAPHY	13
	3.5 SOILS	15
	3.6 HYDROLOGY.....	15
	3.7 FLOOD HAZARDS	18
	3.8 EARTHQUAKE HAZARDS	19
	3.9 FLORA AND FAUNA.....	19
	3.10 ARCHAEOLOGY AND HISTORIC SITES	20
	3.11 FARMLAND PROTECTION, WET LANDS AND OTHER CROSS CUTTING AUTHORITIES.....	20
	3.12 CULTURAL RESOURCES	20
4.	PROJECT IMPACTS AND MITIGATIVE MEASURES	
	4.1 SHORT-TERM IMPACTS AND MITIGATIVE MEASURES	20
	4.1.1 Construction Noise.....	20
	4.1.2 Air Quality.....	21
	4.1.3 Flora and Fauna.....	21
	4.1.4 Surface Water/Groundwater Quality	21
	4.1.5 Archaeological/Historical/Cultural	22
	4.1.6 Traffic.....	22
	4.1.7 Public Health and Safety	22
	4.1.8 Socioeconomic.....	22

4.2	LONG-TERM IMPACTS AND MITIGATIVE MEASURES	22
4.2.1	Noise	23
4.2.2	Flora and Fauna.....	23
4.2.3	Drainage.....	23
4.2.4	Stream Flow and Hydrology	23
4.2.5	Infrastructure	23
4.2.6	Socioeconomic	24
4.2.7	Land Use and Planned Development	24
5.	ALTERNATIVES TO THE PROPOSED PLAN.....	24
5.1	NO ACTION	24
5.2	DELAYED ACTION.....	24
5.3	ALTERNATE SITES.....	24
5.4	ALTERNATE SOURCES	25
6.	"FINDING OF NO SIGNIFICANT IMPACT" DETERMINATION....	26
7.	LIST OF NECESSARY PERMITS AND APPROVALS.....	30
	REFERENCES.....	30
	APPENDICES	
	A - Photos of Site.....	31
	B -LETTERS OF CORRESPONDENCE	
	DLNR, State of Historic Preservation Div.,	37
	List and Letter to adjacent property owners	
	C - RESPONSE LETTERS	41

LIST OF FIGURES

Figure	Title	Page
2-0	PUBLIC WATER UTILITIES ON HAWAII MAP	5
2-1	LOCATION MAP	6
2-2	TOPO MAP	7
2-3	SITE PLAN	8
2-3	TMK MAP	9
2-5	DWS SYSTEM MAP OF AFFECTED AREA	10
3-1	STATE LAND USE PLANNING MAP OF AREA	12
3-2	TOPOGRAPHY OF THE PROJECT SITE	14
3-3	SAMPLE CROSS SECTION OF AQUIFER	15
3-4	WELLS IN REGION MAP	16
3-5	WELLS IN REGION WITH WATER LEVELS MAP	17
3-6	LAVA HAZARD ZONE MAP	19

shown on the TMK maps (Figure 2-4). There is access for a utility road running mauka to the site.



