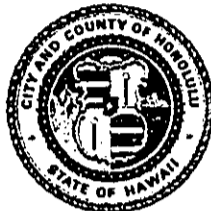




1995-04-08-OA-~~FEA~~ Pilot Program for Rehabilitation of Sewer Lines in Enchanted Lakes

DEPARTMENT OF WASTEWATER MANAGEMENT  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



JEREMY HARRIS  
~~FRANK PADI~~  
MAYOR

FELIX B. LIMTIAGO  
~~KENNETH M. RAPPOLD~~  
DIRECTOR  
CHERYL K. OKUMA-SEPE  
~~FELIX B. LIMTIAGO~~  
DEPUTY DIRECTOR

WPP 95-88

March 17, 1995

Office of Environmental Quality Control  
220 South King Street, 4th Floor  
Honolulu, Hawaii 96813

Gentlemen:

Subject: **Final Environmental Assessment (Negative Declaration) for  
Pilot Project for Rehabilitation of Sewer Lines in Enchanted Lake  
TMK 4-2:26, 34, 35, 61, 83, 84**

This letter is a Notice of Negative Declaration for the subject project pursuant to Chapter 343, HRS. The rehabilitation work proposed will involve the use of City funds and City Lands. This notice of determination was based on an environmental assessment prepared by the Department of Wastewater Management and after consulting with other agencies and individuals. Four (4) copies of the Notice of Final Environmental Assessment (Negative Declaration) are attached. The pertinent data for this notice are as follows:

1. Proposing Agency - Department of Wastewater Management, City and County of Honolulu.
2. Proposed Action - The proposed action will fulfill the mandate of the Consent Decree to conduct a Pilot Study in one or more collection system basins. The work consists of rehabilitation of existing sewer lines in two basin areas in Enchanted Lake, Kailua. Proposal A basin, in Lower Enchanted Lake, will include complete rehabilitation of main lines and lower laterals up to the property line. Proposal B basin, in Upper Enchanted Lake, will include assessment of main lines and lower laterals up to the property line, and rehabilitation of those segments determined to need repair/replacement.


Short term environmental impacts caused by construction activities will not significantly affect business, public or private activities. Ambient noise levels at those places will be reduced to below the State Department of Health daytime limit of 55 dBA. Service interruptions will be kept to a minimum and alternate routes for sewage flows will be provided during construction. The

contractor will be required to follow State and County regulations for controlling dust and noise, posting warning signs and covering or barricading excavations when required for safety and for providing traffic control if needed.

Long term impacts may include reduced peak wet weather flows into the Enchanted Lake and Kailua Heights Wastewater Pump Stations. The current problems involving occasional wet-weather bypasses/spills in these areas may be mitigated to some degree.

3. Determination - Since we have determined that the proposed work will not have a significant impact on the environment, an Environmental Impact Statement will not be prepared. Other agencies and individuals were consulted and the Draft EA was published in the February 8, 1995, OEQC Bulletin. The comments that were received and our responses are included in the Final EA.
4. Reasons Supporting Determination - Reasons and conclusions supporting the determination are based on the following criteria. The proposed work will not:
  - destroy any archaeological, historical or cultural resources;
  - directly affect any rare or endangered species, flora or fauna;
  - conflict with the State's environmental policies and goals expressed in Chapter 343, HRS;
  - affect the economic or social welfare of the community or State;
  - degrade environmental quality.
5. Contact Person - Stephanie Dodge  
Division of Planning and Service Control  
Department of Wastewater Management  
Honolulu Municipal Building, 14th Floor  
Honolulu, Hawaii 96813  
Telephone No. 527-6865

Very truly yours,



FELIX B. LIMTIACO  
Director

Attachments (4 copies)

DEPARTMENT OF WASTEWATER MANAGEMENT  
CITY AND COUNTY OF HONOLULU

**FINAL**

ENVIRONMENTAL ASSESSMENT

FOR

PILOT PROJECT FOR REHABILITATION  
OF SEWER LINES IN ENCHANTED LAKE, KAILUA  
TMK 4-2: 26, 34, 35, 58, 61, 83, 84

MARCH 1995

PROPOSING AGENCY: DEPARTMENT OF WASTEWATER MANAGEMENT  
CITY AND COUNTY OF HONOLULU  
650 SOUTH KING STREET  
HONOLULU HAWAII

RESPONSIBLE OFFICIAL:

  
\_\_\_\_\_  
FELIX B. LIMTIACO  
Director

3/15/95  
Date

PREPARED BY: DEPARTMENT OF WASTEWATER MANAGEMENT  
CITY AND COUNTY OF HONOLULU

THIS ENVIRONMENTAL DOCUMENT IS SUBMITTED PURSUANT TO CHAPTER 343, HRS

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## I. INTRODUCTION

### A. PROJECT DESCRIPTION

The proposed project will fulfill the mandate of the Consent Decree to conduct a Pilot Study in one or more collection system basins.

The work consists of rehabilitation of existing sewer lines in two basin areas in Enchanted Lake, Kailua (see Exhibit A). Proposal A Basin, in Lower Enchanted Lake, will include complete rehabilitation of main lines and lower laterals up to the property line. Proposal B Basin, in Upper Enchanted Lake, will include assessment of main lines and lower laterals up to the property line, and rehabilitation of those segments determined to need repair/replacement.

### B. PROJECT LOCATION

**EXHIBIT A: Kailua Enchanted Lake Area (PROPOSAL LOCATIONS)** shows the Project in Windward Oahu in the Enchanted Lake area of Kailua. The area is entirely residential. The basin areas are at full development as envisioned by the City & County's Koolaupoko Development Plan (Development Plan).

Proposal A Basin (**EXHIBIT B: Lower Enchanted Lake**) lies in the low-lying area of Enchanted Lake, near Kaelepulu Pond. The basin consists of single family residences on 203 parcels totaling 50 acres. Sewer mains are 8" diameter, vitrified clay pipe, with a total length of 8,750 linear feet. The lower laterals are anticipated to be 6" in diameter, vitrified clay pipe. The average age of the collection system is 27 years, consisting of five development projects which were completed between 1964 and 1971.

Proposal B Basin (**EXHIBIT C: Upper Enchanted Lake**) lies in the upper area of Enchanted Lakes. The basin consists of single family residences on 156 parcels totaling approximately 40 acres. Sewer mains are 8" vitrified clay pipe with a total length of 5,560 linear feet. The lower laterals are anticipated to be 6" in diameter, vitrified clay pipe. The average age of the collection system in the project area is 28 years, consisting of four development projects which were completed between 1958 and 1984.

C. PROJECT OBJECTIVES

The objectives of the project are to comply with the mandate of the Consent Decree and to investigate effectiveness and costs of reducing Infiltration and Inflow (I/I) through various methods for the rehabilitation of sewer lines.

