DEPARTMENT OF PUBLIC WORKS
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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

IN REPLY REFER TO:
95-12-0302

July 3, 1995

Mr. Gary Gill
Director
Office of Environmental Quality Control
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Negative Declaration for Kane'ohe Stream Maintenance Dredging Project, Tax Map Key: 4-5-30: 40 and 47, Kaneohe, Oahu, Hawaii

The Department of Public Works has reviewed the comments received during the 30-day public comment period which began on August 8, 1994. The agency has determined that this project will not have significant environmental effects and has issued a negative declaration. Please publish this notice in the July 23, 1995 Office of Environmental Quality Control (OEQC) Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four (4) copies of the final EA.

Please contact Mr. Richard Nakahara at 523-4932 of our Division of Engineering if you have any questions.

Very truly yours,

KENNETH E. SPRAGUE
Director and Chief Engineer

Encl.

1995-07-23-OA-FEA-Kaneohe Stream Maintenance Dredging Project

JUL 23 1995

DRAFT

DRAFT

FINAL

FILE COPY

Environmental Assessment

Kane'ohe Stream Maintenance Dredging Project

Kane'ohe, Hawai'i

Department of Public Works
City and County of Honolulu

May 13, 1995

DRAFT

Responsible Official:

Kenneth E. Sprague
Director & Chief Engineer

Date

DRAFT

Environmental Assessment
Kane`ohe Stream Maintenance Dredging Project

Summary Sheet

Project:	The Kane`ohe Stream Maintenance Dredging Project includes maintenance dredging of approximately 20,000 cubic yards of sediment, silt, and debris from the stream mouth (at the entrance to Kaneohe Bay) to approximately 1,300 lineal feet upstream. Two silt basins to dewater and filter the dredged material will be constructed adjacent to the south bank of the stream. The drained dredged material will be disposed of at a sanitary landfill site. Existing stream bank vegetation will be cut back within limited project segments. At present the stream channel is a modified lined channel outlet. This stream channel was modified in 1980 by the U.S. Army Corps of Engineers. Work at that time included realignment, channel dredging and placement of riprap (rocks) lining along the stream banks to prevent erosion. The proposed maintenance dredging is required to maintain the stream's discharge capacity in order to reduce the risk of injury and property damage due to flooding.
Location:	Kane'ohe, Ko'olaupoko, Hawai'i City and County of Honolulu Tax Map Key: 4-5-30:40 & 47 Project Site: Approximately 5.0 Acres
Approving Agency:	Department of Public Works City and County of Honolulu 650 South King Street Honolulu, Hawai'i 96813
Proposing Agency:	Department of Public Works
Consultant:	Engineers Surveyors Hawai'i, Inc Attn: Mr. Robert Watari 1020 Auahi Street, Building 6, Suite 1 Honolulu, Hawai'i 96814 (808) 591-8116 *In association with:* Eugene P. Dashiell, AICP Planning Services 1219 Keeaumoku Street, Suite 200 Honolulu, Hawai'i 96814-1354 (808) 945-3132

Environmental Assessment
Kane'ohe Stream Maintenance Dredging Project

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1 Description of the Proposed Action

1.1 **Technical characteristics.** This section describes the purpose of the project and how it would be accomplished.

1.1.1 **Location and purpose of the project.** The purpose of the project (Exhibit 1, Location Map) is to dredge Kaneohe Stream near its mouth so that its streamflow capacity is maintained and flood hazards are minimized in the affected area.

At present, Kaneohe Stream is channelized and lined with riprap (rock) in the project reach. This work was completed by the U.S. Army Corps of Engineers in 1980. Under terms of the Corps project sponsorship, periodic maintenance of the project is required by local authorities.

This is a typical and routine project which is accomplished by the City and County of Honolulu at stream mouths around Oahu during each year.

1.1.2 **How the project will be accomplished.** The project will be accomplished by the Department of Public Works, City and County of Honolulu, who will use a contractor for the construction work.

1.1.3 **Dimensions of the project.** The project reach is from the intersection of the mouth of Kaneohe Stream with Kaneohe Bay to approximately 1,300 feet upstream. In this reach the stream is less than 100 feet in width. The existing depth of this stream in this reach varies but is approximately -4 feet below mean low water. The proposed finished depth will vary but will be approximately -9 feet below mean low water. Approximately 2.4 acres of land adjacent to the south bank of the stream and next to the Kaneohe Wastewater Treatment Plan will be used temporarily for dewatering of the dredged material

1.1.4 **Description of the project.** The project (Exhibit 2, Conceptual Plan) consists of removal of approximately 20,000 cubic yards of accumulated sediments, silt, and debris through use of heavy equipment. The dredged material removed from the stream will be placed in silt basins on land alongside the stream so that water may drain from the material. Based on laboratory tests of stream sediments for pesticides and heavy metals, the dredged material is expected to be of adequate quality so that it can be disposed of at a sanitary landfill.

Stream bank vegetation will be cut back to less than four inches above the existing ground at two locations: (1) left (north) bank for approximately 1,100 lineal feet and (2) right (south) bank for approximately 870 lineal feet. Vegetation cutting will be within a corridor approximately 15 feet from the edge of the stream along each bank. The purpose of the vegetation cutting is to remove growth which is encroaching into the stream so that its full capacity can be restored. Vegetation will be disposed of at an approved dump site.

1.1.4.1 Method of Dredging. The material will be dredged from the stream using equipment which may include a suction hydraulic dredge, clam shell, or other devices depending on the type of material to be removed and the contractor's judgement.

1.1.4.2 In-stream Silt Curtains. The contractor will place silt curtains in the stream, downstream of, or surrounding the dredging operations, to reduce sediment discharge into Kaneohe Bay during the active dredging. The silt curtains will be constructed of an interwoven polypropylene fabric (such as Amoco 1380 or similar). As long as the silt curtains are down stream of the operations, the contractor may move the silt curtains from one location to another for most effective treatment. If the curtain is damaged, the contractor will suspend operations until the curtain is repaired and reinstalled.

1.1.4.3 Dredge Spoil Dewatering. The dredged material will have a high water content and cannot be transported to a disposal area until excess water has been removed. To accomplish this, the dredged material will be placed in a silting basin to dewater it (remove excess water from it). Two silting basins (Exhibit 3, Temporary Silting Basin Plan) are proposed, one downslope, but adjacent to the other. These basins have a total capacity of approximately 13,000 cubic yards.