Map 1
Figure 2-1
LOCATION MAP

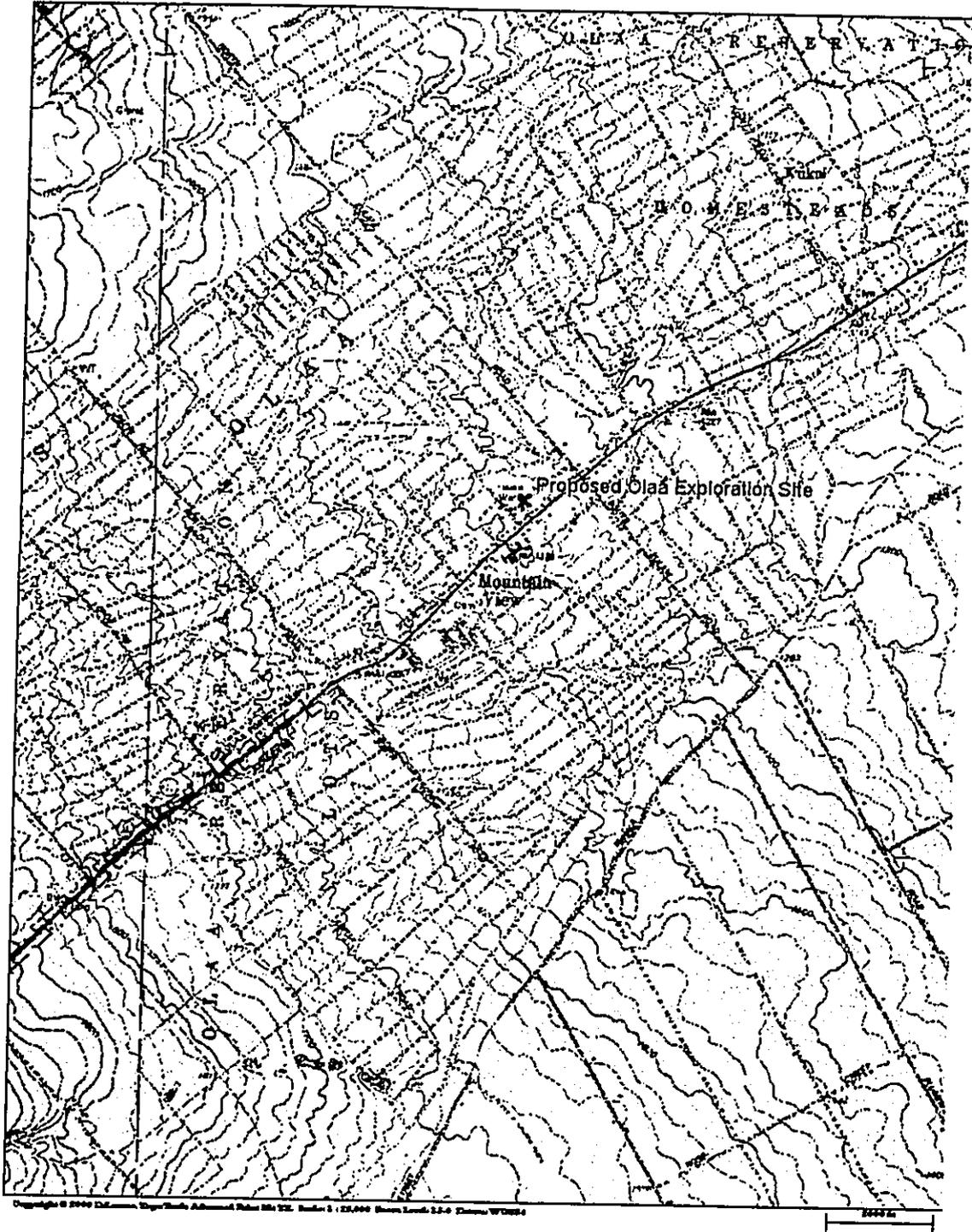


Figure 2-2
TOPO MAP

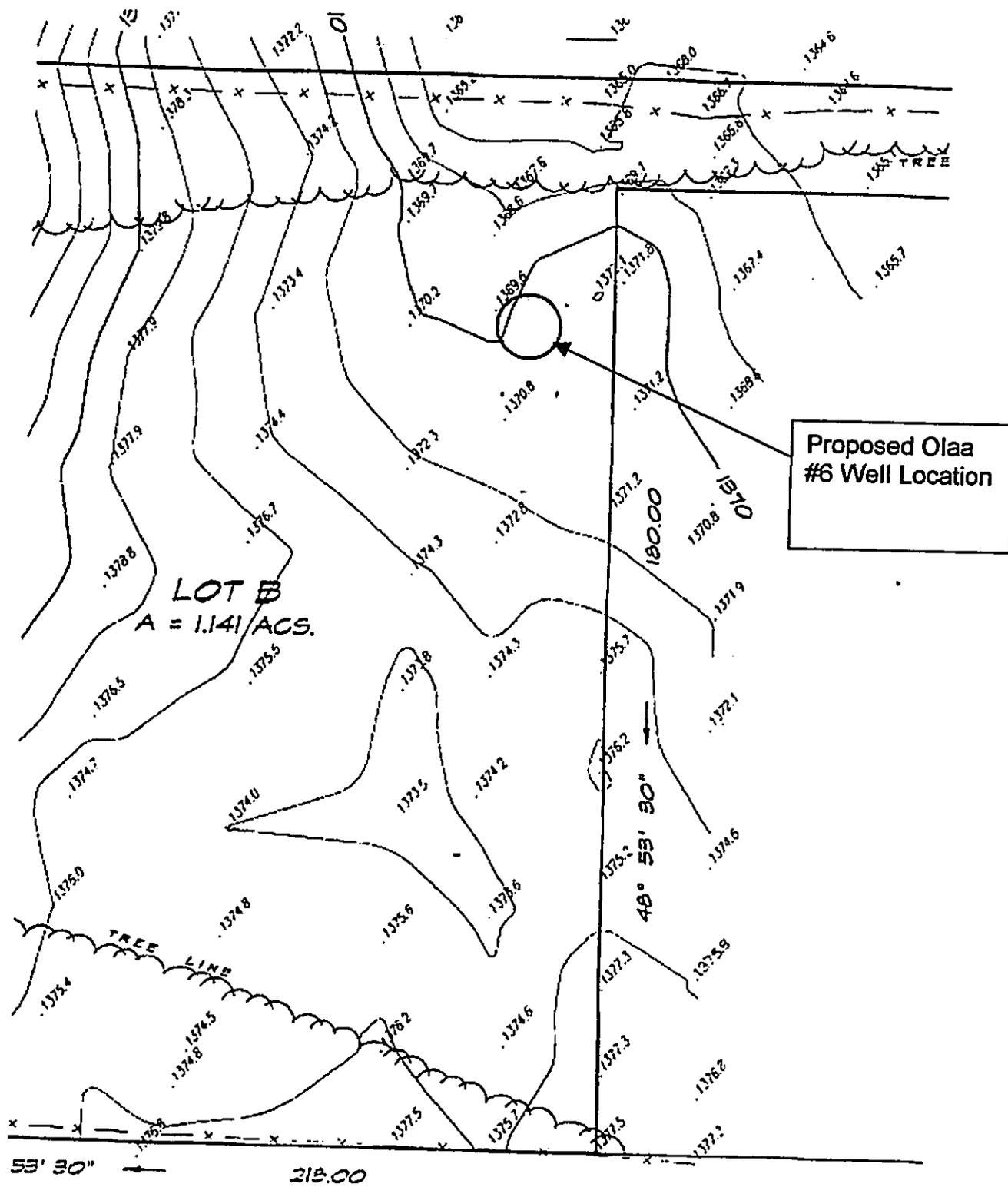


Figure 2-3
SITE PLAN

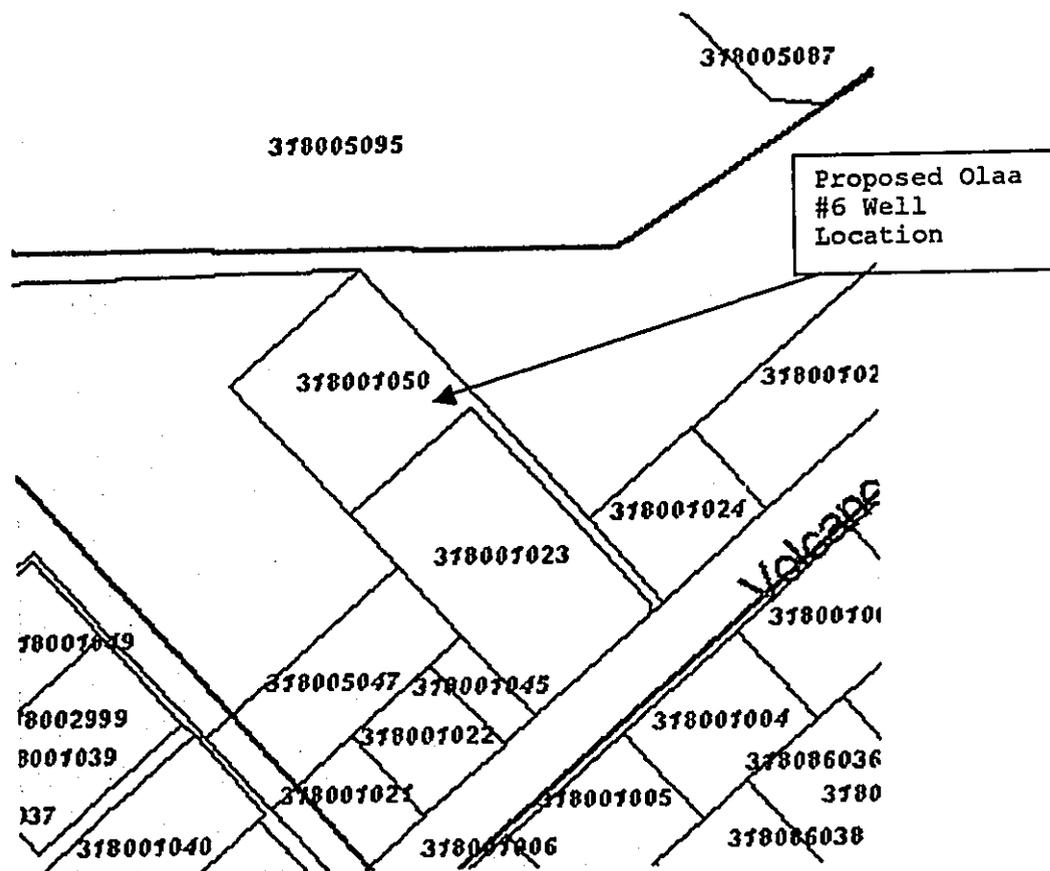


Figure 2-4 TMK MAP

The Water Commission of County of Hawaii, County of Hawaii, currently owns the existing DWS property, with TMK 1-8-1-:50. The well site is next to the existing tank site. The Zoning is RS-20, Single Family Residential.

2.2 PROPOSED FACILITIES

The proposed exploratory well project involves drilling, casing, and testing an exploratory well. The depth of the well is expected to be 1370' (ground elev. 1370'). If the yield and water quality are acceptable to the DWS, the well will be placed into production well. The following improvements will need to be included to put the well into production as part of the DWS system: preparatory site work; fencing relocation; deep well pump installation, including piping and controls; site piping, connections to the reservoir; electrical system, including electric power, motor controls, lighting, and telemetering. A chlorination system and control building are already on site and will be utilized, but may require some upgrades.

The OIaa-Mt. View water system consists of 8 service areas. There are 5 zones labeled as OIaa Sta. 6 (System no. 1700), PPG (System no. 1750), OIaa Sta. 7 (System No. 1800), Volcano Highway (System No. 1850), Peck Road (System No. 1900) which will be serviced by this well project. See Exhibit below for location of each system.

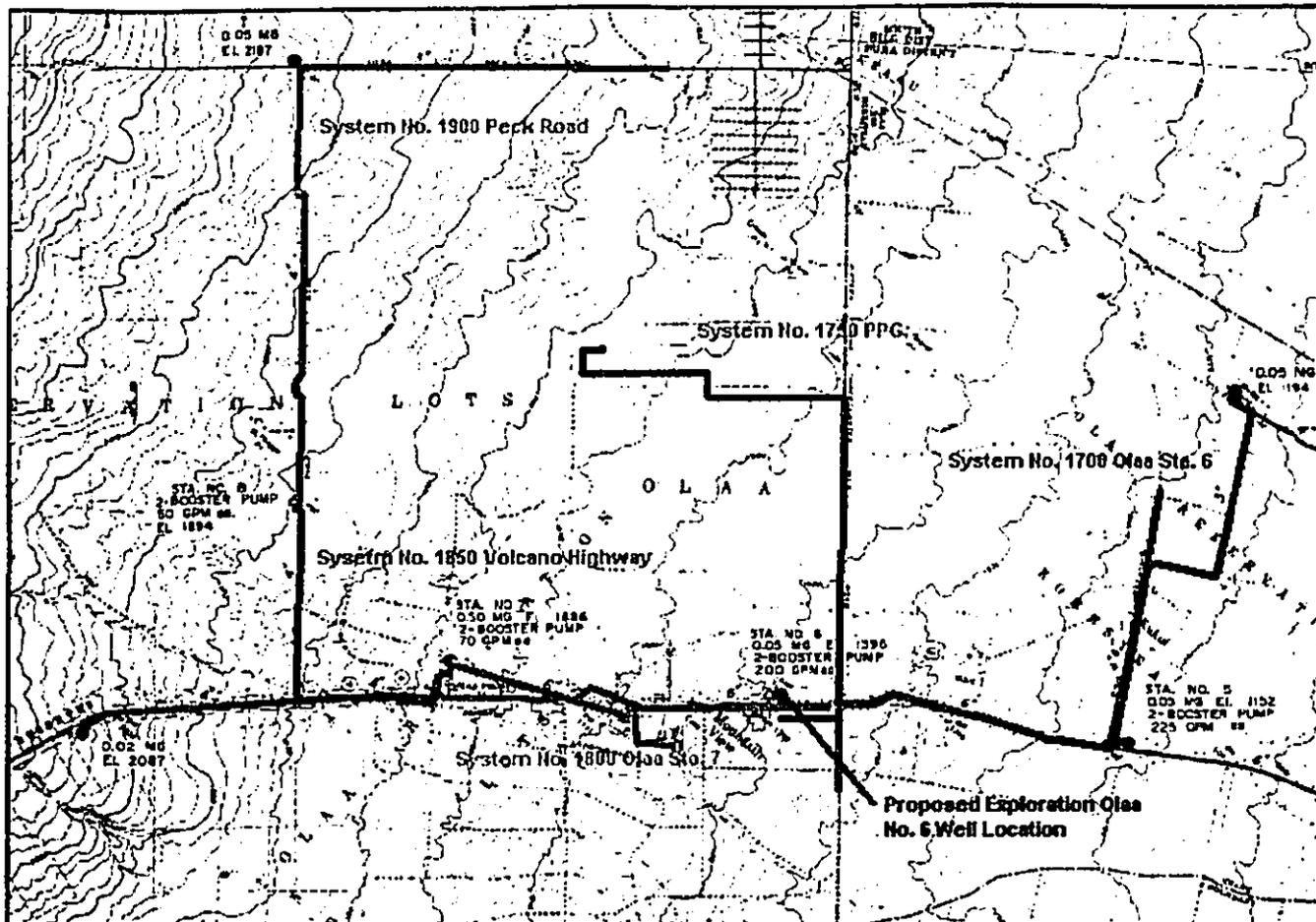


Figure 2-5 DWS System Map of Affected Area

The Department of Water Supply plans to pump at a rate of 1400 gallons per minute (gpm) and up to 2,016,000 gallons per day. However, the actual use of the well will be determined by the results of the exploratory well pump test. There are currently 759 accounts/customers on this system. Current average consumption per service meter in the Olaa-Mt. View system is 264 average gallons per day demand (gpd) per meter with an average system flow of 175,385 average gpd and a max day demand of 267,578 gallons per day (gpd). The County DWS design standard is for 400 gpd per residential account and a maximum day of 600 gpd.

The footprints of the concrete pad for the production well and wellhead piping are approximately 200 square feet in area. Figure 2-3 shows the location of the well in reference to its surroundings and land divisions.

2.3 DEVELOPMENT SCHEDULE AND COST

Construction is scheduled to begin in 2002. The construction cost for this project is estimated at \$750,000.

2.4 PROJECT NEED

The current water demands in the Mountain View area are met with chlorine treated groundwater from Olaa Wells, down gradient of the Olaa #6 well site. The wells produce at the following rates:

Olaa A	975 gpm
Olaa B	800 gpm
Olaa C	1,400 gpm (<i>stand by well</i>)

Or a capacity of 1,775 gpm or maximum capacity of 2,556,000 gallons per max day (gpd). The average flow of these wells is about:

Olaa A	363,000 gpd
Olaa B	68,000 gpd
Olaa C	596,000 gpd

Or an average day pumping of 1,027,000 gpd (1,540,500 max day).

A portion of this water from the Olaa A, B, C wells are pumped mauka through booster pumps stations for use in the area to be serviced by the Olaa #6 well. The new well would provide a reliable groundwater source in the service area that will only require disinfection. If high-level groundwater is found in this exploration phase, a savings in pumping costs may be realized in the overall system. Groundwater from the aquifer is a viable source for the DWS in this region as the DWS monitor wells and the Flagg Well (No. 3010-01) show potential high-level groundwater in the area. The existing booster station and tank will also be relocated to the well site and their capacity enlarged to provide better service.

The water quality of the aquifer is reliable and does not require any treatment except disinfection for the system needs. Traces of Atrazine (0.05 with an MCL of 3.0) and nitrate (0.32 with an MCL of 10.0) were found with very low detection levels and well below the EPA maximum contaminate levels. (note: MCL means a maximum contaminant level of a contaminant in the water, which is delivered to any user of a public water system. MCLs are the only federally enforceable drinking water standards.)

SECTION 3 EXISTING CONDITIONS

This section describes the existing conditions of the project including the existing land use designation, surrounding land uses, climate, geology and topography, soils, hydrology, flood hazards, earthquake hazards, flora and fauna, and archaeological and historic sites.

3.1 EXISTING LAND USE DESIGNATIONS

The OIaa #6 Exploratory well drilling project boundaries fall within the Low Density Urban Land Use Designation. Therefore, a Conservation District Use Permit is not required. The lands are not "Ceded Lands" of the Office of Hawaiian Affairs.

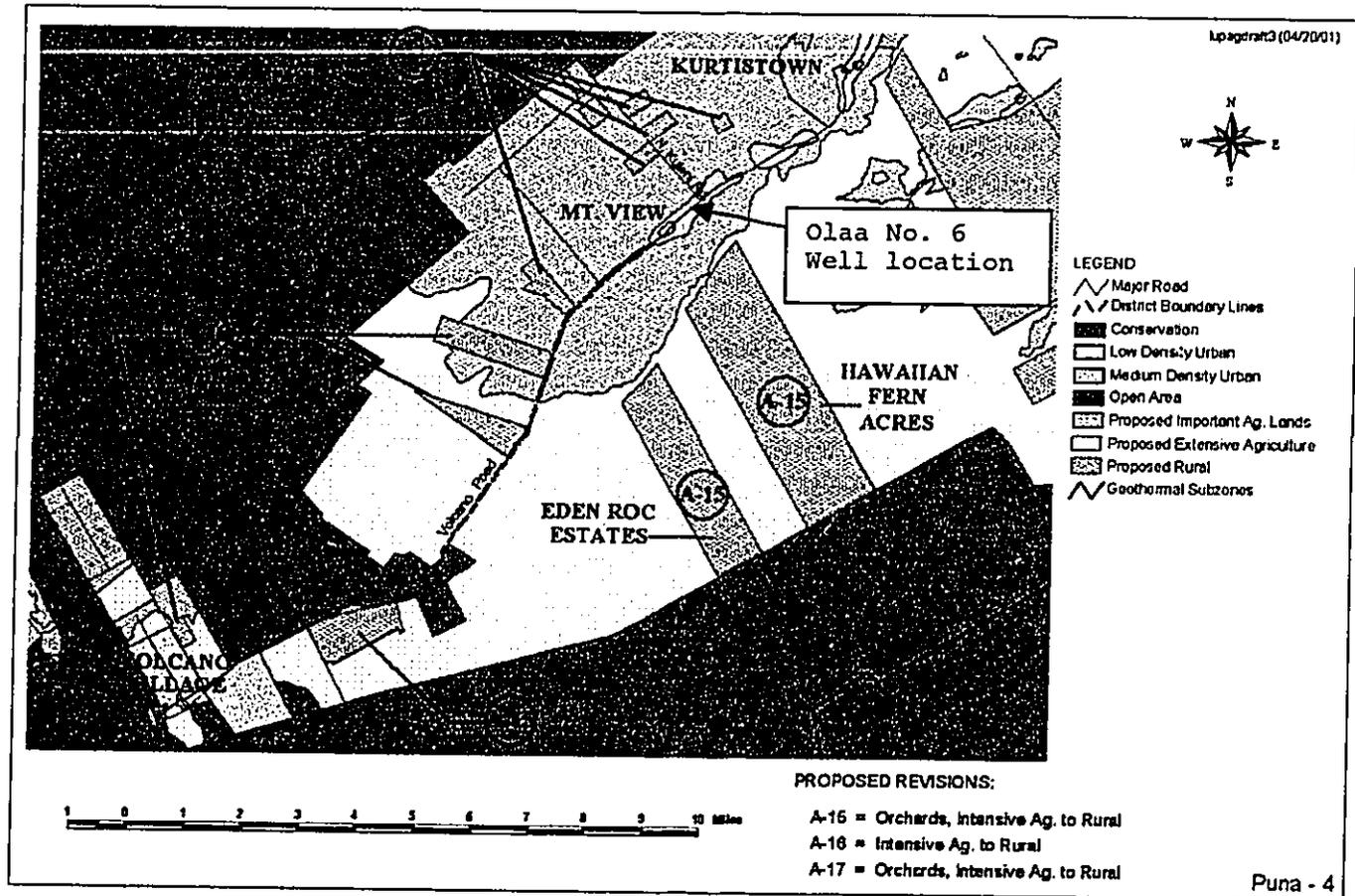


Figure 3-1 State Land Use Planning Map

The County land use zoning designation is RS-20.