## II. DESCRIPTION OF PROPOSED PROJECT

### A. BACKGROUND AND EXISTING CONDITIONS

In 1992, GELCO was contracted by the Department of Wastewater Management to perform TV Inspection, Grouting and Sealing of cracks and joints under Job No. W4-92: Ahuimanu/Kaneohe/Kailua Sewer Line Rehabilitation Project. This project included the pilot project Proposal A and Proposal B areas. All main lines were inspected and tested and whatever deficient joints discovered were repaired by grouting/sealing.

Smoke testing was done in early 1993. The smoke testing results and television inspection results have been summarized and presented in Exhibit B and C.

After this work was completed, gross flow monitoring (covering relatively large areas) was done under a contract with Fukunaga and Associates, Inc. called the Sewer Rehabilitation and I&I Minimization Plan (1st Year) for all of Oahu. The resulting data indicated a high level of Infiltration and Inflow (I/I) existed for the Kailua basin. Intensive flow monitors (covering smaller problem areas) were installed to collect data for the pilot project Proposal A and B areas. Data has been collected under the Sewer Rehabilitation and I&I Minimization Plan (2nd Year). Results from this data indicate that there continues to be large amounts of I&I for these small basins.

### B. PROPOSED IMPROVEMENTS

The project proposes to rehabilitate the existing sewer main lines by using methods other than grouting and also includes the lower laterals to the property line. To expedite the work, the project will be done by a design-build contract, rather than a design-bid contract.

In Basin A, the entire sewer main and all lower laterals up to the property line will be rehabilitated by the methods chosen by the selected design/build team. Chemical grouting has been excluded as an acceptable method. One section of 8" main line of about 1,200 linear feet long, will be replaced by a 10" main line, as hydraulic modeling indicates that this section is hydraulically inadequate for the peak current flows in



the area. Also a portion of the existing line to be re-sized appears to be sagging.

In Basin B, the main lines and lower laterals up to the property line will be assessed, and only the areas determined to need rehabilitation during the assessment will be repaired/replaced. Again the method of rehabilitation will be that chosen by the selected design/build team. Chemical grouting has been excluded as an acceptable method.

**C. PROJECT FUNDING**

100% City and County funding in the amount of \$2 Million is available in the FY1995 Operating Budget.

### III. ENVIRONMENTAL SETTING

#### A. TOPOGRAPHY

The area for project basin A is relatively flat. Project basin B has moderately steep slopes.

#### B. GEOLOGY/SOILS

The soils in the project area are of the Jaucas series. Soils of the Jaucas series are excessively drained and are developed in wind- and water-deposited sand from coral and seashells. In a representative profile, the soil is single grain, pale brown to very pale brown, sandy, and more than 60 inches deep. In many places the surface layer is dark brown as a result of accumulation of organic matter and alluvium. The soil is neutral to moderately alkaline throughout the profile.

Permeability is rapid, and runoff is very slow to slow. The hazard of water erosion is slight, but wind erosion is a severe hazard where vegetation has been removed.

Workability is slightly difficult because the soil is loose and lacks stability. Deep trenching may require shoring of the soils to prevent collapsing. It is recommended that soil boring investigations be done during the design phase of the project to determine the stability of the soil.

#### C. CLIMATE

The area has a mild subtropical climate with strong northeast trade winds about 75 percent of the time. Mean annual temperature is 75 degrees Fahrenheit. Occasional temperatures in the upper fifties in the January-February and slightly over 90 degrees during the August-October constitute the extremes. Mean annual rainfall averages 50 inches along the coast and 150 inches along the crest of the Koolau Range. Heavy rains often occur during November-April, with only about 30 percent of the annual rainfall occurring in May-October.

D. BIOLOGY

There are no known endangered species of flora or fauna located within the project site. Due to the well developed areas surrounding the project, construction of this project will have no impact on wildlife.

E. AIR QUALITY

Although no information on air quality at the project site was obtained, it is observed that the air is relatively clear and low in pollution. This is because of the distance from major urban centers, and industries which produce noxious gases.

F. NOISE

Noise levels were not measured at the project site. The noise levels are basically normal residential activities and primarily urban road traffic.

G. ARCHAEOLOGY

There are no identified historic or archaeologically significant locations located within the project site. However, should any unanticipated sites, artifacts or remains, such as shell, bone or charcoal deposits, be discovered during construction, the work would be halted and mitigating measures will be discussed with the State Historic Preservation Office prior to commencing construction activity.

H. FLOOD HAZARD

The project is not considered to be in a flood-prone area. The Flood Insurance Rate Map (FIRM), City and County of Honolulu, Hawaii, Panel 90 of 135, shows the project site to be outside the 500-year flood plain. (Zone X).

#### **IV. SOCIO-ECONOMIC SETTING**

The Kailua/Mokapu neighborhood consisted of approximately 55,000 people in 1988. Most residents within the neighborhood's 14,000 households who are in the labor force work in downtown Honolulu. The Kailua town core includes commercial businesses and retain activities to service the neighborhood. Agricultural production is insignificant in the neighborhood.

Lands in the project areas are entirely residential. Lot sizes range (in general) from 5,000 to 10,000 square feet.

**V. PROBABLE IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT**

**A. SHORT TERM IMPACTS**

Short term impacts of the proposed project will be primarily due to construction. Use of construction equipment such as backhoes, trucks, hand compactors, and pavers, as well as specialized equipment for trenchless line installers will create noise, dust and exhaust emissions. The noise of the construction equipment will be minimized by placing mufflers on machines and avoiding unnecessary "gunning" of equipment. Construction dewatering may be required for some phases of construction. All applicable environmental permits shall be obtained from the State Department of Health and City and County of Honolulu Department of Public Works. Best Management Practices (BMP's) shall be implemented to control and reduce the discharge of pollutants. Daily traffic of the construction crew should be during off-peak hours. Construction activities will partially interfere with the flow of vehicular traffic. Traffic control by off-duty Police Officers and/or trained construction flagmen will mitigate traffic congestion. Parking will be restricted on both sides of streets, (where applicable) during construction. Other utilities such as water, electric, gas and telephone installations may also be affected by the construction activities. Construction plans will be reviewed for coordination by all utility companies affected.

**B. LONG TERM IMPACTS**

There are no negative long term impacts from this project.

One positive benefit from the project may be reduced peak wet weather flows into the Enchanted Lake and Kailua Heights Wastewater Pump Stations. The current problems involving occasional wet-weather bypasses/spills in these areas may be mitigated to some degree.

## **VI. ADVERSE IMPACTS WHICH CANNOT BE AVOIDED**

The noise level will increase somewhat during the construction period, but not to an unacceptable level. This effect will be of short duration, lasting only for the construction phase. The noise level can be reduced by the contractor by ensuring proper functioning of mufflers on all equipment.