The provision of two silting basins provides maximum containment capacity given the limited site area. One basin will be located between the stream and the Kaneohe Wastewater Treatment Plant and the second will be upstream in a vacant land area. The basins will be constructed by surrounding the basin area with a berm (a raised fill area) constructed of stable fill material. The lower elevation ends of the basins will be constructed of an additional layer of crushed rock and filter cloth. The silting basins will function to retain the dredged material while water drains through the filter cloth/crushed rock layer at the lower elevation of each pond. Water in the silt basins will be filtered through a filter mat layer of material (such as Amoco Engineering Fabric Propex 45-45) laid over a bed of gravel. Filtrate from the silt basins will pass through a silt curtain (such as Amoco Propex Silt Stop or equivalent) which will be constructed on the land between the stream and outside the silt basins, and at the upstream and downstream ends of the basins. This curtain will function to reduce silt discharge from the silt ponds to the stream. The outlets from the silt basins will be upstream of the in-stream silt curtains as well. During the dredging and dewatering operation, as material is placed in the silt basins they will begin to reach capacity and the dewatering rate will decrease. The contractor will

be required to periodically cease dredging, to empty the basins, and to transport the dewatered dredged material to the approved disposal site, the Kailua landfill.

The contractor's operational speed is limited by the capacity of the silt basins which have been sized to fit the available land area. The estimated filtration and dewatering rate is approximately 100 gallons per minute per square foot of silt basin area which is approximately equal to an average drainage rate of 65 cubic feet per second. Under terms of the proposed contract, the contractor cannot dredge material from the stream faster than it can be dewatered in the silt basins. The contractor must periodically cease dredging and remove the dewatered dredge material from the silt basins in order to maintain their dewatering capacity. Because the filter mat may also become clogged with fine sediment particles, the contractor may also replace it to maintain the filtration capability of the silt basins.

Construction details of the two silt basins includes the provision of spillways which open directly to Kaneohe Stream. Under normal conditions these spillways will not be used to drain water from the silt basins. However, if intense rainfall occurs which could cause overflow of the silt basins (because of rain falling into the basins faster than it could drain out through the filter cloth and gravel) the water will overflow via the spillways into Kaneohe stream. This is a remote possibility however because storm water runoff during a so-called 50 - year event is estimated to be less than 12 cubic feet per second which is significantly less than the 65 cubic feet per second discharge capacity of the silt basins. However, if the silt basins should begin to overtop via the spillways, the in-stream silt curtains will remain in place and will function to reduce silt discharges to Kaneohe Bay from the basins via Kaneohe Stream. The contractor will be required to cease operations during extremely heavy rainfall as well to further reduce the chance of overtopping of the basins.

1.1.4.4 Water Quality Monitoring. Turbidity upstream of the dredging operation and downstream below the silt curtains will be visually monitored daily by the contractor who will be required to cease work if a problem of unusual turbidity develops. Turbidity will be measured periodically under the terms of the Department of Health's Water Quality Certification. A copy of the application for this certification is included in Appendix A.

1.2 **Socio-economic characteristics.** This section discusses the impacts of the proposed project on the community in terms of both social and economic effects.

1.2.1 **Economic impacts on the community at large.** The project generally benefits the community at large by reducing the risks of flood damage in the project area.

1.2.2 **Provision of income for the county or state and creation of employment opportunities in areas with high unemployment rates.** The project provides benefits through jobs related to its implementation. This is beneficial at this time of economic recession in Hawaii.

1.2.3 **Targeted segment of the population.** No specific segment of the population is targeted because this project has general public benefit.

1.2.4 **Population density.** The project has no effect on population density because it merely maintains the existing conditions by restoring the capacity of the stream to the specifications of its project design.

1.2.5 **Recreational facilities.** There are no recreational facilities in the area, and the project will have no effect on recreation.

1.2.6 **Child care provisions.** There are no child care provisions in relation to the proposed project.

1.2.7 **Relocations of residences.** No relocation of residences would occur.

1.2.8 **Costs of the proposed project and economic analysis.** The estimated cost of construction of the proposed project is $900,000.

1.3 **Environmental characteristics.** This section discusses the potential effects of the proposed project on the physical environment. [see Exhibit 5, Photographs of Site]

1.3.1 **Aesthetics.** Residents of several homes on the north side of Kaneohe Stream will be able to observe the project site and the construction activity. There will be some temporary change in the viewplane from their homes. The elevation of the top of the berm which will form silt basin #1 will be approximately 4 to 6 feet above the existing ground level. At present this area is covered with overgrowth and junk cars. The area will be cleared for construction of the silt basin. Streambank vegetation will be cut, but not cleared. This will permit the root structure to remain to preserve the integrity of the streambanks and the vegetation will eventually regrow. The view of residents across the stream will change from one of the vegetation along the bank (and of junk cars where clearings exist) to one of the temporary elevated berm which will be grassed. The elevation of the top of the berm which will form silt basin #2 will be approximately 4 to 6 feet above the existing grade level and the basin will partially obscure the view of the existing Kaneohe wastewater treatment plant. This berm will be grassed. Both berms will be removed at the end of the

project and the areas will be grassed to restore to approximately that of the existing condition.

1.3.2 **Air pollution.** There would be some effects during construction and these would be mitigated per county and state rules. There would be no long term effects because the proposed project includes no air pollution sources and would not generate significant differences in traffic from the existing conditions.

1.3.3 **Traffic congestion.** There will be little effect on traffic except during periods when the dredged material is removed from the silt ponds. The traffic will consist of heavy trucks and trailers. They will operate during normal working hours and will follow existing regulations regarding road clean-up resulting from this traffic.

1.3.4 **Noise levels.** There will be some increase in noise levels during construction of the project. This will occur during normal working hours. Contractor's equipment is required to meet Department of Health noise regulations.

1.3.5 **Effects on water quality.** The proposed combination of silt curtains, silt basins and restrictions on contractors operations to avoid periods of extremely heavy rainfall should result in a project with minimal if any impacts on water quality. The proposed measures should reduce turbidity to levels approximately equivalent to existing conditions. Turbidity will be caused by extremely fine sediment in suspension. The majority of sediments removed during operations will be captured in the silt basins and ultimately removed from the site. No nutrients, metals, pesticides or chemicals are involved in the proposed project and water quality data for the site do not show the presence of such materials now.