The County Planning Department indicates there are small subdivision projects in the region and activity conforms to current zoning and is mostly residential units. The planning department expects slow growth in density in this area and is prepared for the expected growth.

The water source is planned to service the current population with some growth. The water system and source is being expanded to provide more reliable source capacity closer to the user and possibly reduce the energy demands.

The Water Commission of County of Hawaii, County of Hawaii, currently owns the existing DWS property, with TMK 1-8-1-:50. The well site is next to the existing tank site. The Zoning is unimproved residential, RS-20.

3.2 SURROUNDING LAND USES

The surrounding land area is residential and grazing which lands had been previously extensively used for sugar agriculture. The well site is located in the town of Mountain View.

3.3 CLIMATE

The project area receives an average of 150 inches of precipitation per year, most of which occurs during the winter months. Due to the elevation of the project site, the average annual temperature is 70 F.

3.4 GEOLOGY AND TOPOGRAPHY

The project site sits upon a formation formed by the Kau basalt flows from the Mauna Loa Mountain laid down in prehistoric time, containing a few inter-stratified beds of volcanic ash.

The water level at the well site may stand as high as elevation 500' MSL and likely varies only slightly. There are no producing wells in the near vicinity.

The OIaa well site is located on the slopes of the Mauna Loa Mountain. The well site is best characterized as gently sloping makai. A topographic map of the area is shown in Figure 3-2.

There are neither ephemeral or perennial streams nor wet lands within a mile radius of the well. The well is an exploratory well with the intent of determining the water levels and specific capacity of the well. The aquifer unit sustainable yield, as set forth in the State Water Plan (1992), is 393 mgd (Keaau 80402). The expected production from this well is 1 to 2 mgd. There is no anticipated significant impact on water levels in the aquifer.

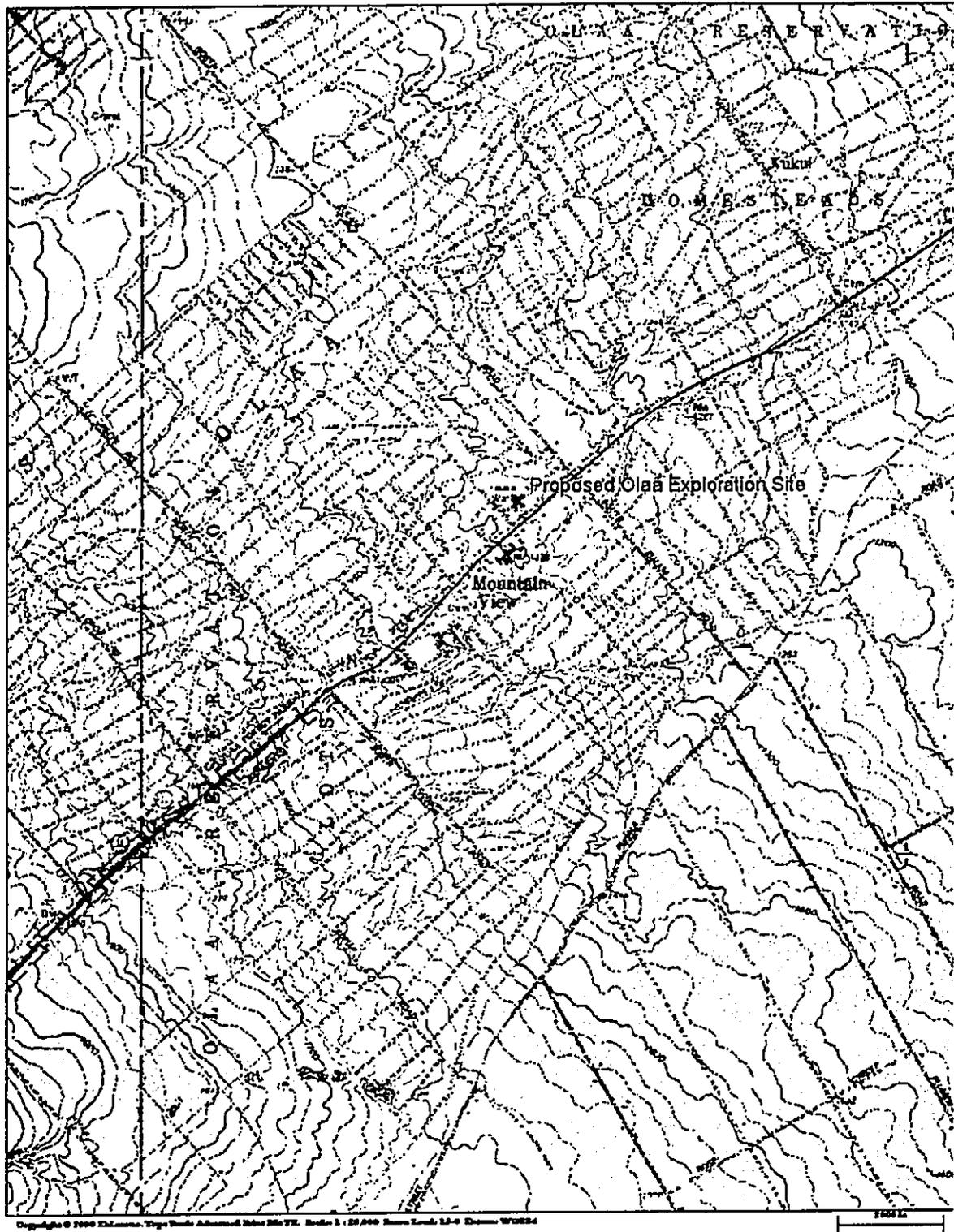


FIGURE 3-2
SITE TOPO MAP

3.5 SOILS

The soil at the project site is classified as Ohia and area extremely stony silty loam with 6 to 20 percent slopes. This soil cover is typically only 20 to 36 inches deep over fragmental A'a lava. Runoff is slow to medium and erosion hazard is slight to moderate. This soil has been used for sugarcane, woodland, and pasture (Capability subclass VIIc, non-irrigated; pasture group 9, woodland group 7), United States Dept of Agriculture, Soils Conservation Service, Dec. 1973.

3.6 HYDROLOGY

An exploratory well located above Mountain View has confirmed the presence of a high level aquifer within the basalt lavas of the Mauna Loa Mountain. It is estimated that the aquifer is confined by a structure, or structures, which hold fresh water at a high level. The water table may be as high as 500 feet above mean sea level at the proposed well site.

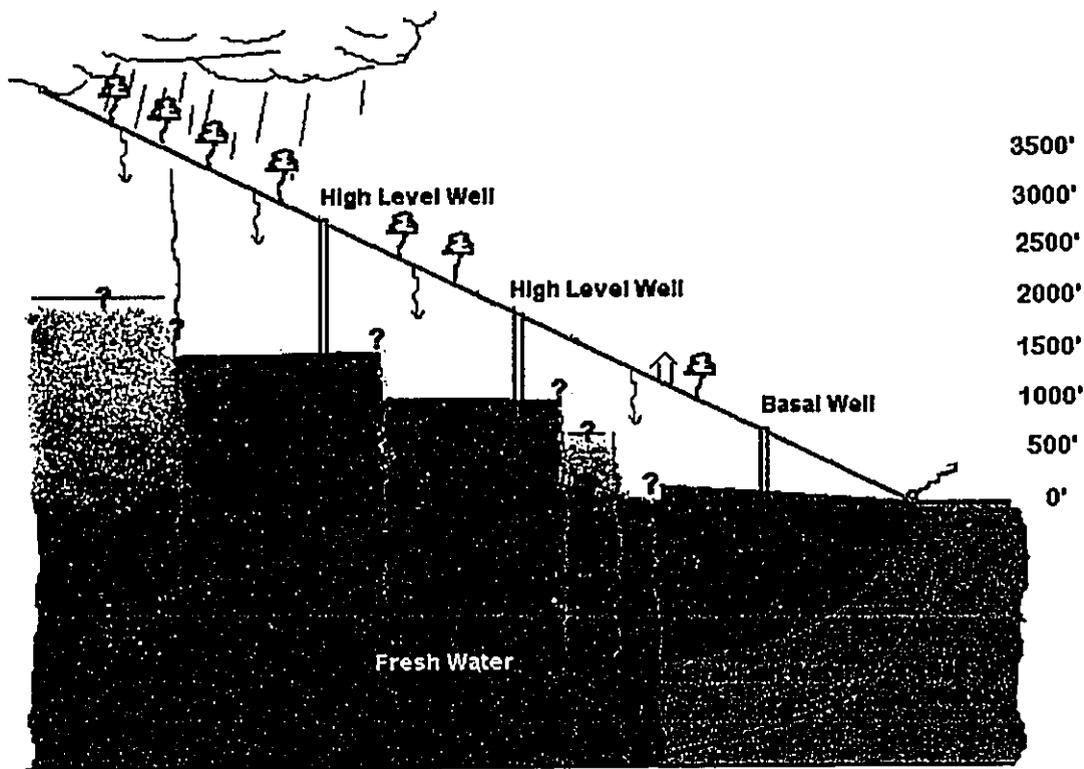


Figure 3-3
Sample Cross Section of Aquifer
(From Central Puna Water Mater Plan, 1999)

The USGS drilled a well mauka of the proposed Olaa No. 6 well site as part of the Hawaii County Dept of Water Supply groundwater development program. This well indicated