During construction, dust may be generated from pipe installation procedures. The contractor will be required to comply with the procedures outlined by the Department of Health to mitigate the dust emission.

Construction dewatering may be required for some phases of construction. All applicable environmental permits shall be obtained from the State Department of Health and City and County of Honolulu Department of Public Works. Best Management Practices (BMP's) shall be implemented to control and reduce the discharge of pollutants.

Rehabilitation of the main lines and laterals is envisioned to be an in-situ process, avoiding open trench construction if at all possible. This should not only reduce dust problems, but should mitigate traffic problems and potential safety hazards also. Sewer by-pass around the work site may be the cause of additional construction impacts (noise, dust and traffic).

Residents in the two basins will be consulted in regards to driveway access and other roadway frontage usage. This will occur when construction is directly fronting their lots.

## VII. ALTERNATIVES TO THE PROPOSED ACTION

The alternatives for this project were to not conduct a pilot study and to conduct a pilot study in another basin area.

The pilot study is required under the Consent Decree between the City & County of Honolulu and the Environmental Protection Agency. The Consent Decree includes a required program for Sewer Rehabilitation and Minimization of Infiltration and Inflow. Not conducting a pilot study would be in violation of this consent decree.

Although other sites were investigated for the pilot study, the areas shown in this document were chosen due to the amount of information (smoke testing, TV inspection and flow monitoring data) available for these areas and due to the past and current problems of bypasses/overflows in the area.

**VIII. RELATIONSHIP BETWEEN LOCAL SHORT TERM AND MAINTENANCE AND ENHANCEMENT OF LONG TERM PRODUCTIVITY**

The short term use of the project is the same as its long term use - transport sewage from the residential area of Enchanted Lakes to the Regional Kailua WWTP for treatment and disposal. The proposed action, if implemented, may reduce wet weather peak flows for all downstream wastewater infrastructure, including the Enchanted Lake and Kailua Heights WWPS's.

The proposed action will not involve trade-offs between short-term uses, foreclose future options, narrow the range of beneficial use of the environment, nor pose long-term risks to health and safety.



**IX. MITIGATING MEASURES TO MINIMIZE ADVERSE IMPACTS**

The short term impacts occurring during the construction work will be minimized by applying current techniques and methods.

To minimize pollutant emissions from internal combustion engines, the contractor will be responsible for proper maintenance of all construction equipment and vehicles.

The contractor will be required to comply with Department of Health regulations to mitigate dust emission. Dust is not anticipated to be a problem due to the sandy nature of the native soil. Dust problems can be mitigated by use of an appropriate water sprinkling method and limiting the area being worked at any one time.

Construction dewatering may be required for some phases of construction. All applicable environmental permits shall be obtained from the State Department of Health and City and County of Honolulu Department of Public Works. Best Management Practices (BMP's) shall be implemented to control and reduce the discharge of pollutants.

Traffic control by off-duty Police Officers and/or trained construction flagmen will moderate traffic congestion.

**X. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES**

The construction of the proposed project would involve the commitment of certain natural and fiscal resources. The commitment of construction materials, manpower, and energy are mostly unrenowable and irretrievable. The impacts of using these resources should, however, be weighed against the benefits of the knowledge which the study can bring. Future projects for reducing I&I/preventing bypasses and overflows will draw upon the information gathered in this study to most economically allocate resources for future projects.

**XI. DETERMINATION**

Based on the preceding paragraphs, it is anticipated that the proposed action will result in no significant adverse impacts other than those described in this assessment. Consequently, a Negative Declaration is recommended and therefore, an Environmental Impact Statement would not be required.

## XII. REASONS SUPPORTING RECOMMENDED DETERMINATION

- A. The proposed action does not involve an irrevocable commitment or loss of or destruction of any natural cultural resource:

There are no natural or cultural resources associated with the project site. Development of the project area has substantially altered the site from its natural condition.

- B. The proposed action does not curtail the range of beneficial uses of the environment:

The proposed project is consistent with the County's General Plan and the Department of Wastewater Management's planning standards and would not curtail beneficial uses of the environment in the area. The proposed project will be compatible with the uses of the surrounding area.

- C. The proposed action is in concert with the State's long-term environmental policies, goals and guidelines as expressed in Chapter 343, HRS, and any revisions and amendments thereto, court decisions and executive orders:

The proposed project is consistent with the State's Land Use Plan which is in concert with all applicable policies, goals and guidelines. No long-term environmental conflicts are foreseen.

- D. The proposed action does not substantially affect the economic or social welfare of the community or State:

The economic impact will be affected by the short-term, construction related activities. Cash infusion during the construction phase will be the primary short-term economic impact. Upon completion of the project, the economic situation should return to the existing condition.

- E. The proposed action does not involve substantial secondary impacts, such as population changes or effects on public facilities:

The proposed project will not result in an increase of population in the area.

- F. The proposed action does not substantially affect public health:

Only the short-term impacts have potential for affecting public health. Construction activities will be regulated to minimize noise, dust and exhaust emissions.

- H. The proposed action is individually limited and cumulatively, does not have a considerable effect upon the environment or involve a commitment for larger actions:

The proposed action, either individually or cumulatively, will not have a considerable effect on the environment, nor will it involve a commitment to larger actions.

- I. The proposed action does not substantially affect rare, threatened or endangered species or habitats:

There are no known rare, threatened or endangered species of habitat associated with the project site.

- J. The proposed action does not detrimentally affect air or water quality or ambient noise levels:

Short-term impacts on air and water quality, as well as noise, may occur during the construction period, but will be mitigated by normal construction practices and will be regulated by the project plans and specifications.

- K. The proposed action does not affect any environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary or coastal waters:

The proposed project is not located in an environmentally sensitive area. The project is not located within a flood plain or tsunami zone. The project is not located on unique geologically hazardous lands.. It is also not expected to have any significant adverse impacts on fresh or coastal waters.