1.3.6 **Other environmental effects.** There may be positive effects on Kaneohe Bay from the proposed project which will remove nearly 20,000 cubic yards of sediment in the project area of Kaneohe Stream. Such material if not removed by the proposed project could be discharged to Kaneohe Bay under high rainfall and storm runoff conditions.

Because streambank vegetation will be cut to less than 4 inches leaving the root systems in place, this activity will not cause bank erosion. Vegetation will regrow. Also, trees with trunks greater than 8 inches in diameter will not be cut, and will continue to grow.

2 Description of the Affected Environment

2.1 **Location.** The proposed project is located at the mouth of Kaneohe Stream, at Kaneohe Bay in Honolulu, and including the south streambank within the project

reach. This location is approximately at latitude: 21° 24' 50" and longitude: 157° 47' 15".

2.2 **Land ownership and tenancy.** The stream where the material is to be dredged is owned by the City and County of Honolulu. The land adjacent the south of the stream where the silt basins for the temporary storage of dredged material and their dewatering is owned by Pacific Atlas (Hawaii) Inc.

2.3 **Land use.** The sites of the proposed silt basins are vacant and undeveloped. The site of Silt Basin #1 is littered with junk cars and other abandoned debris. The site of Silt Basin #2, which is adjacent to the Wastewater Treatment Plant is vacant and clear.

2.4 **Land and related water use plans.**

2.4.1 City and County of Honolulu. The land is designated urban in the general plan and is designated preservation in the Koolaupoko Development Plan.

2.4.2 State of Hawaii. None.

2.4.3 Federal. None.

2.5 **Flora.** The site is highly disturbed with heavy vegetation including grasses and shrubs. Portions are barren earth. There are no wetlands on the silt basin sites. Wetland vegetation is not present on the south bank in the area where stream bank is to be cut back. Some wetland vegetation species are present on the north bank where vegetation is to be cut back (see Botanical Report, Appendix B).

2.6 **Fauna.** No animals were observed during two field trips although the area probably supports common urban birds, mongoose, mice or rats, and feral cats.

2.7 **Water Quality.** The water quality of Kaneohe Stream is characterized by high turbidity and sediment loads, especially under high stream flow conditions. The upstream flood control dam provides some regulation of stream flow at the site. Data on existing water and sediment quality is shown in Exhibit 4. The data do not indicate the presence of heavy metals or pesticides in sediments, or in the water column. This implies that the dewatering process through use of the sediment basins should not adversely affect the water quality of the bay, and the quality of the sediments, once removed and dewatered, should be adequate for use as landfill cover.

2.8 **Significant habitats.** There are no significant habitats at the project site. The stream is channelized and heavily disturbed as are the stream banks. Kaneohe Bay (the receiving waters for Kaneohe Stream) are significant, and effective measures to minimize damage to Kaneohe Bay from the proposed maintenance dredging are included in the project design.

2.9 **Historical, archeological and cultural sites.** At the project site, the stream bottom and banks and adjacent land areas are heavily disturbed. They have been dredged or filled as part of previous land development flood control projects. The Waikalua-Loko Fish Pond (11.6 acres) is located south of Kaneohe Stream mouth and west of the Kaneohe Wastewater Treatment Plant (WWTP). The pond is separated from the stream by both the streambank and the pond wall. The proposed dewatering location is separated from the pond by the Kaneohe WWTP.

2.10 **Adjacent natural resources.** The site is surrounded by lands in an unnatural state including filled lands and the Kaneohe WWTP.

2.11 **Sensitive habitats or bodies of water adjacent to the proposed project.** Kaneohe Bay is a sensitive habitat adjacent to the proposed project.

3 Major Impacts and Alternatives Considered

3.1 **Positive significant impacts.** The proposed project will restore and maintain the flood control capacity of the Kaneohe Stream project which benefits residents in the immediate vicinity. A broader class of residents are also benefited through continued flood protection of the City's Kaneohe WWTP.

3.2 **Negative significant impacts.** There are no negative significant impacts of the proposed project.

3.3 **Alternatives considered, if applicable.** The alternative of no action was considered and rejected because it would not restore the stream's flow capacity to the design criterion.

4 Proposed Mitigation Measures

4.1 **Potential problems and appropriate mitigation including best management practices.** There are two potential problems related to the proposed project. Each is mitigated using best management practices as follows.

4.1.1 Potential Problem of Increased Sediment, Turbidity and Nutrients. This problem is addressed through the use of (1) silt curtains across the stream, (2) silt curtains surrounding the silt basins, (3) silt curtain and gravel mat inside the silt basins. These three measures are intended to reduce the discharge of sediment from the maintenance dredging operations to a minimum and to aid in meeting water quality standards for Kaneohe Bay.

4.1.2 Effects of High Intensity Rainfall. This problem is addressed by provision of high capacity of the silt basins (approximately equivalent to a 50 - year storm)

and overflow spillways should a more severe storm occur. These measures prevent any potential damage to the downstream fishponds from the silt basins themselves.

4.1.3 Cut Back of North Bank Vegetation. The proposed project includes cutting and trimming of stream bank vegetation to a height of 4 inches or less. Trees with trunks greater than 8 inches will not be cut. These measures will not adversely affect wetland species or possible wetlands on the north bank. There will be no filling, excavating or discharging in this area and the cut vegetation will be removed from the site. Equipment and personnel will enter and access the site via an existing roadway.

4.2 **Mitigation or preservation plan prepared for the Department of Land and Natural Resources State Historic Preservation Division.** Because there are no historic properties in the stream, or on land a mitigation or preservation plan is not applicable.

4.3 **Copy of the approval letter for the plans from the State Historic Division.** Such a letter is not applicable.

5 Determination

5.1 **Primary and secondary consequences; cumulative, short, and long-term effects.** The primary consequences of this project would be to maintain flood protection for affected properties within the project reach. Secondary consequences, cumulative, short and long term effects are generally beneficial with regard to maintenance of the flood channel capacity in this considerably altered environment.