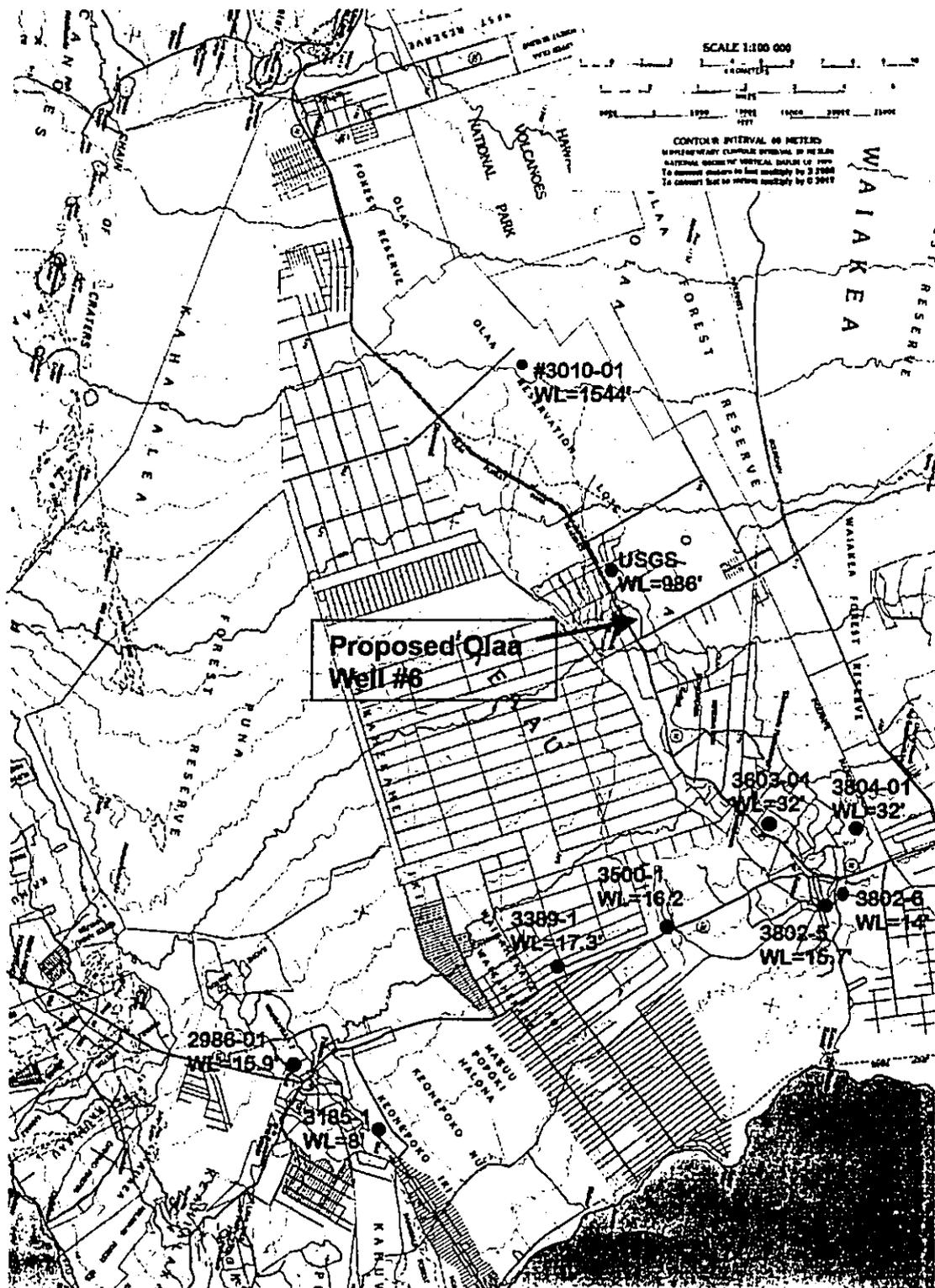


Figure 3-5
 Wells in Region with Water Levels
 (from Central Puna Water Master Plan, 1999)

The pumping from this well will only impact the aquifer slightly. The average pumpage is not anticipated to exceed 1 MGD. The present DWS pumpage is slightly in excess of 1 MGD with an estimated sustainable yield exceeds 393 MGD (Aquifer Sector Keeau – 804002).

According to the State Department of Health, November 1993 map of the Island of Hawaii, Upper Aquifer Development Stage and Utility Status, the existing well and proposed wells are above the UIC line and are in an area designated as "Potential Use".

There are no operating wells in the immediate area and the nearest is the DWS Olaa Well #3 which is about 5.3 miles to the east of the proposed site.

Contamination Analysis: The Office of Hazard Evaluation and Emergency Response (HEER) files show that there are no reported spills or contamination incidents in this area of Mountain View, HI, 96771,

The water quality of the aquifer is reliable and does not require any treatment except disinfection for the system needs. In the wells makai (Olaa Wells 1 and 2) Traces of Atrazine (0.05 with an MCL of 3.0) and nitrate (0.32 with an MCL of 10.0) were found near detection levels but well below the EPA maximum contaminate levels. (note: MCL means a maximum contaminant level of a contaminant in the water, which is delivered to any user of a public water system. MCLs are the only federally enforceable drinking water standards.)

Wellhead protection is provided by the fact that there are no industrial users up gradient of the well site. Extensive agricultural practices, such as sugar cane production, are no longer using the mauka properties. The well will be constructed as to mitigate contaminants from entering the well bore and will draw water from the deeper portions of the aquifer.

There are no ephemeral or perennial streams nor wet lands within a one mile radius of the well.

The well is an exploration well with the intent of determining the water levels and specific capacity of the well. The aquifer unit sustainable yield as set forth in the State Water Plan (1992), is 393 mgd (Keeau 80402). The expected production from the well is up to 2 mgd. There is no anticipated significant impact on the water levels in the aquifer.

3.7 FLOOD HAZARDS

Flood Insurance Rate Maps (FIRM) were used to evaluate the potential flooding for the study area. Based on map number 155-166-1125C, the project site is designated as "other areas, Zone X – areas which are determined to be outside of the 500-year flood plain" and designates areas of minimal flood hazard outside both the SFHA and the 0.2 percent annual chance floodplain.

3.8 EARTHQUAKE AND LAVA HAZARDS

The entire island of Hawaii is classified as a Seismic Zone 3 area, as per the Uniform Building Code (1991). Given that the least active zone is Zone 0, and the most active zone is Zone 4, the possibility of an earthquake occurring on the Island of Hawaii is fairly high. All new structures will be designed and constructed to resist stresses produced by lateral forces, which apply to the Seismic Zone 3. There is no known damage to the existing wells in the area have been damaged by earthquakes.

The area where the well is to be constructed is in Lava Hazard Zone 3, as seen in the exhibit below.

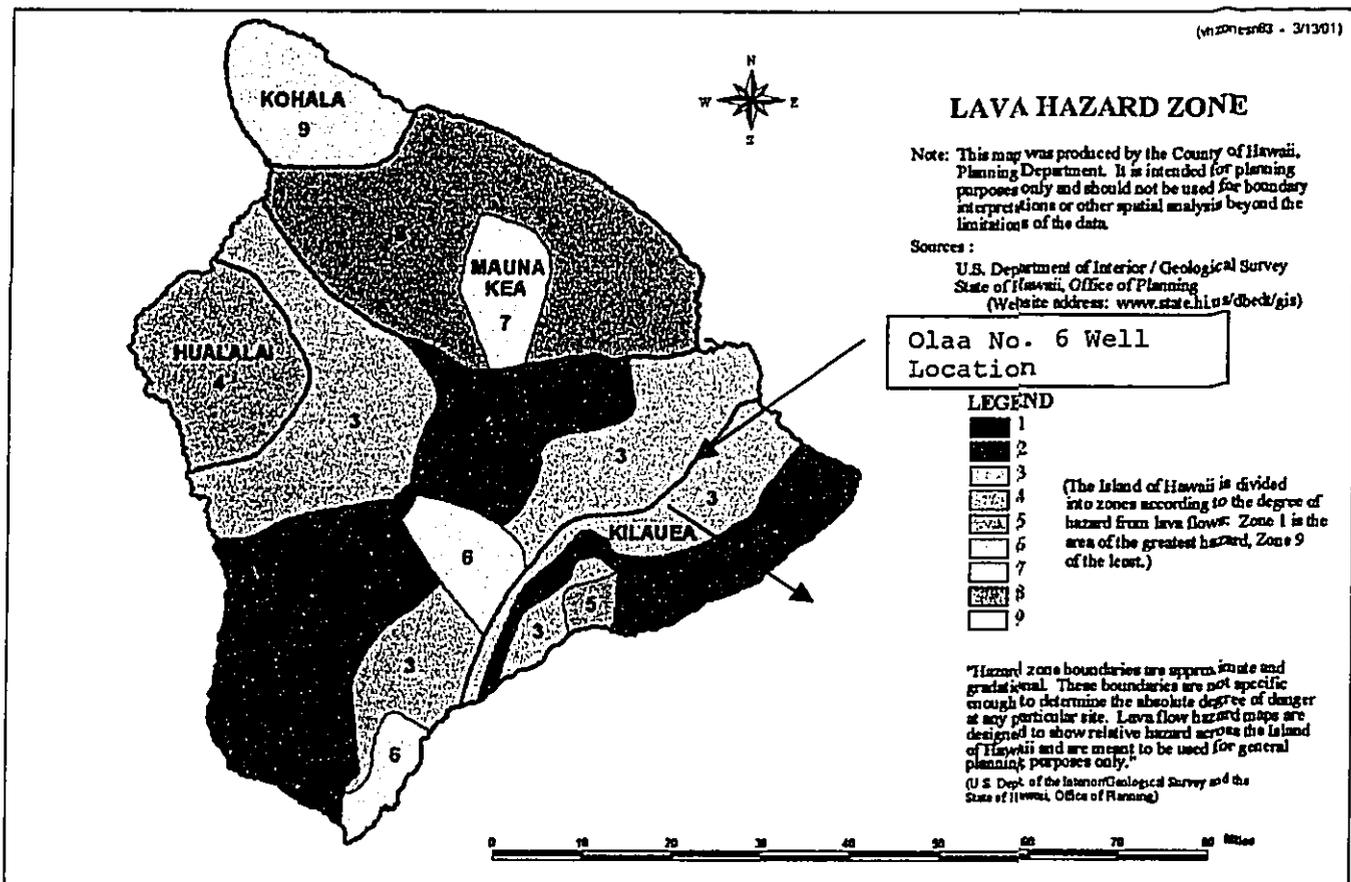


Figure 3-6 Lava Hazard Zone map for Hawaii

3.9 FLORA AND FAUNA

Most of the plant species in the area are introduced, and there are no rare or endangered flora species at the project site. The area around the site was cultivated and planted in sugar and currently grazed by cattle. Grass and Strawberry guava were evident.

No rare or endangered fauna species are known to live at the project site. Common species, which could be found nearby, include feral pigs, mynas, pheasant, quail, plovers, mongoose, and mice and other exotic species.

3.10 ARCHAEOLOGY AND HISTORIC SITES

According to the Department of Land and Natural Resources, State Historic Preservation Division (letter dated December 31, 2001, see Appendix B) the probability of finding any historic or archaeological site in the vicinity of the well site is unlikely. The site has been severely altered and used as a well and tank site while the surrounding areas were used for production of sugar and is now in pasture. However, should burials be found during construction, work must stop and the State Historic Preservation office must be contacted immediately.

3.11 FARMLAND PROTECTION, WET LANDS, AND OTHER CROSS CUTTING AUTHORITIES.

The zoning for the property of RS-20, designates the land for urban use and the Farmland Protection Policy Act does not apply. The area is sloped and no wetlands are on the property.

3.12 CULTURAL RESOURCES

There are no cultural activities on the site now and no signs of past use. The site is uncared for grass area and surrounded by Strawberry Guava and other vegetation.

SECTION 4 PROJECT IMPACTS AND MITIGATIVE MEASURES

The project impacts and their mitigative measures are discussed in the following sections. Some of the impacts discussed are construction noise, air quality, flora and fauna, surface water and groundwater quality, archaeological and historic, traffic, public health and safety, and socioeconomic.

4.1 SHORT-TERM IMPACTS AND MITIGATIVE MEASURES

Short-term impacts will result from site clearing, grubbing and grading, well drilling and installation, pumping station, building construction, and landscaping. These activities will be limited to the project site during the well construction period of approximately five to six months. The following sections discuss the short-term impacts and their mitigative measures.

4.1.1 Construction Noise

Noise generated from the mobilization of equipment along the access road, and the drilling of the exploratory well will be the primary impact during construction at the Olaa well site. Mobilization of equipment, as well as the well drilling, should be done only during daylight hours. Nearby residences may be as close as 1000 feet to the well site, and the noise impact on the nearby residential areas should not be significant.

In order to mitigate any noise impacts during pumping tests, the use of muffled construction equipment is recommended. Construction equipment is also expected to be properly maintained. Heavy vehicles must be in compliance with Title III Administrative Rules, Department of Health (DOH), Chapter 42, Vehicular Noise Control for Hawaii. Construction work will most likely not be done during the weekends and holidays.

4.1.2 Air Quality

Short-term air pollution from dust/dirt due to clearing, grubbing and grading, along with vehicular emissions from construction equipment, is expected to be insignificant. All operations will be conducted in conformance with the State Department of Health regulations regarding vehicular emissions.