**XIII. LIST OF NECESSARY REVIEW/APPROVALS**

**A. CITY AND COUNTY OF HONOLULU**

1. Department of Public Works
  - a. Construction plan approval
  - b. Work in County Roads Permit
  - c. Construction Dewatering Permit
2. Department of Transportation Services - plan approval
3. Department of Land Utilization
  - a. Construction Dewatering Permit (Temporary)
  - b. Sewer Connection Permits
  - c. Sign Permit
  - d. Special Management Area Use Permit
  - e. Street Usage Permit

**B. STATE OF HAWAII**

1. Department of Health
  - a. Community Noise Control for Oahu, Title 11, Chapter 43
  - b. Vehicular Noise Control for Oahu, Title 11, Chapter 42
  - c. Fugitive Dust, paragraph 11-60-5, Air Pollution Control, Title 11, Chapter 60
  - d. Construction Plan Approval

**XIV. ORGANIZATION AND PERSONS CONTACTED**

**A. STATE OF HAWAII**

1. Department of Accounting and General Services
2. Department of Business, Economic Development and Tourism
3. Department of Education
4. Department of Land and Natural Resources
5. Department of Health

**B. CITY AND COUNTY OF HONOLULU**

1. Board of Water Supply
2. Planning Department
3. Department of Public Works
4. Department of Transportation Services
5. Police Department

**C. LEGISLATIVE OFFICIALS**

1. State Representatives
2. State Senators
3. City Council Members

**D. COMMUNITY GROUPS**

1. Kailua Neighborhood Board No. 31



E. OTHERS

1. Gasco, Inc.
2. Hawaiian Electric Company, Inc.
3. Oceanic Cable
4. GTE Hawaiian Tel

## XV. BIBLIOGRAPHY

- A. Design Standards of the Division of Wastewater Management, Volume 1 (Feb 1984) & Volume 2 (Jul 1984), Department of Public Works, City and County of Honolulu
- B. Standard Details for Public Works Construction, City and County of Honolulu, September 1984.
- C. Standard Specifications for Public Works Construction, City and County of Honolulu, September 1986.
- D. Islandwide Sewer Adequacy Study (Kailua), City and County of Honolulu, Department of Public Works, Division of Wastewater Management, Akinaka/Fukinaga Engineering Joint Venture, March 1989.
- E. TV inspection tapes for Job No. W4-92: Ahuimanu/Kaneohe/Kailua Sewer Line Rehabilitation, GELCO, 1992.
- F. Interim Sewer Rehabilitation and Infiltration & Inflow Minimization Plan, Department of Wastewater Management, City and County of Honolulu, Fukunaga and Associates, Inc., August 1994.
- G. Draft Request for Sealed Proposals, RFP No. R-055, Pilot Project for Rehabilitation of Sewer Lines in Enchanted Lake, Department of Finance, City and County of Honolulu, January 1995.
- H. Final Environmental Impact Statement for Lanikai Flood Control Project, Phase 1, September 1989, Department of Public Works, Division of Wastewater, 1Management, Barret Consulting Group.
- I. Ahuimanu-Kaneohe-Kailua Infiltration/Inflow Report, March 1992, City and County of Honolulu, Department of Public Works, Division of Wastewater, 1Management, Barret Consulting Group.
- J. State of Hawaii, Department of Business, Economic Development & Tourism, The State of Hawaii Data Book, 1990: A Statistical Abstract, 1987.

**XVI. RESPONSE TO CONTACTS**

ORGANIZATION	REPLIED BY	REPLY DATE	COMMENTS
Department of Accounting and General Services State of Hawaii	Letter	2/17/95	No comments
Department of Business, Economic Development and Tourism State of Hawaii	Letter	2/8/95	No comments
Department of Education State of Hawaii	Letter	3/2/95	No comments
Department of Land and Natural Resources State of Hawaii	Letter	2/27/95	Believe project will have "no effect" on historic sites
Department of Health State of Hawaii	Letter	3/9/95	No comments
Board of Water Supply City & County of Honolulu	Letter	3/9/95	Have water main replacement project in same area. Wish to review construction plans
Planning Department City & County of Honolulu	Letter	3/2/95	No objections
Department of Transportation Services City & County of Honolulu	Letter	2/28/95	No comments at this time. Wish to review traffic control plan and construction plans
Police Department City & County of Honolulu	Letter	3/3/95	No significant impact on HPD
State Representative Devin Nakoba Eve Anderson			
State Senator Whitney Anderson			
City Council Member Steve Holmes			
Neighborhood Board #31 Kailua			

GASCO	Letter	2/17/95	They have gas lines in the neighborhood and would like to review construction plans
Hawaiian Electric Company	Letter	3/9/95	No comments at this time. Would like to review construction plans
Oceanic Cable			
Hawaiian Telephone	Letter	3/6/95	No comments

BENJAMIN J. CAYETANO  
GOVERNOR



RECEIVED

'95 FEB 22 A9:19

95-263  
P.P. W  
EUGENE S. IMAI  
COMPTROLLER SPP ✓

MARY PATRICIA WATERHOUSE  
DEPUTY COMPTROLLER

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

LETTER NO. (P) 1116.5

FEB 17 1995

Mr. Felix B. Limtiaco  
Acting Director  
Department of Wastewater Management  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Attention: Ms. Stephanie Dodge

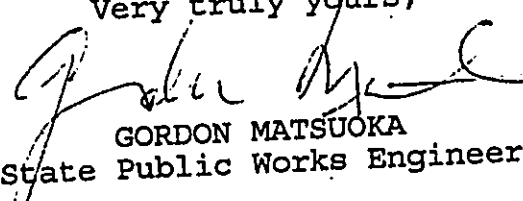
Dear Mr. Limtiaco:

Subject: Rehabilitation of Sewer Lines in Enchanted Lake  
Kailua, Oahu, Hawaii  
Draft Environmental Assessment

Thank you for the opportunity to review the subject document. We have no comments to offer.

If there are any questions, please have your staff contact Mr. Ralph Yukumoto of the Planning Branch at 586-0488.

Very truly yours,

  
GORDON MATSUOKA  
State Public Works Engineer

RY:jk



DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT, AND TOURISM

ENERGY DIVISION, 335 MERCHANT ST., RM. 110, HONOLULU, HAWAII 96813 PHONE: (808) 587-3800 FAX: (808) 587-3820

95-203  
95-0228 Plan.  
BENJAMIN J. CAYETANO  
Governor  
SELI F. MAYA  
Director  
RICK EGGER  
Deputy Director

EIS 016

February 8, 1995

DEPT OF WASTEWATER MGT

95 FEB -9 P 3:23

RECORDED

Handwritten notes and signatures on the right margin, including 'Jaysu' and other illegible marks.

Mr. Felix B. Limtiaco  
Acting Director  
City and County of Honolulu  
Department of Wastewater Management  
650 South King Street  
Honolulu, Hawaii 96813


Dear Mr. Limtiaco:

SUBJECT: Draft Environmental Assessment (EA) for Pilot Project for  
Rehabilitation of Sewer Lines in Enchanted Lake  
(Kailua, Oahu, Hawaii)

We wish to inform you that we have no comments regarding the subject  
Draft Environmental Assessment (EA).

Thank you for the opportunity to submit any comments or recommendations.

Sincerely,

  
Maurice H. Kaya  
Energy Program Administrator

MHK/hk

Benjamin J. Cayetano  
GOVERNOR

HERMAN M. AIZAWA, PH.D.  
SUPERINTENDENT



STATE OF HAWAII  
DEPARTMENT OF EDUCATION

P. O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

March 2, 1995

Ms. Stephanie Dodge  
Division of Planning and Service Control  
Department of Wastewater Management  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Ms. Dodge:

SUBJECT: Draft Environmental Assessment (EA) for  
Rehabilitation of Sewer Lines in Enchanted Lake  
Kailua, Oahu, Hawaii

We have reviewed the subject document and have no comment on the proposed rehabilitation of sewer lines in Enchanted Lake.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script, appearing to read "Herman M. Aizawa".