5.2 **Determination letter from the approving agency (Negative Declaration).** After review of the draft Environmental Assessment and the review comments, no significant impacts of the proposed project are anticipated (see below for discussion).

5.3 **Findings and reasons supporting the determination including justifying evidence.** Chapter 200 (Environmental Impact Statement Rules) of Title 11 Administrative Rules of the State Department of Health specifies criteria for determining if an action may have a significant effect on the environment. These are discussed below in the context of the proposed project. Based on the following findings, it appears that the proposed maintenance dredging will have no significant adverse environmental impacts.

5.3.1 Involves an irrevocable commitment to loss or destruction of any natural or cultural resource. The project site has been modified extensively and has no natural or special resources. The proposed project has no effect on other such resources in the area.

5.3.2 Curtails the range of beneficial uses of the environment. The proposed project does not change from the existing condition which provides for beneficial flood reduction measures.

5.3.3 Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders. The proposed project does not conflict with long-term State environmental policies or goals.

5.3.4 Substantially affects the economic or social welfare of the community or State. The proposed project improves the health, social and economic well-being of the affected residents.

5.3.5 Substantially affects public health. Public health and safety is generally benefited by the proposed project.

5.3.6 Involves substantial secondary impacts, such as population changes or effects on public facilities. This is a project provides maintenance of an existing public facility, the Kaneohe Stream Flood control project. As such it will have no effect on population size or on other public facilities.

5.3.7 Involves a substantial degradation of environmental quality. There will be little if any effect on the environment from this small project.

5.3.8 Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions. The proposed project is consistent with the City's Development Plan and is not part of a larger set of projects proposed by the landowner.

5.3.9 Substantially affects a rare, threatened or endangered species, or its habitat. There are no rare, threatened, or endangered species on the project site.

5.3.10 Detrimentally affects air or water quality or ambient noise levels. There will be minor short-term effects on air quality and noise levels during construction but these pose nuisance levels and will be regulated by conformance to public health regulations.

5.3.11 Affects an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary fresh water, or coastal waters. The proposed project is within a flood zone AE as designated on the Federal Emergency management Agency's Flood Insurance Rate Map (Panel Number 150001 0060B) and is actually maintenance of an existing federal/city flood control project which has reduced flooding (from the flow of Kaneohe Stream especially in the residential subdivision on the north bank of the stream). The proposed project will remove sediment which has deposited in

the channel of the flood control project and which has reduced its total flow capacity. The proposed project will serve to maintain the design capacity of the flood control project. The proposed project affects no environmentally sensitive areas and it aids in maintaining the levels of flood protection provided in the design of the original project.

5.4 Comments and Responses to the Draft Environmental Assessment. A Draft EA was circulated for public review through the Office of Environmental Quality Control. Following is a summary of the comments received and the appropriate responses. Copies of the actual letters are included in the Appendix D.

5.4.1 U. S. Fish and Wildlife Service.

Comment: The proposed project appears to deviate in extent from the map shown in the U.S. Army Corps of Engineers existing General Permit.

Response: According to discussions with Corps officials, the proposed work is within the bounds of the existing permit.

w Comment: Please contact the U.S. Fish and Wildlife Service (USFWS) if the silt basins are used by endangered or other waterbirds.

Response: The Department of Public Works (DPW) will notify the Service if such birds are noted.

Comment: The USFWS recommends that additional measures to avoid or minimize disturbance to the aquatic environment be included in the project. Such measures include storage of materials in a proper place, construction materials free of pollutants, no contamination of the aquatic environment, and a contingency plan to control accidental spills of petroleum products.

Response: The DPW will incorporate the additional measures in the plans and specifications of the project.

5.4.2 U. S. Army Corps of Engineers.

Comment: The proposed work is required by the Corps under terms of the Kaneohe Stream Flood Control local project sponsorship agreement and must also remove a sunken boat and two unauthorized dock structures.

Response: The DPW acknowledges this.

Comment: The DPW must notify the Corps Operation Division for authorization of the proposed plans.

Response: The DPW has coordinated with the Operations Division from the inception of this project and will provide a formal letter including the plans when construction is about to begin. Our understanding is that the proposed work is within the authority of the Corps to permit.

Comment: The proposed project is located within a flood zone AE as designated on the Federal Emergency Management Agency's Flood Insurance Rate Map.

Response: The DPW is aware of the base flood elevations in the project area as shown on the Flood Insurance Rate Map and these will be noted in the final Environmental Assessment.

5.4.3 **State of Hawaii Department of Health.**

Comment: Construction of dewatering/silting basins in wetlands is prohibited. The discharge of effluent may not be covered in the Corps General Permit.

Response: No wetlands are present, please note the report of the botanist which is included in the EA. Discharge of effluent is acceptable to the Corps subject to issuance of a Water Quality Certification (WQC) by the State Department of Health. The DPW as filed an application for a WQC. The proposed project would be initiated after receipt of the WQC, a copy of which would be forwarded to the Corps.

Comment: Plans for best management practices and effluent and receiving water quality monitoring are required.

Response: These plans are described in the application for WQC which is also included as an appendix to the EA. The monitoring plan provides for periodic reports and includes tests for pH. Hawaii Administrative Rules will be followed regarding the restriction on effluent not to be lower than a pH of 5.5.

5.4.4 **State of Hawaii Department of Land and Natural Resources.**

Comment: The Division of Aquatic Resources does not object to the proposed project provided the conditions of the existing Conservation District Use Permit (OA-779A) remain applicable.

Response: The DPW acknowledges this and will abide by the CDUP conditions.

Comment: The Historic Preservation Division believes the project will have "no effect" on historic sites.

Response: The DPW acknowledges this.

6 Identification of Agencies, Organizations and Individuals Consulted

A table at the end of this section summarizes the permits and approvals which are required for this project to proceed. The following narrative summarizes the coordination with key agencies and with the Kaneohe Neighborhood Board. Also, letters commenting on the draft EA were received from several agencies. The comments and responses located in the previous section summarize the correspondence (reproduced in Appendix D).

6.1 State of Hawaii.

6.1.1 Department of Land and Natural Resources

6.1.1.1 Division of Water and Land Development. The Division was contacted regarding the issuance of a Stream Alteration Permit. The permit will be applied for when this EA is submitted to the Office of Environmental Quality Control (OEQC) for public review.