Water trucks will be used to minimize the levels of dust in the air. Areas which have been graded should be grassed as soon as possible to prevent dust from becoming a nuisance. All construction equipment shall be equipped with adequate emission control. All open-bed trucks shall be covered when transporting materials, which have the potential to become airborne. Overall, the project is not expected to have significant impacts on air quality.

4.1.3 Flora and Fauna

No known rare or endangered species of flora and fauna are found at the site. Therefore, no short-term impacts are expected. No wetlands are on the property.

4.1.4 Surface Water and Groundwater Quality

Impacts on surface water and groundwater are expected to be insignificant as reported in the large amounts of groundwater flow in the area.

Any storm runoff from the site during construction can be mitigated by erosion control measures including building berms around the project site to contain storm water runoff, installing silt fences as needed, immediately landscaping areas which have been graded, and grading during dry weather. Dewatering is not necessary for this project. The drilling contractor in accordance with the requirements of the Department of Health, Clean Water Branch, will dispose of drilling fluid and discharge from pump testing. An NPDES permit is not required for this type of discharge. The water from the well site drains into an existing drainage ditch, which may be used by the contractor. No flooding is expected to be caused by the contractor or run off water due to the capacity of the stream.

If the well testing is successful, the next phase is to outfit the well into a production source. For this next phase, the design will specify for the installation of a shallow drainage well to take the initial surge water from the well.

Impacts on the groundwater are considered insignificant as the capacity of the well production is well below the groundwater flow in the area. Also well annulus will be grouted to sea level or below to negate surface contamination in the well.

There are no ephemeral or perennial streams nor wet lands within a one mile radius of the well.

The well is an exploration well with the intent of determining the water levels and specific capacity of the well. The aquifer unit sustainable yield as set forth in the State Water Plan (1992), is 393 mgd (Keaau 80402). The expected production from the well is up to 2 mgd. There is no anticipated significant impact on the water levels in the aquifer.

4.1.5 Archaeological and Historical

No archaeological or historic sites are known to exist at the well site, and no short-term impacts due to construction are expected.

4.1.6 Traffic

The two-lane Highway 11 passes south of the well site. Traffic along this road may backup slightly during transport of the drilling equipment and construction materials, but the infrequent occurrences should not greatly affect the surrounding residents. Mobilization will be done during low traffic flow hours.

4.1.7 Public Health and Safety

The construction contractor shall be responsible for implementing appropriate measures to ensure public health and safety during the construction period. Construction areas will be delineated.

4.1.8 Socioeconomic

Construction of the production well and related improvements will provide several related jobs for the local workers. The purchase of materials from local suppliers will help the local building economy.

4.2 LONG-TERM IMPACTS AND MITIGATIVE MEASURES

No long-term impacts are expected for the exploratory well. If the results of the pumping test and water quality analysis are favorable, the use of the well for production of potable water to the existing water system is within the sustainable yield of the aquifer.

The following sections describe the production well's long-term impacts on noise, flora and fauna, drainage, stream flow, infrastructure, socioeconomic, land use and planned development.

4.2.1 Noise

Very little noise at the well site will be generated from the pumping of the production well as the pumping equipment at the well is removed from any residence area and produces very low noise levels. Similar equipment is currently used in similar and more populated areas.

4.2.2 Flora and Fauna

Since there are no rare or endangered plant or animal species at the project site, no significant long-term impacts are expected.

4.2.3 Drainage

The minimal amount of additional runoff generated from the project improvements will be allowed to sheet flow into existing natural drainage ways or into drywells constructed on the site. No significant impacts on drainage are expected.

4.2.4 Stream Flow and Hydrology

The withdrawal of up 1400 gpm (gallons per minute), or a maximum of 2,000,000 gallons per day of groundwater by the well will have no impact on any streams in the area as there are no springs or perennial streams nearby.

There are no ephemeral or perennial streams nor wet lands within a one mile radius of the well.

The well is an exploration well with the intent of determining the water levels and specific capacity of the well. The aquifer unit sustainable yield as set forth in the State Water Plan (1992), is 393 mgd (Keaau 80402). The expected production from the well is up to 2 mgd. There is no anticipated significant impact on the water levels in the aquifer.

4.2.5 Infrastructure

Power will be required to operate the pump motor and control center. Because there is no well motor demand at the site presently, additional power consumption is expected and there will be an increase on HELCO's existing power grid. HELCO has indicated that this increase can be accommodated. It is estimated that the increase will be about 700-horse power (hp).

The road leading to the site will need to be improved for access of equipment to the site. It is currently a dirt road that is eroded in some areas.

4.2.6 Socioeconomic

The Department of Water Supply (DWS), County of Hawaii is responsible for providing safe drinking water in a reliable manner to the people of the island of Hawaii. To increase the reliability of water delivery in dry weather and to use high-level groundwater as the source to reduce pumping costs. A well in this area will assure the ability for DWS to provide its support for the residential, commercial and agricultural water users of the Mountain View and near by areas.

4.2.7 Land Use and Planned Development

The proposed well facility is expected to remain consistent with the land use designation of the area. Both the County and State designations fall under urban and residential.

SECTION 5 ALTERNATIVES TO THE PROPOSED ACTION

Four alternatives were considered for this project:

- 1) no action,
- 2) delayed action,
- 3) alternate sites, and
- 4) alternate sources.

These alternatives are discussed below.

5.1 NO ACTION

A no-action alternative is not practical, because the Department of Water Supply may not be able to meet the demands of the existing system during dry weather or failure of the existing system to boost water to the area, possibly resulting in water shortages. The benefits of providing the public with redundancy to the existing system is vital to the mission of the DWS and to access the high level groundwater to reduce energy costs for pumping water.

5.2 DELAYED ACTION

Delayed action is also not a practical alternative. It would create a reduced service to customers during emergencies and higher costs for water.

5.3 ALTERNATE SITES

The well site was selected by the Department of Water Supply based on its proximity to the existing reservoir and the ease of site development. This is the only practical economical site.

5.4 ALTERNATE SOURCES

The development of tunnels or surface water sources would be unreliable and prone to drought conditions. The purpose of the well is to provide a reliable source to the existing sources and tap the high level groundwater. The use of surface water would also require treatment under the Surface Water Rules of the Safe Drinking Water Act and its amendments. Such alternatives may cost as much as several millions of dollars to place in service and include significant maintenance and operations, regardless of the actual use.

The Department of Water Supply emphasizes the development of available and reliable groundwater as one of its primary sources of potable water.

SECTION 6
EXPECTED FINDINGS OF FINAL EA
FINDING OF NO SIGNIFICANT IMPACT DETERMINATION

There are few negative impacts, which have been identified in this Final Environmental Assessment for Olaa #6 Exploratory Well. Well construction should be adequately minimized by the suggested mitigative measures. In accordance with Chapter 343, *Hawaii Revised Statutes*, we would expect it to be determined that this project will not have significant environmental effect and an Environmental Impact Statement is not required. This would constitute a "Finding of No Significant Impact".

Description of the Proposed Action

The Department of Water Supply (DWS), County of Hawaii proposes to design and construct an exploratory deep well in Olaa in the Puna District of the Big Island of Hawaii. If the exploratory well proves to be productive, it will be outfitted to a production well to provide groundwater to the existing Olaa-Mt. View water system of the proposed well site and to explore the groundwater. Other alternatives have been explored but do not provide the redundancy required to insure a safe and sufficient water supply at reduced pumping energy rates.

The few negative impacts, which have been identified in this Environmental Assessment for Olaa #6 Exploratory Well, should be adequately minimized by the suggested mitigative measures. In accordance with Chapter 343, *Hawaii Revised Statutes*, it has been determined that this project will not have significant environmental effect and an Environmental Impact Statement is not required. This would constitute a "Finding of No Significant Impact" if there are no other impacts identified in the review process.

D. Determination, Findings and Reasons Supporting the Determination

The proposed project would not have a significant effect on the environment and therefore preparation of an environmental impact statement is not required. The "Significance Criteria," Section 12 of Hawaii Administrative Rules Title 11, Chapter 200, "Environmental Impact Statement Rules," were reviewed and analyzed. Based on the analysis, the following were concluded:

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

The lands for construction and access right-of-way are in former sugar agriculture lands and now pasture lands. No significant natural resources are present. No known cultural resources would be impacted. The State Division of Historic Preservation was contacted for review of the site. Should any archaeologically significant artifacts, bones or other indicators of previous onsite activity be uncovered during construction of the well, their

treatment will be conducted in strict compliance with the requirements of the Dept. of Land and Natural Resources.

The site would be visible from the highway, but the DWS would landscape the area similar to other facilities visible from the highway in the area. Drainage designs would be incorporated in to the site to reduce discharge and runoff.

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

The project, while certainly making use of groundwater resources, would increase the reliability of the supply of water to the Olaa-Mt. View water system and what is extracted will not significantly impact the sustainable yield of the aquifer.

Although the subject property is suitable for agricultural uses, the land is near the highway and residential area and well drilling project boundaries fall within the Low Density Urban Land Use Designation.

3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders.

The project is consistent with the policies in Chapter 344 and the EPA. Two broad policies are espoused: conservation of natural resources, and enhancement of the quality of life. The proposed project does not consume significant natural resources in land or groundwater, as this is a well to provide an alternative water source to the existing well sources down gradient. It would include mitigative measures to minimize various categories of pollution, while promoting general welfare and improving the reliability of providing quality water to the Olaa-Mt. View water system, allowing fulfillment of the social, economic and other requirements of residents in the Mountain View area.

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

Construction of the well would result in temporary economic benefits to the well drilling construction industry and indirectly to other economic sectors as well. The redundancy of the water source would allow the population a degree of reliability in its water supply, and possibly increase the potential for economic investments in the area.

5. Substantially affect public health.

The project would improve the reliability of a safe and sufficient water source to the area. It will facilitate provisions for water supply backup for the DWS and other public services. The negligible short-term impact of air and noise impacts due to construction, outweigh the overall positive impacts to the area.

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

The well project arises from the need established to provide a reliable water source to the present population. The total capacity of the source is not increased, limiting the population expected to be serviced. There are small subdivision projects in the region, but little activity in the Mountain View area. All activity conforms to current zoning and is mostly residential and farm dwelling units. The planning department does not expect much increase in density in this area and is prepared for the expected growth. The water source is planned to service the current population with some growth. The water system and source is not being expanded, only the source capability is being made more reliable and brought closer to the customers in the area. It will also take advantage of the high level groundwater and reduce pumping costs. No expected increase in population could be attributed to this well project.

7. Involves a substantial degradation of environmental quality.

The project area is unremarkable in terms of environmental resources, and standard mitigation measures would suffice to protect ambient environmental quality. Proper mitigation of construction noise and drilling water discharge would take place. The project is not expected to result in concentrations of air pollutants exceeding State or federal standards for ambient air quality as standard utility electric power will power the pump.

8. Is individually limited but cumulatively has considerable effects on the environment, or involves a commitment for larger actions.

The proposed project is self-contained and dependent only to the Mountain View area water system. The project solves a redundancy need for the existing water source makai of the service area and increases the ability to provide safe and sufficient water to customers requiring less energy to pump to the service elevation.

9. Substantially affects a rare, threatened or endangered species or their habitats.

No known endangered, threatened or candidate floral species would be affected by the project.

10. Detrimentally affects Air or water quality or ambient noise levels.

There is no impact on local air quality. No significant water quality impacts are anticipated either during construction or operation of the well. Proper well construction methods and materials are expected to be specified and used.

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

No environmentally sensitive areas would be affected. The project site is on slightly sloped land well inland of the coast. Tsunami inundation is very unlikely due to the high elevation of the site. Seismic risks are not expected if proper construction is used. The existing facilities have not experienced any damage. The volcanic hazards are comparable to those in Keaau and Hilo. Development of the property is compatible with the above criteria since there are no environmentally sensitive areas associated with the project site and the site was previously used for agricultural activities. As such the site no longer reflects a "natural environment".