Herman M. Aizawa, Ph.D.  
Superintendent

HMA:jml

cc: A. Suga  
R. Hiraishi

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII

RECEIVED

'95 FEB 24 02:55



RECEIVED

FEB 27 P3:52

DEPT. OF  
WASTEWATER  
MANAGEMENT

STATE OF HAWAII

DEPT. OF WASTEWATER MGMT  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 6TH FLOOR  
HONOLULU, HAWAII 96813

95-298  
MICHAEL D. WILSON, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY  
GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT PROGRAM  
AQUATIC RESOURCES CONSERVATION AND ENVIRONMENTAL AFFAIRS CONSERVATION AND RESOURCES ENFORCEMENT CONVEYANCES FORESTRY AND WILDLIFE HISTORIC PRESERVATION DIVISION LAND MANAGEMENT STATE PARKS WATER AND LAND DEVELOPMENT

LOG NO: 13864 ✓  
DOC NO: 9502EJ12

95-0319

February 21, 1995

Mr. Felix B. Limtiaco, Acting Director  
Department of Wastewater Management  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Limtiaco:

SUBJECT: Draft Environmental Assessment (DEA) for Pilot Project for Rehabilitation of Sewer Lines in Enchanted Lake Kailua, Ko'olaupoko, O'ahu  
TMK: 4-5-34; 4-5-58; 4-5-61; 4-5-83

Thank you for the opportunity to review this project which proposes rehabilitation of sewer lines in the Enchanted Lake subdivision. The Enchanted Lake Subdivision was constructed by filling Kaelepulu Pond (State Site No. 50-80-11-377), formerly a traditional freshwater fishpond of much importance. This site may be eligible for the Hawaii Register and National Register of Historic Places for the information on Hawaiian history and prehistory that it is likely to yield through archaeological investigations. Because this project proposes rehabilitation of existing sewer lines and will be limited to previously excavated areas, we believe that this project will have "no effect" on historic sites.

We would appreciate the opportunity to review any future projects related to Kaelepulu Pond, especially those which may affect intact deposits, so that we can ensure that there is no adverse effect on this valuable resource.

If you have any questions please call Elaine Jourdane at 587-0015.

Sincerely yours,

DON HIBBARD, Administrator  
Historic Preservation Division

EJ:amk



BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



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

DEPT OF WASTEWATER MGMT

RECORDED 95-0481

'95 MAR 17 19:50

LAWRENCE MIDKE  
DIRECTOR OF HEALTH

95-397

P.R.

in reply, please refer to: ~~CFP~~  
EMD / WWB

A:KAILUA-S.P5

March 9, 1995

Mr. Felix B. Limtiaco  
Acting Director  
Department of Wastewater Management  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

RECEIVED  
95 MAR 17 16:43  
KLM  
DEPT. OF  
WASTEWATER  
MANAGEMENT


Dear Mr. Limtiaco:

Subject: Draft Environmental Assessment (EA) for Pilot Project  
for Rehabilitation of Sewer Lines in Enchanted Lake  
Kailua, Oahu

We have reviewed the material on the subject project submitted by your office. At this time, we have no objections to the proposed pilot project for rehabilitation of sewer lines in Enchanted Lake. We support this project.

Should you have any further questions, please contact Mr. Harold Yee of the Wastewater Branch at telephone 586-4294.

Sincerely,

  
JAMES K. IKEDA  
Acting Deputy Director for  
Environmental Health

LK:bhm

BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96843

RECEIVED  
MAR 14 9 05 AM '95

95-0442  
95-387  
JEREMY HARRIS, Mayor  
WALTER O. WATSON, JR., Chairman  
MAURICE H. YAMASATO, Vice Chairman  
SISTER M. DAVILYN AH CHICK, O.S.F.  
KAZU HAYASHIDA  
MELISSA Y.J. LUM  
FORREST C. MURPHY  
KENNETH E. SPRAGUE

March 9, 1995  
DEPT. OF WASTEWATER MGT.  
DIV. OF ENGR. & CONST.  
RAYMOND H. SATO  
Manager and Chief Engineer

95-0444

TO: FELIX B. LIMTIACO, DIRECTOR  
DEPARTMENT OF WASTEWATER MANAGEMENT  
FROM: *Raymond H. Sato*  
RAYMOND H. SATO, MANAGER AND CHIEF ENGINEER  
BOARD OF WATER SUPPLY  
SUBJECT: YOUR LETTER OF FEBRUARY 3, 1995 ON THE DRAFT  
ENVIRONMENTAL ASSESSMENT (EA) FOR THE REHABILITATION OF  
SEWER LINES IN ENCHANTED LAKE, KAILUA, TMK: 4-2

Thank you for the opportunity to review and comment on the Draft EA for the proposed rehabilitation of sewer lines in Enchanted Lake. We have the following comments to offer:

1. We have a water main replacement project in the subject area which is currently in the design phase. Approximately 4,100 linear feet of water main will be replaced along Nanaloko Place, along Akupa Street from Akamai Street to Akumu Street, along Akupa Place, and along Alahaki Street from Akumu Street to Holoholo Street. The construction plan review will be coordinated with the Department of Wastewater Management.
2. The sewer line construction plans should be submitted for our review and approval.

If you have any questions, please contact Barry Usagawa at 527-5235.

RECEIVED  
95 MAR 13 9:21 AM  
DEPT. OF WASTEWATER MGT.

WPP 95-95

March 20, 1995

**MEMORANDUM**

**TO:** MR. RAYMOND H. SATO, MANAGER AND CHIEF ENGINEER  
BOARD OF WATER SUPPLY

**FROM:** FELIX B. LIMTIACO, DIRECTOR  
DEPARTMENT OF WASTEWATER MANAGEMENT

**SUBJECT:** PILOT PROJECT FOR REHABILITATION OF SEWER LINES IN  
ENCHANTED LAKE, KAILUA, DRAFT ENVIRONMENTAL ASSESSMENT


Thank you for your comments on our Draft Environmental Assessment and for notifying us of your water main replacement project in the same area. We would like to review your construction plans.

Our construction plans will be forwarded for your review and approval at the appropriate times.

If you have any questions, please contact Stephanie Dodge of the Division of Planning and Service Control at 527-6865.