6.1.1.2 Office of Conservation and Enforcement. The Office was contacted regarding the issuance of a Conservation District Use Application (CDUA) permit. A permit already is in place for maintenance dredging of Kaneohe Stream and it is activated by letter. It requires that other applicable State, Federal and County permits be obtained as well, and that all applicable water quality and other laws be adhered to. A copy of this permit is included in Appendix C. This CDUA permit should be activated one week prior to the initiation of start of work at the project site. Work must comply with provisions of the permit.

6.1.2 Department of Health - The Department (DOH) was contacted regarding issuance of a Water Quality Certification (WQC) permit. A copy of the application for this permit is included in Appendix A. The application for the WQC permit will be filed when this EA is submitted to OEQC. See also the DOH comments regarding the draft EA (located in the previous section).

6.2 City and County of Honolulu.

6.2.1 Department of Public Works. The DPW is the proponent agency for this project.

6.2.2 Department of Land Utilization. The DLU is the designated Coastal Zone Management agency and is responsible for review or waiver of the Special Management Area permit. A waiver of the SMA permit requirements for the proposed project will be requested from DLU.

6.3 **United States Government.**

6.3.1 U.S. Army Corps of Engineers. The Corps has issued an existing General Permit 82-1E-B (Section 10 Rivers and Harbors Act, 1899) which includes maintenance dredging of Kaneohe Stream. This permit expires on May 6, 2002. To activate this existing permit, the applicant should send a letter notifying the start of work including an estimate of the volume of material to be dredged and including a map showing the project. The letter must include a copy of the Water Quality Certification Permit which is to be issued by the State Department of Health and which is being applied for separately. See also the Corps comments regarding the draft EA (located in the previous section).

6.4 **Organizations and Individuals.**

6.4.1 Kaneohe Neighborhood Board. The proposed project was presented at the regular evening meeting of the Kaneohe Neighborhood Board on March 18, 1994. The project was described and the potential impacts were discussed. The following questions were asked at the meeting.

6.4.1.1 Mr. Herb Lee of Atlas Properties was unaware of discussions the City had with the Company regarding right-of-entry and possible use of the site for siltation basins.

Response: The City obtained a formal right of entry to prepare a land and topographic survey and other planning work related to the project prior to entering the property. The City is in the process of obtaining an agreement to use the temporarily for the proposed project.

6.4.1.2 Councilmember Holmes asked if the project team was aware of a study done for the Kaneohe Bay Task Force (KBTF) which mentioned the possibility of high levels of heavy metals or pesticides in the Kaneohe Bay sediments.

Response: Existing data did not indicate the presence of heavy metals or pesticides in Kaneohe Stream sediments. Additionally, for this project, sediment samples from the area to be dredged were collected and analyzed and no pesticides were found. These data are included in this EA as part of Exhibit 4. Mr. Holmes provided a copy of the KBTF report[1] and it did not contain data for Kaneohe Stream concerning the presence of pesticides or heavy metals.

[1]Kaneohe Bay Task Force, "Report of Land Use Committee, Subcommittee for Water Quality", Carl R. Honig M.D., Chris Evans, August 28, 1991.

6.4.1.3 Some Board members were concerned that the silt basins be fenced to prevent children (there are schools nearby) from going into them.

Response: The silt basins will be fenced to prevent this from happening.

6.4.1.4 One Board member asked about the procedures to protect Kaneohe Bay during high storm water runoff periods. Would the runoff wash-out the silt curtain poles and silt curtains?

Response: The contractor is responsible to monitor the project and if necessary remove the silt curtain and poles under such circumstances.

6.4.1.5 It was noted that there are boulders in the stream, possibily from the existing rip rap lining and would these be removed?

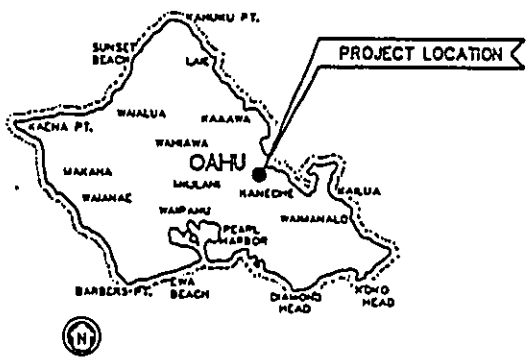
Response: The boulders in the stream in the area of dredging will be removed. If the rip rap lining needs repair, that will be done where necessary.

References

Department of Public Works, City and County of Honolulu, Engineering Evaluation for the Kaneohe Stream Maintenance Dredging Project At Kaneohe, Oahu, Hawaii, n.d.

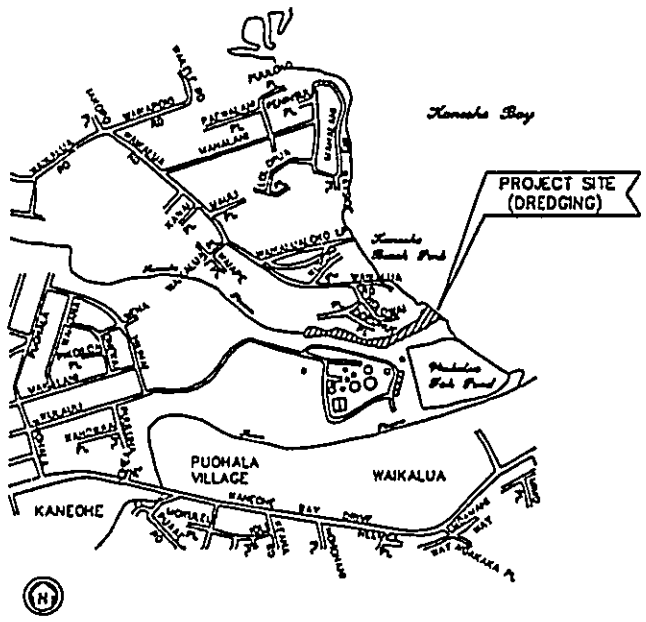
Exhibits

1. Location Map
2. Conceptual Plan
3. Temporary Silting Basin Plan
4. Existing Water and Sediment Quality, Kaneohe Stream
5. Photographs