12. *Substantially affects scenic vistas and view planes identified in county or state plans or studies.*

Due to the topographical characteristics of the property mauka of the highway and the hill behind the site, views of the area are not significant, although they are visible. Other DWS water facilities in the region are landscaped and fit in with the neighborhood environment.

13. *Requires substantial energy consumption.*

The well construction project will not require connection to the power company grid. Later permanent well pump installations will require up to a 500 horsepower motor. Many water pumping facilities in the DWS system have pump motors ranging from 200 to 500 or more horsepower. The cost to lift the water from booster pumps from lower elevation wells will require more power due to losses in efficiency and friction. Construction of a well in this location would actually reduce the power needed to deliver water to the community.

SECTION 7
LIST OF NECESSARY PERMITS AND APPROVALS

The following permits and approvals are anticipated for the development of the proposed Olaa #6 Exploratory Well project:

1. Plan Approval - Department of Water Supply, County of Hawaii.
2. Well Construction Permit - Commission of Water Resource Management, State DLNR.
3. Pump Installation Permit - Commission of Water Resource Management.
4. Department of Land and Natural Resources, State of Hawaii.
5. State Historic Preservation Office Review Department of Land and Natural.
6. Utility Company Approvals - HELCO, Verizon Hawaii

REFERENCES

1. *Island of Hawaii, Water Systems, Dept. of Water Supply, County of Hawaii.*
2. Letter from Department of Land and Natural Resources, State Historic Preservation Division.
3. Megumi Kon, Inc. State of Hawaii, Commission of Water Resource Management, Department of Land and Natural Resources. *Hawaii County Water Use and Development Plan. Review Draft, February 1992.*
4. H.T. Stearns and G.A. MacDonald, *Geology and Ground-Water Resources of the Island of Hawaii*, Bulletin 9, Hawaii Division of Hydrography, 1946.
5. State of Hawaii, *Environmental Assessment Booklet*
6. State of Hawaii, Department of Land and Natural Resources, Division of Water and Land Development. *Rainfall Atlas of Hawaii. R76. June 1986.*
7. U.S. Department of Agriculture, Soil Conservation service. *Soil Survey of Island of Hawaii, State of Hawaii. August 1972.*
8. *Land Use District Boundaries, District Map H-50, State of Hawaii, Land Use Commission, Dec. 20, 1974.*
9. Data collected from Waimea Water Services Inc.
10. Central Puna Water Master Plan (Draft), 1999, County of Hawaii, Dept. of Water Supply,

APPENDIX A

PHOTOS OF WELL SITE



Photo 1 of Existing Booster and Tank

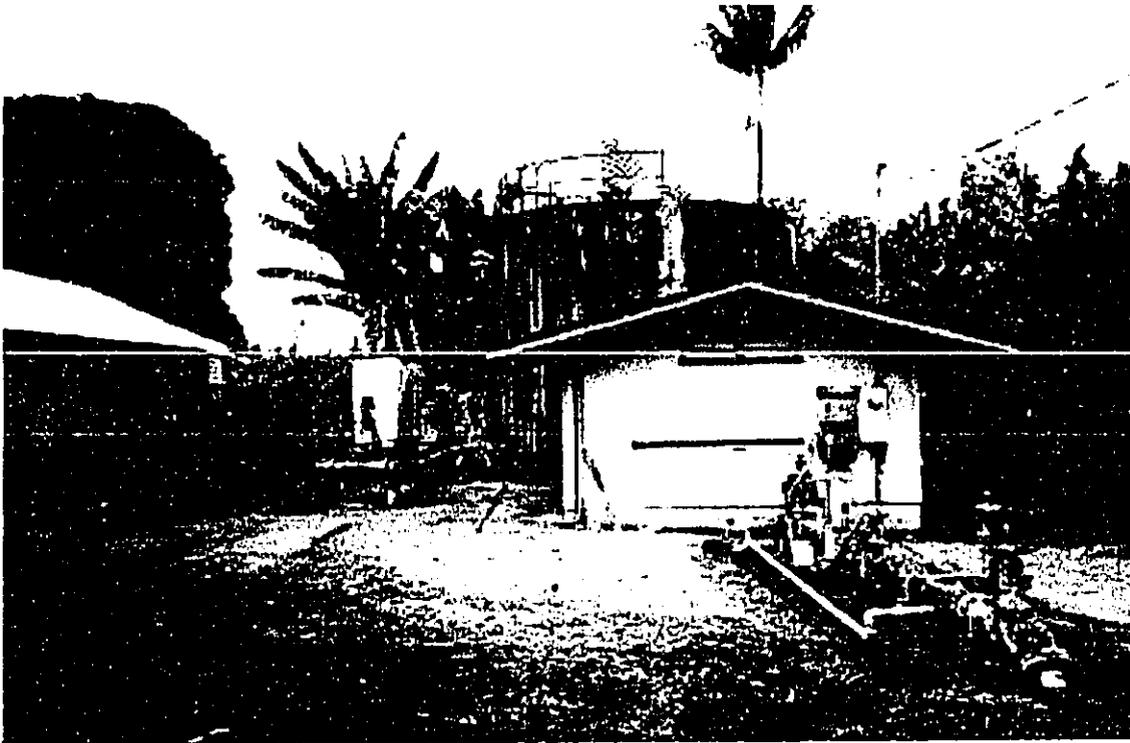


Photo 2 of Existing Olaa Booster and Tank



Photo 3 of Existing Olaa booster and tank and entry to new site

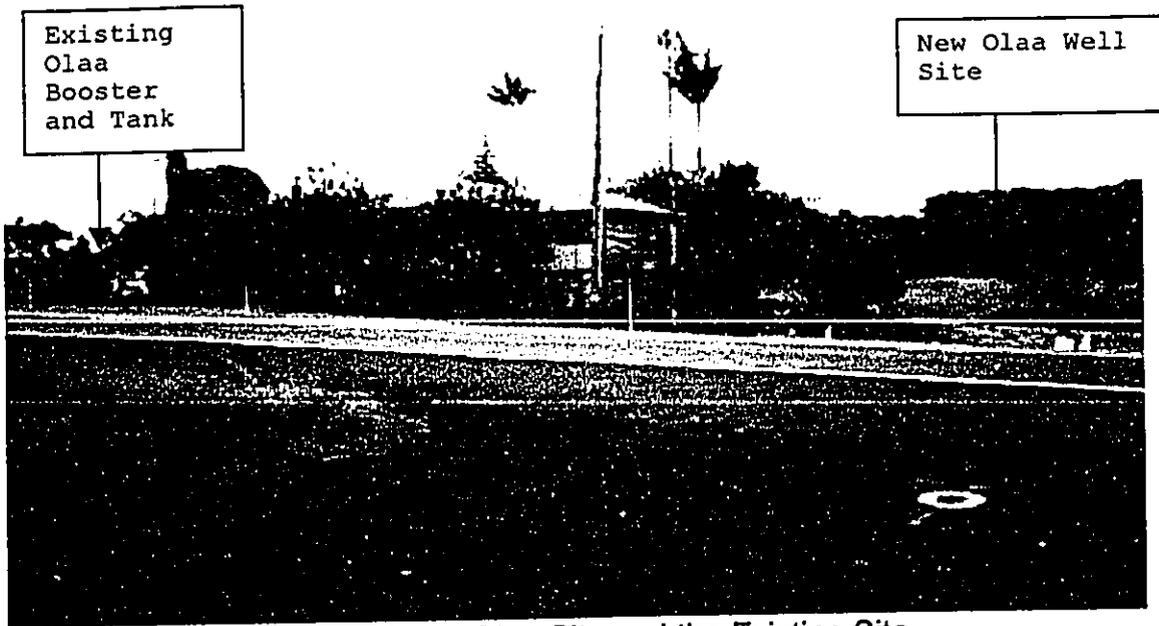


Photo 4 of new Olaa Site and the Existing Site

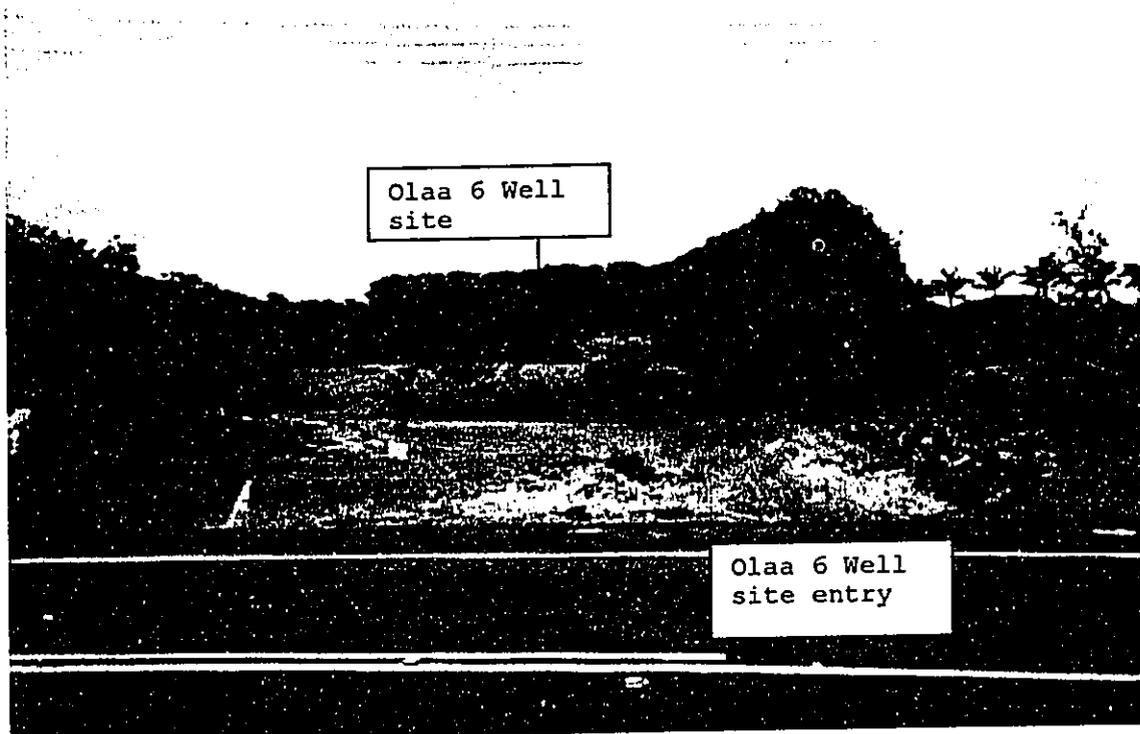


Photo 5 of New Olaa 6 well site



Photo 6 of Highway looking northwest from entry to Olaa 6 well site



Photo 7 of highway to the southeast of the entry to Olaa 6 well site



Photo 8 of Olaa 6 Well site looking northwest



Photo 9 of Olaa 6 Well site looking southeast



Photo 10 of the Olaa 6 Well site property looking back to highway



Photo 11 of a DWS booster system and tank in vicinity as an example of what the final development could look like.

APPENDIX B

LETTERS OF CORRESPONDENCE

DLNR, State Historic Preservation Division, Office of Environmental Quality Control

Letter to adjacent property owners



Olaa

Date: 26 October 2001

To: Mr. Ross Cordy
State Historic Preservation Division
DLNR

Fr: John Stubbart 

Re: Information Regarding Historical Sites in the Proposed Area
Olaa No. 6 Exploration Well

We are seeking information regarding historical sites at the location of the area of the proposed Olaa No. 6 Well (see attached). The area is in town and near the school (see attached maps and TMK, pages 7-9).

Could you send us a letter indicating the possibility of finding historic sites in the area?

Contact us at (808) 885-5941 if you require any additional information.

Mahalo.

Attachments

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



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

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhikawa 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

LOG NO: 28880 ✓
DOC NO: 0112PM06

December 31, 2001

Mr. John Stubbart
Waimea Water Services, Inc.
P.O. Box 326
Kamuela, Hawaii 96743

Dear Mr. Stubbart:

**SUBJECT: Request for Information Regarding Historic Sites—Proposed Olaa No. 6
Exploration Well, Olaa, Puna, Hawaii Island, TMK: 1-8-1:50**

This is in response to your letter of October 26, 2001, which requested information concerning the presence/absence of historic sites at the above referenced location. The County of Hawaii Department of Water Supply proposes to drill a well at this location. We apologize for our late response to your request.