CHERYL K. OKUMA-SEPE

For FELIX B. LIMTIACO  
Director

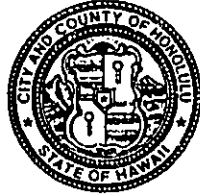
RS/17 SD SD:jm  


PLANNING DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

95-335  
P. ✓  
SRP ✓

'95 MAR -6 A9:15

JEREMY HARRIS  
MAYOR



DEPT OF WASTEWATER MGMT

CHERYL D. SOON  
CHIEF PLANNING OFFICER  
CAROLL TAKAHASHI  
DEPUTY CHIEF PLANNING OFFICER

MH 2/95-0204

March 2, 1995

95-0377

MEMORANDUM

TO: FELIX B. LIMTIACO, DIRECTOR  
DEPARTMENT OF WASTEWATER MANAGEMENT

FROM: CHERYL D. SOON, CHIEF PLANNING OFFICER  
PLANNING DEPARTMENT

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR PILOT PROJECT  
FOR REHABILITATION OF SEWER LINES IN ENCHANTED LAKE  
(KAILUA, OAHU, HAWAII), TAX MAP KEY: 4-2

In response to your department's request of February 3, 1995, we have reviewed the subject DEA and have the following comments to offer:

1. Proposals A and B Basins are designated for Residential use on the Koolaupoko Development Plan Land Use Map.
2. There are no publicly funded nor privately funded improvements designated in the general vicinity on the Koolaupoko Development Plan Public Facilities Map.
3. We have no objections to the proposed pilot project for rehabilitation of sewer lines in Enchanted Lake.

Should you have any questions, please contact Matthew Higashida of our staff at 527-6056.

*Cheryl D. Soon*  
CHERYL D. SOON  
Chief Planning Officer

DEPT. OF  
WASTEWATER  
MANAGEMENT

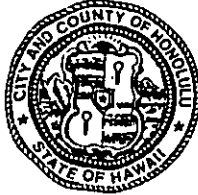
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CDS:ft

DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**

PACIFIC PARK PLAZA  
711 KAPIOLANI BOULEVARD, SUITE 1200  
HONOLULU, HAWAII 96813



JEREMY HARRIS  
FRANK P. FROST  
MAYOR

95 MAR -1 AM 11:17

95-0319  
95-308  
95-0329  
MAX  
CHARLES O. SWANSON  
JOSEPH M. MAGALHAES, JR.  
DIRECTOR

DEPT OF WASTEWATER MGT

AMAR SAPPAL  
DEPUTY DIRECTOR  
TE-553  
PL95.1.045

February 28, 1995

MEMORANDUM

TO: FELIX B. LIMTIACO, DIRECTOR  
DEPARTMENT OF WASTEWATER MANAGEMENT

FROM: CHARLES O. SWANSON, DIRECTOR  
DEPARTMENT OF TRANSPORTATION SERVICES

SUBJECT: REHABILITATION OF SEWER LINES - ENCHANTED LAKE  
DRAFT ENVIRONMENTAL ASSESSMENT (EA)  
TMK: 4-2

This is in response to your memorandum dated February 3, 1995 requesting our comments on the subject draft EA.

Based on our review, we have no objections or comments to offer at this time. Construction plans, including a traffic control plan, for all work within and affecting the City rights-of-way should be submitted to our department for approval.

Should you have any questions, please contact Lance Watanabe of my staff at local 4199.

*Charles O. Swanson*  
CHARLES O. SWANSON

DEPT. OF  
WASTEWATER  
MANAGEMENT

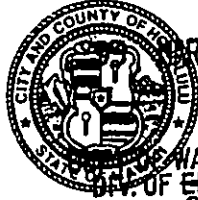
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POLICE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

801 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96813 - AREA CODE 808-531-3111

95-355  
H. R.  
SPP



MAR -8 P1 55

JEREMY HARRIS  
MAYOR

MICHAEL S. NAKAMURA  
CHIEF

HAROLD M. KAWASAKI  
DEPUTY CHIEF

DEPT. OF WASTEWATER MGT.  
ENGR. & CONST.  
PLANNING & SERV. DIV.

OUR REFERENCE BS-DL

March 3, 1995

95-0410

DEPT. OF  
WASTEWATER  
MANAGEMENT

95 MAR -7 9:33:39

RECEIVED

TO: FELIX B. LIMTIACO, ACTING DIRECTOR  
DEPARTMENT OF WASTEWATER MANAGEMENT

FROM: MICHAEL S. NAKAMURA, CHIEF OF POLICE  
HONOLULU POLICE DEPARTMENT


SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR PILOT PROJECT  
FOR REHABILITATION OF SEWER LINES IN ENCHANTED LAKE  
(KAILUA, OAHU, HAWAII)

This is in response to your memorandum of February 3, 1995, requesting for comments on a Draft Environmental Assessment for sewer line work in Enchanted Lake.

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

Thank you for the opportunity to review this document.

MICHAEL S. NAKAMURA  
Chief of Police

By   
EUGENE UEMURA, Assistant Chief  
Administrative Bureau

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

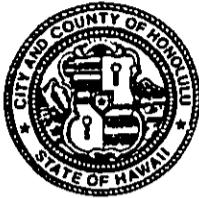
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

95 MAR -2 11:19

95-320

P. 11

JEREMY HARRIS  
MAYOR



DEPT OF WASTEWATER MGMT Acting

KENNETH E. SPRAGUE  
DIRECTOR AND CHIEF ENGINEER

DARWIN J. HAMAMOTO  
DEPUTY DIRECTOR

ENV 95-075

February 28, 1995

MEMORANDUM:

TO: FELIX B. LIMTIACO, ACTING DIRECTOR  
DEPARTMENT OF WASTEWATER MANAGEMENT

FROM: *for* KENNETH E. SPRAGUE  
ACTING DIRECTOR AND CHIEF ENGINEER *(KES)*

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA)  
REHABILITATION OF SEWER LINES IN ENCHANTED LAKE  
TAX MAP KEY: 4-2

We have reviewed the subject DEA and have the following comments:

1. A construction dewatering permit from the Department of Public Works is required.
2. Implement best management practices (BMPs) to control and reduce discharge of pollutants.

Should you have any questions, please contact Mr. Alex Ho at Local 4150.

DEPT. OF  
WASTEWATER  
MANAGEMENT

95 FEB 29 12:52

RECEIVED

95-271  
Plamp

**The Gas Company**  
515 Kamakee Street  
P.O. Box 3379 Honolulu, Hawaii 96842  
Telephone (808) 547-3333  
Fax (808) 547-3030 547-3561  
Telex 7430292

RECEIVED

'95 FEB 22 P3:04

February 17, 1995

DEPT OF WASTEWATER MGMT



**BHP**  
Petroleum Americas

City and County of Honolulu  
Department of Wastewater Management  
650 South King Street  
Honolulu, Hawaii 96813

Attention: Mr. Felix B. Limtiaco  
Acting Director

Gentlemen:

Subject: Draft Environmental Assessment for  
Pilot Project for Rehabilitation of Sewer Lines in Enchanted Lake  
Kailua, Oahu, Hawaii

Please be advised that BHP Gas Company maintains an underground utility gas main in the project vicinity, which serves residential customers in the area and is interconnected with the utility network in Kailua. We would appreciate your consideration during the project planning and design process to minimize any potential conflicts with the existing gas facilities in the project area.