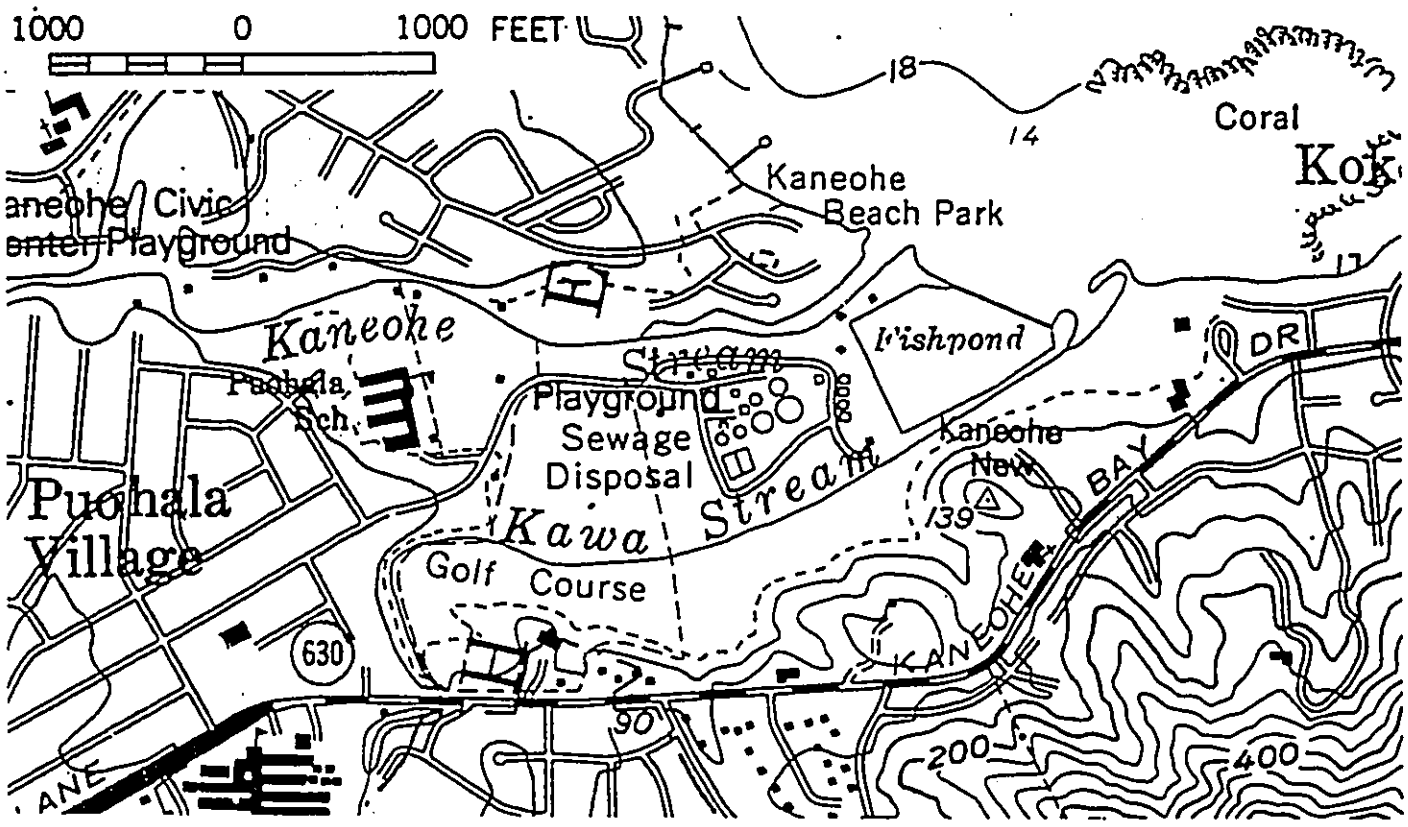
VICINITY MAP

NOT TO SCALE



LOCATION MAP

NOT TO SCALE



Location Map
Exhibit 1

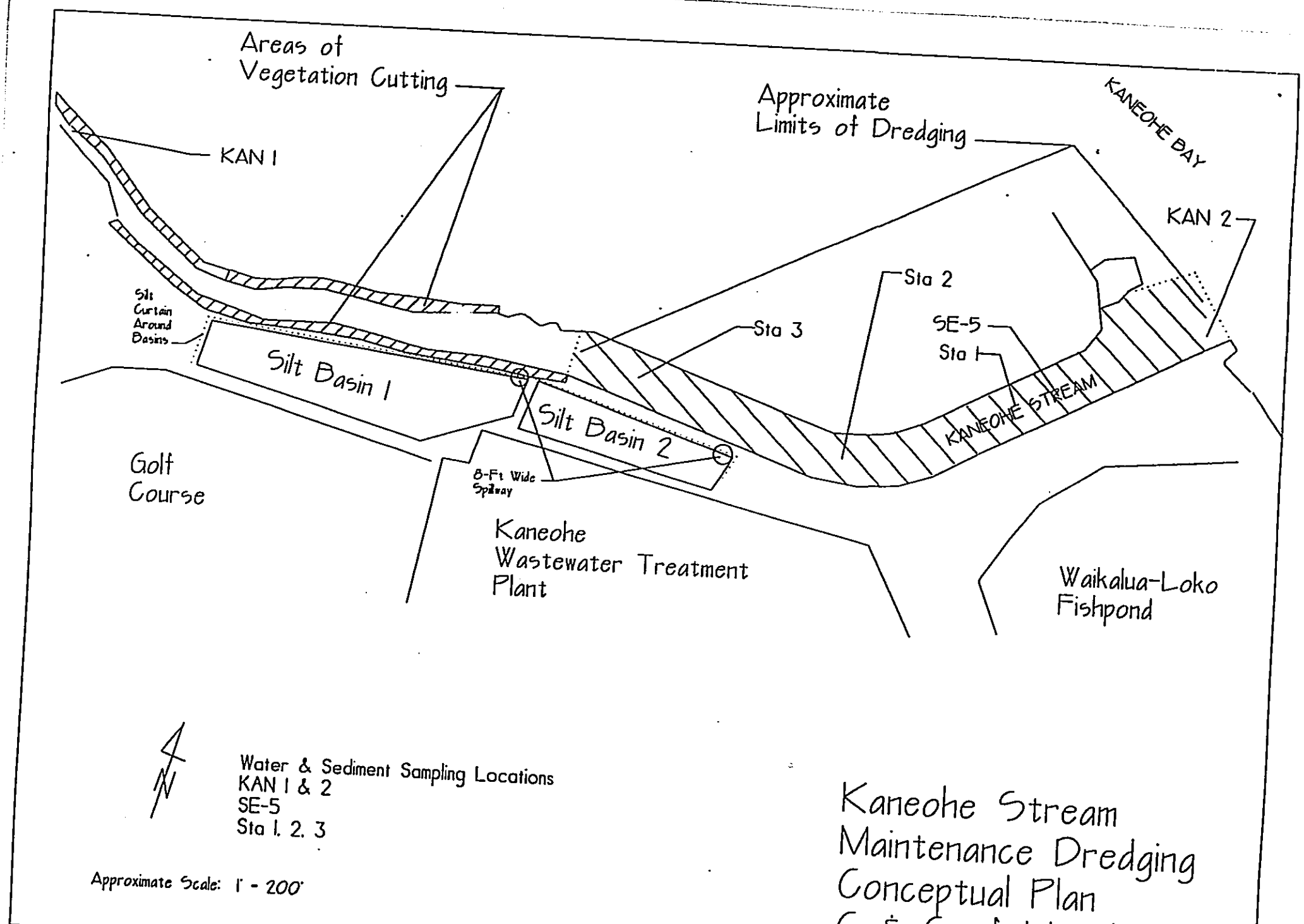
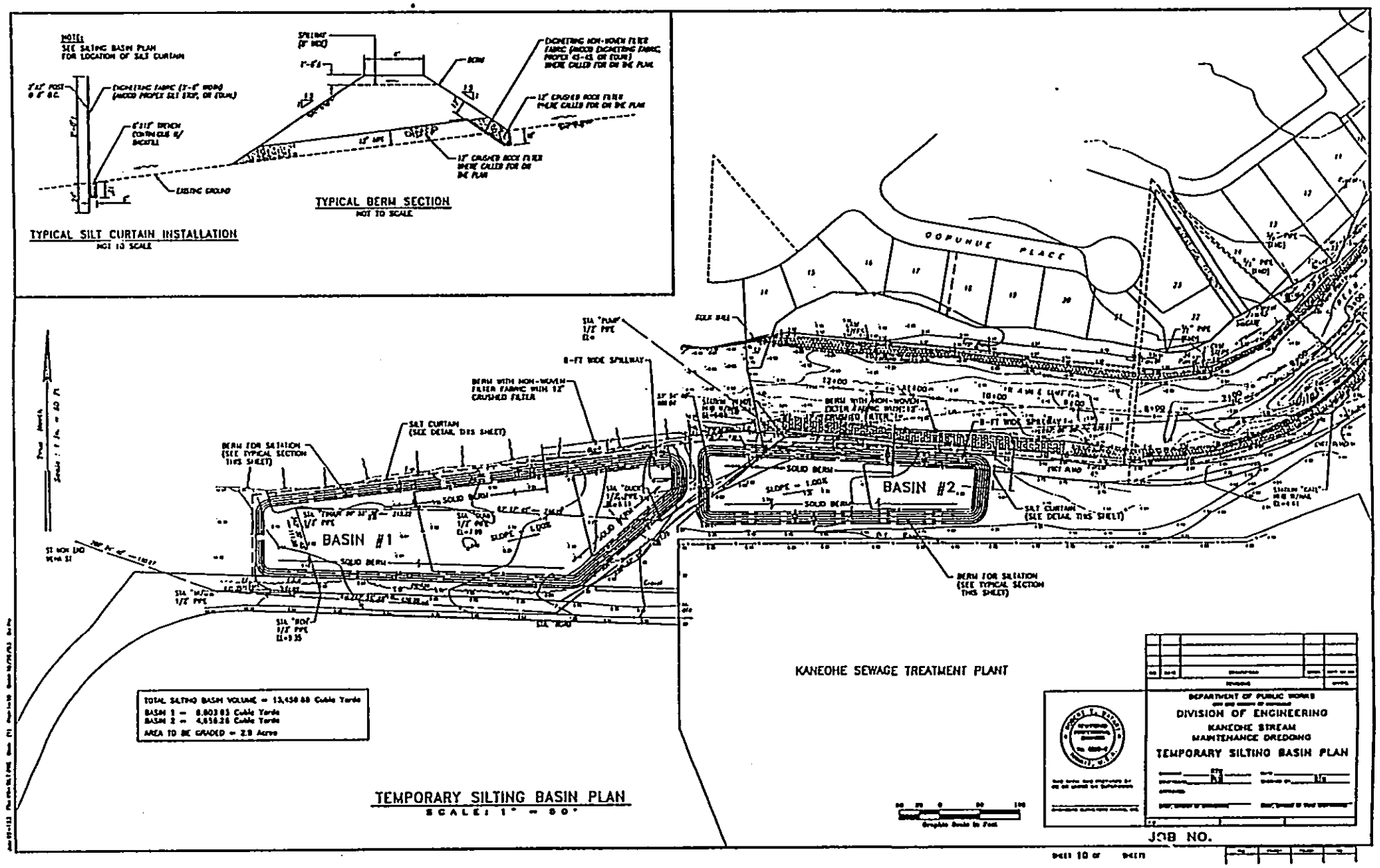


EXHIBIT 2 (EA), (Botanical Report Figure 1)



Temporary Silting Basin Plan
Exhibit 3

Exhibit 4
Existing Water and Sediment Quality, Kaneohe Stream

Parameters Water: Sediment & Nutrients	Year = 1991 (Data for Sediments & Nutrients Shown as Geometric Means) Kan 1 Upstream Wet Season	Kan 1 Upstream Dry Season	Kan 2 At Mouth Wet Season	Kan2 At Mouth Dry Season
Turbidity (NTU)	6.67	4.87	8.69	14.37
Suspended Solids (NFR) (mg/L)	6.5	10.6	8.68	13.5
Nitrate plus nitrite (mg [NO2+NO3]-N/L)	0.484	0.358	0.492	0.528
Ammonia (mg NH4-N/L)	0.009	0.01	0.032	0.046
Total Nitrogen (mg N/L)	0.71	0.58	0.75	0.89
Orthophosphate-phosphorus (mg PO4-P/L)	0.009	0.01	0.01	0.014
Total Phosphorus (mg P/L)	0.029	0.035	0.036	0.025