We have no record of historic sites at the proposed project location. It is unlikely that significant historic sites would be found on this parcel given the location and history of previous land disturbance in this general area. We thus believe that no historic sites would be affected by the proposed well drilling.

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

Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

PM:amk

c. Chris Yuen, Hawaii County Planning Department

BENJAMIN J. CAYETANO
GOVERNOR



JMS
File
OLAS
GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENT QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4188

August 5, 2002

Mr. Milton D. Pavao, Manager
Department of Water Supply
345 Kekuanooa Street, Suite 20
Hilo, Hawai'i 96720

Dear Mr. Pavao:

Subject: Draft EA for Ola'a #6 Exploratory Well, Mountain View, Hawai'i

Thank you for the opportunity to review and comment on the subject project. We have the following comments.

1. Please clarify whether this project is for regular or stand-by use. The project summary indicates that the project is for stand-by use. However, the text of the Draft EA does not mention stand-by use.
2. Please consult with the immediate neighbors of this project.
3. Please describe the impacts of this project on cultural resources. ✓ p. 20 memo by 3.12
4. Please describe the impacts of the water withdrawal on the water levels and flows of nearby streams. 4.1.04
p-18 p-22
4.2.4 p-23
5. Please analyze the impacts of this project based on the new significance criteria established by the Environmental Council in 1996. Please see the attached example. 128+29
6. Please review the attached guidelines on assessing water well development projects and answer the relevant questions. ✓

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson
Genevieve Salmonson
Director

c: Waimea Water Services

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENT QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

JME
G/S
GLOB
GENEVIEVE SALMONSON
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3. Please describe the impacts of this project on cultural resources. ✓ p. 20 notes 3, 12
4. Please describe the impacts of the water withdrawal on the water levels and flows of nearby streams. ✓ 4.1.4
p. 18 p. 22
4.2.4 p. 23
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6. Please review the attached guidelines on assessing water well development projects and answer the relevant questions. ✓

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson
Director

c: Waimea Water Services

GUIDELINES FOR ASSESSING WATER WELL DEVELOPMENT PROJECTS

Prepared by the Office of Environmental Quality Control, May 1998

I. INTRODUCTION

Water is recognized as one of Hawaii's most important resources. Its quality and availability for a wide variety of purposes is essential to both humans and the natural environment. Hawaii's water supply, development and distribution is a critical environmental issue today and is likely to become even more sensitive in the future. The establishment of guidance protocols such as this will encourage understanding and careful planning of this important resource.

These guidelines are not new rules or law. The purpose of the guidelines is to provide preparers and reviewers a general standard of completeness to apply for any EA or EIS relating to well development. The objectives of this guidance document are to integrate the review of environmental concerns with existing planning and regulatory processes and to alert decision makers of the environmental effects of the well project. The approving agency or accepting authority remains responsible for the contents of the EA or EIS.

Pursuant to HAR §11-200-8(a)(5), basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource may be exempt from preparing an environmental assessment. Accordingly, drilling of monitor wells as defined by the CWRM (provided the well shall not be capable of being used or intended to be used to withdraw groundwater for the purposes of exploring or developing ground water) may be exempt.

Environmental assessments for exploratory wells should not need to comply with all the information requirements below because some of the information will not be available until the well is tested. Should the exploratory well yield positive results and demonstrate production capability, a second environmental assessment for the production well should be prepared to comply with all the information requirements.

II. IMPACT ASSESSMENT CONTENT

In addition to the content requirements for environmental assessments and impact statements, which are set out in the EIS rules, any well development project should include the following information.

1. Orientation Maps

Maps with the appropriate scale and coverage to analyze the aquifer or hydrologic unit that show the following:

- a) General information: location of proposed well, TMK or land ownership maps, location

of existing and future wells in the affected aquifer or hydrologic unit, and general references such as roads, schools, etc.

b) Hydrologic information: aquifer or hydrologic unit boundary, nearby streams and wetlands, known or assumed groundwater flowpaths, known or assumed water level contours.

c) Contamination information: Points or regions of known contamination, points of potential contamination (landfills, individual wastewater disposal systems (cesspools, septic tanks, aeration units), hazardous waste sites, dry wells and injection wells), known or assumed chloride levels at specified depths in relation to nearest or adjacent wells, likely wellhead protection area for the proposed well.

NOTE: New injection wells and dry wells are typically prohibited from within 1/4 mile of a drinking water well. Other restrictions may apply. New water wells should not be situated in areas that have a significant need for injection wells, dry wells, or on-site individual wastewater disposal systems.

2. Aquifer or Hydrologic Unit Status

A description of the aquifer or hydrologic unit status including the following:

- * Sustainable yields or other measures of water availability
- * Authorized water use by the Commission on Water Resource Management (for Water Management Areas only)
- * Data table presenting the following information as appropriate
 - Current water use totals, including subtotals for individual users
 - Current installed capacity including subtotals for individual wells and/or groups of wells.
 - Pending installed capacity and/or use for the proposed well and subtotals for individual wells and/or groups of wells within the aquifer

NOTE: Format and sample data tables for aquifer status data are contained in appendix #1.

3. Contamination Analysis and Vulnerability Assessment

A record of contamination problems in the aquifer or hydrologic unit including but not limited to saltwater intrusion, turbidity, heavy metals, inorganic and organic chemicals, microbiological agents, water quality parameters (such as pH, alkalinity, calcium, conductivity and temperature), and radioactivity. If contamination exists, the sources and duration of the contamination should be listed. Water quality data from nearby wells should be presented as well as any anticipated need for treatment or filtering systems. Discuss past and existing land uses within the likely wellhead protection area and the potential for future contamination from those uses.

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

of existing and future wells in the affected aquifer or hydrologic unit, and general references such as roads, schools, etc.

b) Hydrologic information: aquifer or hydrologic unit boundary, nearby streams and wetlands, known or assumed groundwater flowpaths, known or assumed water level contours.

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- * Data table presenting the following information as appropriate
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 - Current installed capacity including subtotals for individual wells and/or groups of wells.
 - Proposed installed capacity and/or use for the proposed well and subtotals for individual wells and/or groups of wells within the aquifer

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The potential for contamination should be assessed based on geologic and hydrologic considerations. Although sources of contamination might be presently absent, vulnerability to contamination might be great, if contamination sources occur in the future, due to factors such as high rates of infiltration or thin, protective soil horizons.

Any hazardous materials used and/or produced during drilling and treatment should be described. The method of handling these hazardous materials should also be disclosed.

4. Hydrologic Impact Analysis

A description of the associated watershed and recharge area and a discussion of the potential effects the well development may have on affiliated groundwater and surface water (e.g., streams and wetlands). Relevant hydrologic, physical, chemical, and biological data for potentially affected waters should be included. If potential impacts exist, a monitoring program for the surface waters should be included.

NOTE: See appendix 2 for sample description.

The EA should include pump test data on water level, extraction rates, and water quality. Similar data from nearby wells should also be included. The precise criteria used to determine if the well should be converted to production should be described. Any provisions for future use and monitoring of wells not placed into production should also be described.

5. Biological Assessment

A flora and faunal survey for sites in biologically sensitive areas.

6. Archaeological and Cultural Impact Assessment

A description of the archaeological and cultural significance of the region, including an on-site survey as well as consultations with Native Hawaiian groups such as DHHL, OHA and local community associations. (If applicable, the Environmental Council's Guidelines for Assessing Cultural Impacts could be used for this purpose.)

7. Financial and Institutional Arrangements

In some instances, a well is developed by private financing, the transfer of public lands to government or private developers, or in return for a water allocation credit to supply an urban development. The EA should include a full discussion of any institutional, financial or land use arrangements or commitments related to developing the well and delivering water to end users.

These arrangements may include the formation of public utility companies and subsequent rate-setting, the establishment of county water commitments, the co-funding of state or county water system development, an executive order or other set-aside of state lands, and purchase of land or easements by public entities.

Any or all of these arrangements and all permits or governmental approvals required to fulfill these commitments should be listed.

8. Watershed and Land Use Analysis

A discussion of how waters from the well will be used, and an analysis of how the proposed well development may affect land and water uses on the island and in the region. The analysis should include a discussion of the following (published materials may be referenced):

- * Hawaii State Water Plan and its component parts
- * County General, Development, and/or Community Plans
- * Plans for future water development within the aquifer
- * Any related water, wastewater, drainage or erosion control plans
- * Historical water supply and demand figures for the region
- * How the well may affect existing water sources
- * Any secondary or cumulative impacts caused by promoting land uses that alter the hydrology of the source and/or end-use area
- * An assessment of the well's impact on the land owners, water users including farmers and kuleana residents in the region and a declaration if ceded lands are involved.

9. Alternative Analysis

A list of alternatives to new groundwater development and discussion of their related costs and benefits. The list should include but not be limited to alternative locations, wastewater reuse, rainfall catchment, existing potable and non-potable water supplies, water conservation and Demand Side Management or Integrated Resources Planning. Show why developing a new source is more cost efficient than water conservation programs (slow-flow and low-flush retrofits, leak detection, etc.). In the case of back-up wells, there should be a discussion of the feasibility of providing a back-up pump only, rather than drilling a second well.

10. Impacts of Accessory Facilities

A description of impacts associated with the well's permanent production facilities including pumps, distribution pipelines, control devices, storage facilities, access roads and accessory structures.

The inclusion of this information will help make environmental assessments and environmental impact statements complete. If you have any questions, please call OEQC at 586-4185.

Appendix #1

FORMAT SUGGESTIONS AND SAMPLE TABLES AND CHARTS TO DISPLAY SUSTAINABLE YIELD DATA.

Sustainable Yield

Sustainable yield policies for basal aquifers involve trade-offs between groundwater extraction rates and aquifer water levels. The selected extraction rate implies acceptance of the affiliated equilibrium head (h_e), the water level at which the aquifer stabilizes under pumping at sustainable yield levels.

Equilibrium head is usually less than pre-development water levels or initial head (h_i). For comparative purposes, it is helpful to attach values of h_e and h_i to sustainable yield figures. Groundwater extraction can then be discussed in terms of its relationships with sustainable yields and water levels.

Data Subtotals and Grouping

To assure the clarity of information presented in the EA, tables for the following categories of data should be grouped by user/operator and landowner.

Categories for Data Tables in the EA

- * Current water use totals
- * Current installed capacity
- * Pending installed capacity
- * Authorized water use

To assist in spatial analysis, subtotals should also be grouped for aquifer sub areas and/or water quality regimes (such as zones of varying recharge of extraction intensity or chloride concentration).

A sample table for the display of this data is presented in the next page.

Aquifer or Hydrologic Unit Status Data

Sustainable Yield = 40 mgd

Initial head = 20 feet

Equilibrium head = 18 feet

Authorized Water Use (for water management areas only) = 36 mgd

Table 1: Overall Aquifer or Hydrologic Unit Status Data in million gallons per day

Land Owner	Authorized Water Use (Permitted by CWRM)	Existing (E)		Planned/Pending (P)		Potential Future (E + P)	
		Pump Capacity*	Average Use **	Pump Capacity	Proposed Use	Pump Capacity	Proposed Use
A	4	5	4	+5	+4	10	8
B	7	10	7	+3	+2	13	9
C	25	25	15	-10	-5	15	10
Total	36	40	26	-2	+1	38	27

Table 2: Aquifer or Hydrologic Unit Status Data for Landowner C in million gallons per day

Well Site	Authorized Water Use (Permitted by CWRM)	Existing (E)		Planned/Pending (P)		Potential Future (E + P)	
		Pump Capacity	Average Use	Pump Capacity	Proposed Use	Pump Capacity	Proposed Use
Mauka	10	10	8	0	0	10	8
Makai	5	5	0	-5	0	0	0
Central	10	10	7	-5	-5	5	2
Total	25	25	15	-10	-5	15	10

Notes:

* Total amount of water a well pump is capable of removing from the ground under ideal conditions in a 24-hour period. This number should be the same as the "rated pump capacity or installed pump capacity" as reported by the well owner to the CWRM.