Thank you for the opportunity to comment on the Draft Environmental Assessment. Should there be any questions, or if additional information is desired, please call me at 594-5574.

Very truly yours,

THE GAS COMPANY

Keith K. Yamamoto  
Supervisor, Engineering

KKY:krs  
95-103

DEPT. OF  
WASTEWATER  
MANAGEMENT

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SRP-1/12/95  
PK  
SQ  
R/L

February 28, 1995

WPP 95-65

The Gas Company  
515 Kamakee Street  
Honolulu, Hawaii 96862

Attention: Mr. Keith Yamamoto  
Supervisor, Engineering

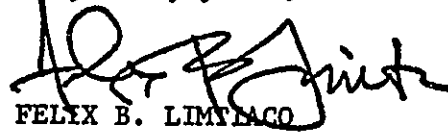
Gentlemen:

Subject: Draft Environmental Assessment for  
Pilot Project for Rehabilitation of Sewer Lines  
in Enchanted Lake, Kailua, Oahu, Hawaii

Thank you for your comments on our Draft Environmental Assessment and for notifying us of your utilities in the area. We will be in contact with you again as the project progresses through the planning and design stages to ensure that utility conflicts are addressed and minimized.

Please contact Stephanie Dodge of the Division of Planning and Service Control at 527-6865 if you need additional information or have further questions.

Very truly yours,

  
FELIX B. LIMTIACO  
Acting Director

SD/jy  
5/2

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'95 MAR 13 A9:10

DEPT OF WASTEWATER MGT



William A. Bonnet  
Manager  
Environmental Department

March 9, 1995

95-373  
R.R.  
SEP

Mr. Felix B. Limtiaco  
Department of Wastewater Management  
City & County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

DEPT. OF  
WASTEWATER  
MANAGEMENT

'95 MAR 13 A8:22

RECEIVED

Dear Mr. Limtiaco:

**Subject: Draft Environmental Assessment for  
Rehabilitation of Sewer Lines Pilot Project in Enchanted Lake**

Thank you for the opportunity to comment on the subject draft assessment for the Enchanted Lake sewer lines rehabilitation project, as proposed by the Department of Wastewater Management of the City & County of Honolulu. We have reviewed the draft assessment and have no comments at this time on the proposed project. HECO will reserve further comments pertaining to the protection of existing powerlines bordering and servicing the area until construction plans are finalized.

Sincerely,

**GTE Hawaiian Tel**

GTE Hawaiian Telephone Company Incorporated  
P.O. Box 2200 · Honolulu, HI 96841 · (808) 546-4511

95-336

P.L.R.

EXP

*Beyond the call*

'95 MAR -6 A9:17

DEPT OF WASTEWATER MGMT

March 3, 1995

Mr. Felix B. Limtiaco  
City & County of Honolulu  
Department of Wastewater Management  
650 South King Street  
Honolulu, HI 96813

DEPT. OF  
WASTEWATER  
MANAGEMENT

'95 MAR -6 A7:00

RECEIVED

Subject: Draft Environmental Assessment (EA) for Pilot Project for Rehabilitation of Sewer Lines in Enchanted Lake, Kailua, Oahu, Hawaii

Dear Mr. Limtiaco,

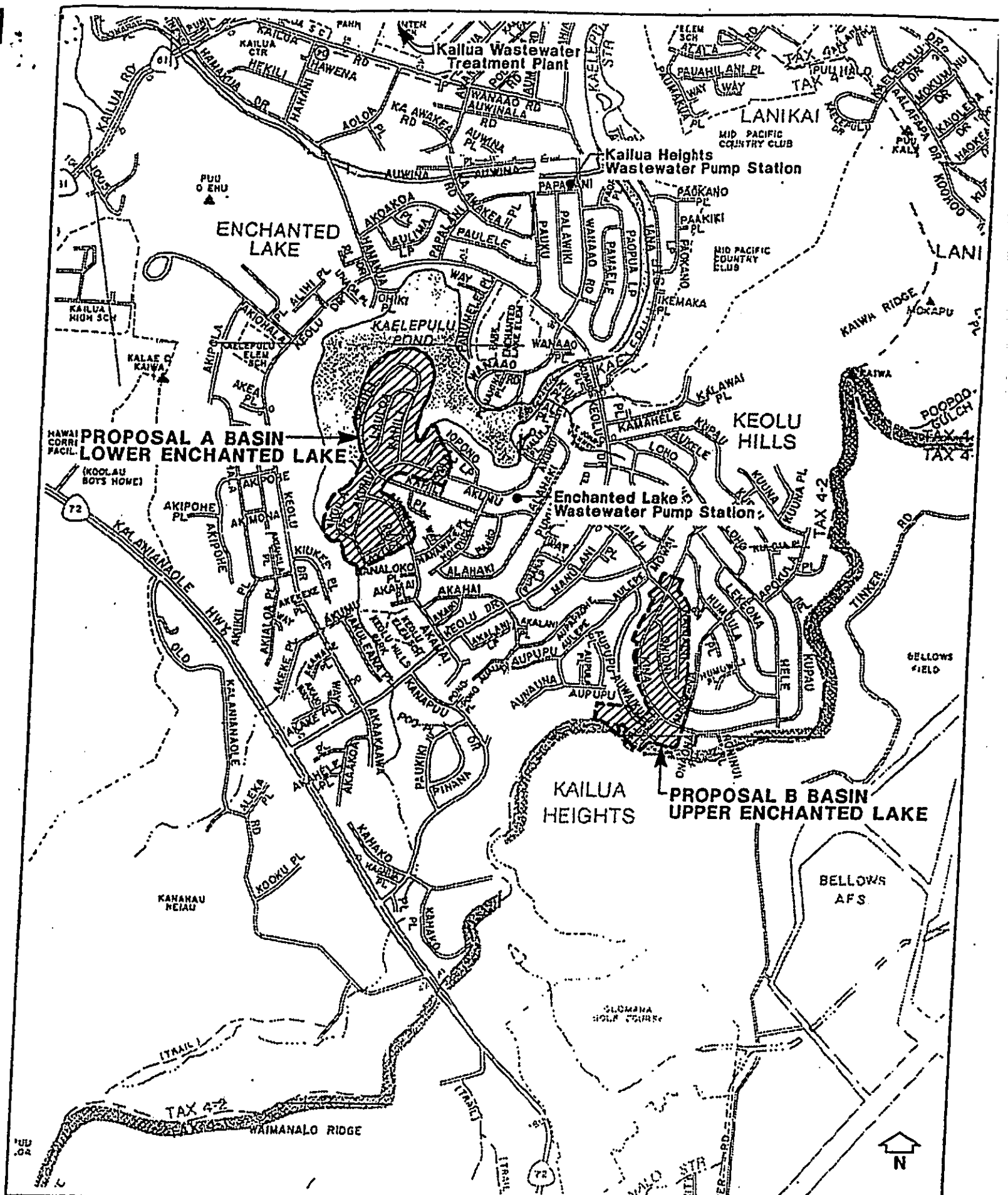
Thank you for the opportunity to review the draft environmental assessment for the above project. We have no comments to offer with regards to the project and its impact on the environment.