** Average water use based upon water meter readings as reported by the well owner to the CWRM. The average should be based on the appropriate number of years of data.

Appendix #2

SAMPLE DESCRIPTION LIST FOR THE AFFECTED SECTOR WITHIN A WATERSHED AND GROUNDWATER RECHARGE AREA

Below you will find a list of characteristics that should be discussed in the description of affected sector within a watershed and groundwater recharge area.

Watershed:

1. Drainage area boundaries
2. Drainage networks and patterns
3. Groundwater discharges as sources of surface water flows
4. Surface water flow and habitat characteristics
 - a. timing, magnitude, duration, frequency of groundwater-source baseflows
 - b. relationships between baseflows and aquatic and riparian habitats and communities,
 - c. water quality
 - d. water uses (e.g., ditch or 'auwai systems)

Recharge Area:

1. Boundaries
2. Geologic structure
3. Groundwater flow patterns
4. Overlying land and water uses, and runoff patterns.
5. Relationships between recharge rates and patterns, and climatic variations
6. Relationships between proposed groundwater extraction and associated activities, and aquifer water levels
7. Storage volumes, other wells, discharges to surface and coastal waters, and water quality parameters

Appendix #3

SOURCES OF INFORMATION

1) Hydrologic information may be obtained from the Commission on Water Resources Management. These include:

- a) location of existing wells;
- b) CWRM aquifer boundary;
- c) information on nearby streams;
- d) sustainable yield for aquifer;
- e) authorized water use by CWRM (for water management areas only);
- f) current water use within aquifer;
- g) current installed capacity within aquifer;
- h) pending installed capacity and water use within aquifer;
- I) Hawaii State Water Plan and its component parts;
- j) water levels of nearby wells; and
- k) salinity levels of nearby wells.

2) Contamination information may be obtained from the Department of Health. These include:

Safe Drinking Water Branch

- a) results of water quality tests of nearby wells;
- b) records of contamination problems in the aquifer; and
- c) locations of drywells and injection wells.

Wastewater Branch

- a) locations of individual wastewater systems.

Solid and Hazardous Waste Branch

- a) location of hazardous waste sites; and
- b) location of landfills.

3) Preliminary information about the well head protection area may be obtained from the Safe Drinking Water Branch, Department of Health.

4) Information about wetlands may be obtained from the U.S. Army Corps of Engineers.

5) County general, development and community plans may be obtained from the respective planning departments.

DETERMINATION, FINDINGS AND REASONS FOR SUPPORTING DETERMINATION

SIGNIFICANCE CRITERIA: According to the Department of Health Rules (I 1-200-12), an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects, and its short and long-term effects. In making the determination, the Rules establish "Significance Criteria" to be used as a basis for identifying whether significant environmental impact will occur. According to the Rules, an action shall be determined to have a significant impact on the environment if it meets any one of the following criteria:

- ✓ (1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resources;

The proposed project will not impact scenic views of the ocean or any ridge lines in the area. The visual character of the area will change from the current agricultural land to an improved 4-lane highway which is compatible with the surrounding land use plans and programs being implemented for the region. The highway corridor is comprised of "Prime" agricultural land which is an important resource. Development of drainage systems will follow established design standards to ensure the safe conveyance and discharge of storm runoff. In addition, the subject property is located outside of the County's Special Management Area (SMA).

As previously noted, no significant archaeological or historical sites are known to exist within the corridor. Should any archaeologically significant artifacts, bones, or other indicators of previous onsite activity be uncovered during the construction phases of development, their treatment will be conducted in strict compliance with the requirements of the Department of Land and Natural Resources.

- ✓ (2) Curtails the range of beneficial uses of the environment;

Although the subject property is suitable for agricultural uses, the land area adjoining the Mokulele Highway is naturally suited for transportation purposes due to its location proximate to an existing highway system. To return the site to a natural environmental condition is not practical from both an environmental and economic perspective.

- (3) Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders;

The proposed development is consistent with the Environmental Policies established in Chapter 344, HRS, and the National Environmental Policy Act.

- (4) Substantially affects the economic or social welfare of the community or state;

The proposed project will provide a significant contribution to Maui's future population by providing residents with the opportunity to "live and work in harmony" in a high quality living environment. The proposed project is designed to support surrounding land use patterns, will not negatively or significantly alter existing residential areas, nor will unplanned population growth or its distribution be stimulated. The project's development is responding to projected population growth rather than contributing to new population growth by stimulating in-migration.

- (5) Substantially affects public health

Impacts to public health may be affected by air, noise, and water quality impacts, however, these will be insignificant or not detectable, especially when weighed against the positive economic, social, and quality of life implications associated with the project. Overall, air, noise, and traffic impacts will be significantly positive in terms of public health as compared to the "no action" alternative.

- (6) Involves substantial secondary impacts, such as population changes or effects on public facilities

Existing and planned large-scale housing development projects within Wailuku-Kahului and Kihei will contribute to a future population growth rate that will require expansion of public and private facilities and services. These

improvements will become necessary as the overall population of Maui grows and settlement patterns shift. However, the proposed project will not in itself generate new population growth, but provide needed infrastructure the area's present and future population.

In addition, new employment opportunities will generate new sources of direct and indirect revenue for individuals and the County of Maui by providing both temporary and long-term employment opportunities during the construction period. Indirect employment in a wide range of service related industries will also be created from construction during project development.

(7) Involves a substantial degradation of environmental quality;

The proposed development will utilize existing vacant agricultural land. With development of the proposed project, the addition of urban landscaping will significantly mitigate the visual impact of the development as viewed from outside the site while the overall design will complement background vistas.

Makai views from the subject property are available, however, they are not significant nor generally, available to the public in the property's present restricted condition.

(8) Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions;

By planning now to address the future needs of the community and the State, improvement of the transportation system is consistent with the long term plans for Maui. No views will be obstructed or be visually incompatible with the surrounding area.

(9) Substantially affects a rare, threatened or endangered species or its habitat;

No endangered plant or animal species are located within the highway corridor.

(10) Detrimentially affects air or water quality or ambient noise levels;

Any possible impact to near-shore ecosystems resulting from surface runoff, will be mitigated by the establishment of on-site retention basins during the construction phases of development. After development, retention areas within the highway right-of-way will serve the same function to encourage recharge of the groundwater.

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

Development of the property is compatible with the above criteria since there are not environmentally sensitive areas associated with the project and the physical character of the corridor has been previously disturbed by agricultural uses. As such, the property no longer reflects a "natural environment". Shoreline, valleys, or ridges will not be impacted by the development.

(12) Substantially affects scenic vistas and view planes identified in county or state plans or studies;

Due to topographical characteristics of the property, views of the area to be developed are generally not significant although they are visible. The majority of the proposed project will not be visible, except from higher elevations by the general public or from persons traveling along the highway.

(13) Requires substantial energy consumption.

The location of the proposed project is between Maui's major growth areas. This relationship will reduce travel times and energy consumption after project build out through efficiencies gained by the increased capacity of the highway. Construction of the proposed project will not require substantial energy consumption relative to other similar projects.

Letters sent to near by parcels of landowners not visited by Staff

Parcels next to proposed Olaa #6 Well:

Parcel #	Owner Name	Address
3-18-005:095	Charles M Bostwick Barbara J Bostwick	PO Box 110 Mountain View, 96771
3-18-001:024	Paulino G Villanueva Jr Audrey D K Villanueva	1202 Volcano Road PO Box 5513 Hilo, 96720
3-18-001:025	Bernice E Oshiro Doris H Fujimori	663 Kaumana Drive Hilo, 96720
3-18-001:003	Shigeru Okada George C Okada Sakae Okada	PO Box 129 Mountain View, 96771
3-18-001:004	Toshie Nagata Don M Nagata	PO Box 105 Mountain View, 96771
3-18-001:005	Fumie Omori Family Partners	2558 Kinoole Street Hilo, 96720
3-18-001:022	Murray L Gier Trust Sybil V Gier Trust	76 Kaikea Place Kailua, 96734
3-18-001:021	Kiyomi Nakanishi Richard Nakanishi Doris Hiroshi Trust	1220 Volcano Road PO Box 122 Mountain View, 96771
3-18-001:047	Yasuko Niimi Trust	18-1220B Volcano Hwy PO Box 249 Mountain View, 96771

SAMPLE LETTER SENT TO NEAR BY LAND OWNERS

September 10, 2002

**«FirstName» «LastName»
«Address1»
«City», «State» «PostalCode»**

Subject: Proposed OIaa #6 Exploratory Well

Dear «FirstName»:

The County of Hawaii Department of Water Supply (DWS) has proposed an exploratory well, OIaa #6 Exploratory Well, to be built near your property. The well site is next to the existing tank site (see attached Tax Map Key for well location).

We, Waimea Water Services, Inc., are the consultants contracted by the DWS for the proposed well. In order to comply with the Office of Environmental Quality Control (OEQC) requirements, we have furnished an Environmental Assessment that gives more detail on the purpose and parameters of OIaa #6. If you would like to review it, you can find a copy at the Mountain View Public Library.

As part of the process, we are asked to inquire with the neighboring properties, like you, to see if there are any questions or concerns regarding this proposed well.

Please feel free to call us at (808) 885-5941 or e-mail us at waiono@interpac.net.

Sincerely,

John M. Stubbart

Stephen P. Bowles

cc: Bruce McClure – Department of Water Supply

RESPONSES TO LETTERS SENT TO NEAR BY LAND OWNERS
As of 26 September 2002

One visit by Steve Bowles to the home of Minnie Galante and John Silva, the owners of the property that was subdivided and sold to the DWS for the well site. They told Mr. Bowles that they had no objections to the project. (31 Aug 02, TMK 23).

Letters sent to remaining landowners. No written responses to the letters sent.

- Charles Bostwick, 1:10 pm, 9/12/02, TMK 95, his only comment was he would like to see the guava trees surrounding the property along the property lines remain. We asked for his comments in writing and provided the email address but no comments were received.
- Richard Nakanishi, 4:00 pm, 9/13/02, TMK 21, after discussion on the project, he asked about the new tank and if the old tank would remain and what would happen to that property. We suggested he call the Dept. of Water Supply, as that was not part of this study and the results of the well drilling would determine the progression of the improvements and system changes.

APPENDIX C
RESPONSE LETTERS TO
DRAFT ENVIRONMENTAL ASSESSMENT



26 September 2002

Attn: Jeyan Thirugnanam
Genevieve Salmonson, Director
Office of Environment Quality Control
PO Box 702
Honolulu, HI 96813

Subject: Draft Environmental Assessment for Oiaa #6 Exploratory Well

Dear Ms. Salmonson:

We have enclosed a final draft of the Draft Environmental Assessment with the changes noted in your letter of 5 August 02. All six items were addressed.

1. Well use – This well will be used for regular use, as it will replace the water now pumped up the mountain to the service area. We have added language to define this more. See page 4, end of first paragraph.
2. We have tried to contact the neighbors directly with limited success. Attached is the letter sent to each nearby landowner and the list of those receiving the letter.
3. Impacts on cultural resources, language was added to the report as section 3.12 on page 20 and 26.
4. Impacts on water withdrawal, Steve Bowles, our hydro-geologist has added language on page 18, last paragraph of section 3.6, and on page 22, section 4.1.4, and on page 23, section 4.2.4.
5. New criteria, see items new language on items #11, 12, and 13, pages 28 and 29.
6. We have reviewed the water development guidelines and feel that as an exploration well in a high level aquifer that we have put in as much data as available at this point. By drilling this well, we will be able to find out more about the aquifers in the area and their ability to produce groundwater for consumption.

Previously we submitted a completed OEQC Publication Form and diskette with the project summary. Enclosed is a new diskette.

If you have any questions, please feel free to call me at 808) 885-5941.

Sincerely,



John Stubbart

/mdc

Attachments