If you should have any questions, please call Lynette Yoshida at 483-8045.

Sincerely,

*Garret T. Hayashi*

Garret T. Hayashi  
Operations Supervisor



**EXHIBIT A: Kailua Enchanted Lake Area (PROPOSAL LOCATIONS)**

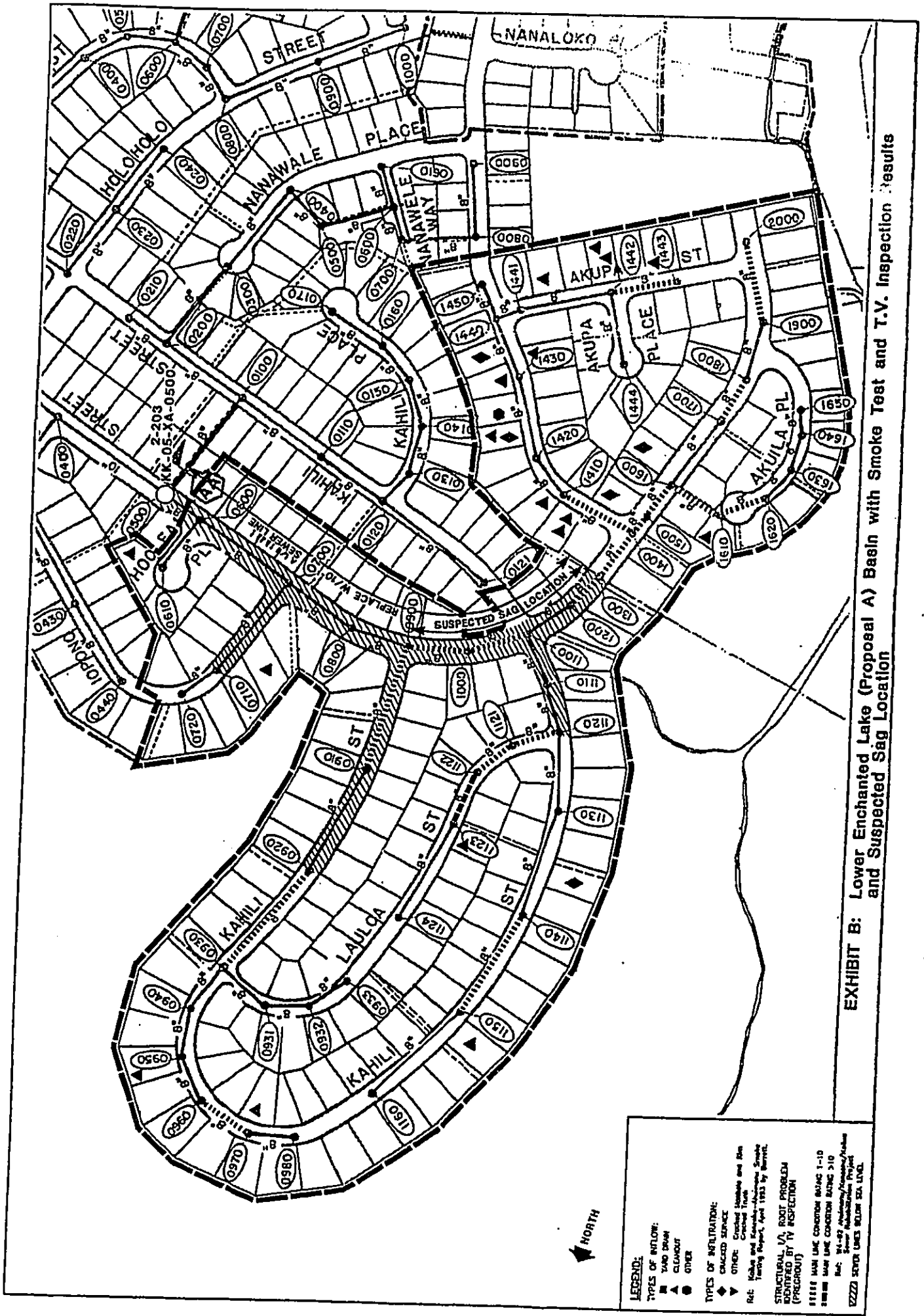


EXHIBIT B: Lower Enchanted Lake (Proposal A) Basin with Smoke Test and T.V. Inspection Results and Suspected Sag Location

**LEGEND:**

**TYPES OF INFLOW:**  
 □ YARD DRAIN  
 ▲ CLEANOUT  
 ● OTHER

**TYPES OF INFILTRATION:**  
 ◆ CRACKED SERVICE  
 ▼ OTHER: Cracked Manhole and Risers  
 ▲ OTHER: Cracked Trunk  
 ● OTHER: Other

RE: Notes and Recommendations - Smoke Testing Report, April 1982 by Merrill

**STRUCTURAL V.I. ROOT PROBLEM IDENTIFIED BY TV INSPECTION (PRE-CRACK)**

||||| MAN LINE CONDITION B/W/MS 1-10  
 ||||| MAN LINE CONDITION B/W/MS 5-10  
 --- Man Line Condition B/W/MS 10-15  
 - - - - - Man Line Condition B/W/MS 15-20  
 - - - - - SEWER LINES BELOW SEA LEVEL



**LEGEND:**

**TYPES OF INFLOW:**

- TWO DOWN
- ▲ CLOWNOT
- OTHER

**TYPES OF INFILTRATION:**

- ◆ CAUSED SERVICE
- ▼ CAUSED SERVICE AND Bm
- ▲ CAUSED FROM
- CAUSED FROM
- CAUSED FROM

Ref: 91-17 Aulaiman/Humulu/Hala  
 Testing Report, April 1983 by Service

**STRUCTURAL VJ, ROOT PROBLEMS IDENTIFIED BY TV INSPECTION (PREVIOUS)**

18110 WITH LK COACTION RATING 1-10  
 18110 WITH LK COACTION RATING 2-10  
 Ref: 91-17 Aulaiman/Humulu/Hala  
 Testing Report, April 1983 by Service  
 18110 WITH LK BELOW SEA LEVEL

EXHIBIT C: Upper Enchanted Lake (Proposal B) Basin with Smoke Test and T.V. Inspection Results