Geometric Means

Water: Metals	Year = 1990 Kan 1 Upstream Mar	Kan 1 Upstream Apr	Kan 1 Upstream May	Kan 2 At Mouth Mar	Kan 2 At Mouth Apr	Kan 2 At Mouth May
Arsenic (mg As/L)	--	ND	ND	--	ND	ND
Manganese (mg Mn/L)	--	ND	ND	0.10	ND	ND

Sediment: Metals	Year = 1991, August SE-5 Instream Near Mouth
Ag (mg/Kg sediment dry weight)	<1.1
As (mg/Kg sediment dry weight)	9.6
Cd (mg/Kg sediment dry weight)	<2.2
Cr (mg/Kg sediment dry weight)	195
Cu (mg/Kg sediment dry weight)	101
Hg (mg/Kg sediment dry weight)	<0.5
Ni (mg/Kg sediment dry weight)	224
Pb (mg/Kg sediment dry weight)	11.1
Zn (mg/Kg sediment dry weight)	128

Sediment: Pesticides	Year = 1991, September SE- 5
Chlordane (ppm)	<0.01
Dieldrin (ppm)	<0.05
All others (ppm)	ND

Notes:
1. Wet season (N=8) = March 7 - April 25, 1991; dry (N=7)= May 2 - June 13, 1991.
2. ND = Not detected; detection limit for arsenic was 0.005 ppm, for manganese 0.10 ppm (mg/L).
3. Method detection limits for pesticides = 0.01 ppm for all compounds except = 0.05 ppm as DDE, DDT, and Dieldrin.
4. All other pesticides: see basic pesticide profile.
5. Exhibit prepared from AECOS sources.
6. See map for site locations.

BASIC PESTICIDE PROFILE

Aldrin
Aspon
Atrazine
Balan(Benfluralin)
BHC, alpha
BHC, beta
BHC, delta
Bromophos
Bromophos ethyl
Cardophenothion
Chlordane
Chlorpyrifos
Chlorthion
CIPC
Dacthal
DDE
DDT
DEF
Demeton-S
Demeton-S-Sulfone
Diazinon
Dichlobenil
Dichlorofenthion
Dieldrin
Diphenamid
Disulfoton Sulfone
Dyfonate
Endosulfan I
Endrin
Ethion
Ethoprop
Famphur
Fenamiphos
Fenitrothion (Sumithion)
Fensulfothion
Fenthion
Fenthion oxygen analog
Fenthion oxygen analog sulfoxide
Fenthion sulfone
Fonofos (Dyfonate)
Fusarex (TCN)
Gardona
Heptachlor
Heptachlor Epox
Hexachlorobenzene
Isobenzan(Telodrin)
Isodrin
Isofenphos
Isopropalin
Lindane
Malathion
Malathion oxygen analog
Methidathion
Methoxychlor
Methyl Parathion
Metribuzin
Mirex
Nitrofen
Ovex
Oxadiazon
Parathion
Parathion oxygen analog
Parathion methyl
PCB's
PCNB
Pentachloroanilin
Pentachlorobenzen
Pethane
Phenthoate
Phorate
Phosphamidon
Primicarb
Primiphos ethyl
Primiphos methyl
Procymidone
Profenfos
Prometryne
Prothiophos
Ronnel
Simazine
Strobane
Sulfallate
TDE
Terbufos
Tetrasul
Toxaphene
Triadimeform
Trialate
Trichloronate
Vinclozolin

AECOS
970 N. Kalaheo Avenue, Suite C300 • Kailua, Hawaii 96734
Telephone: (808) 254-5884

June 15, 1994

Mr. Eugene P. Dashiell, AICP
Planning Services
1219 Keeaumoku Street, Suite 200
Honolulu, HI 96814-1354

RE: Kane`ohe Stream Maintenance Dredging 401 WQC compliance and sediment testing.

Dear Gene,

Enclosed are the analytical results for the sediment samples collected on April 4, 1994. Also included is the map showing the station locations. The sediment was tested for EPA 8080 analytes. The analytes of interest were chlordane and dieldrin which had been found in Kawa stream sediment previously and in the tissue of oysters collected near the mouth of Kane'ohe stream. These two analytes as well as the rest of the EPA 8080 analytes were not found in the stream sediment tested. The analytical results include the detection limits.

Following is a description of the sediment and stations:

Station 1- the sediment was a very soft mud. A 2 foot core was taken midstream. The water depth was about 6 feet. The core was clay-like at the top and silty towards the bottom. The color of the sediment was black.

Station 2- the sediment was a silty mud. A one foot core was taken mid-stream but yielded only pebbles and gravel. The core was dumped and a new sample taken near the Waimanalo bank of the stream approximetely 2 to 3 feet into the stream from the edge of the revetment. A 2 foot core was taken. The sediment was black and clay-like.

Station 3- A mid-stream sample could not be taken here as the bottom was rocky. The sample was taken about 5 feet into the stream from the Waimanalo side of the bank. The sediment was black clay with 1 to 1 1/2 inch rocks.

Hope this description helps.

Sincerely,

Snookie Mello

Snookie Mello

AECOS
970 N. Kalaheo Avenue, Suite C300 • Kailua, Hawaii 96734
Telephone: (808) 254-5884

CLIENT: Eugene Dashiell

ATTENTION: Eugene Dashiell

FILE No.:	753
REPORT DATE:	05/26/94
PAGE:	1 of 2

REPORT OF ANALYTICAL RESULTS

SAMPLE TYPE: stream sediment
DATE SAMPLED: 04/04/94

AECOS LOG No.: 7534
DATE RECEIVED: 04/04/94

SAMPLE ID ⇨ / ANALYTE ⇩	Station 1	Station 2	Station 3		Analysis Date Analyst ID
Aldrin (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
alpha-BHC (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
beta-BHC (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
delta-BHC (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Lindane (mg/Kg))	<0.035	<0.030	<0.025		04/16/94 jh
Chlordane (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
4,4'-DDD (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
4,4'-DDE (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
4,4'-DDT (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Dieldrin (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Endosulfan I (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Endosulfan II (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh

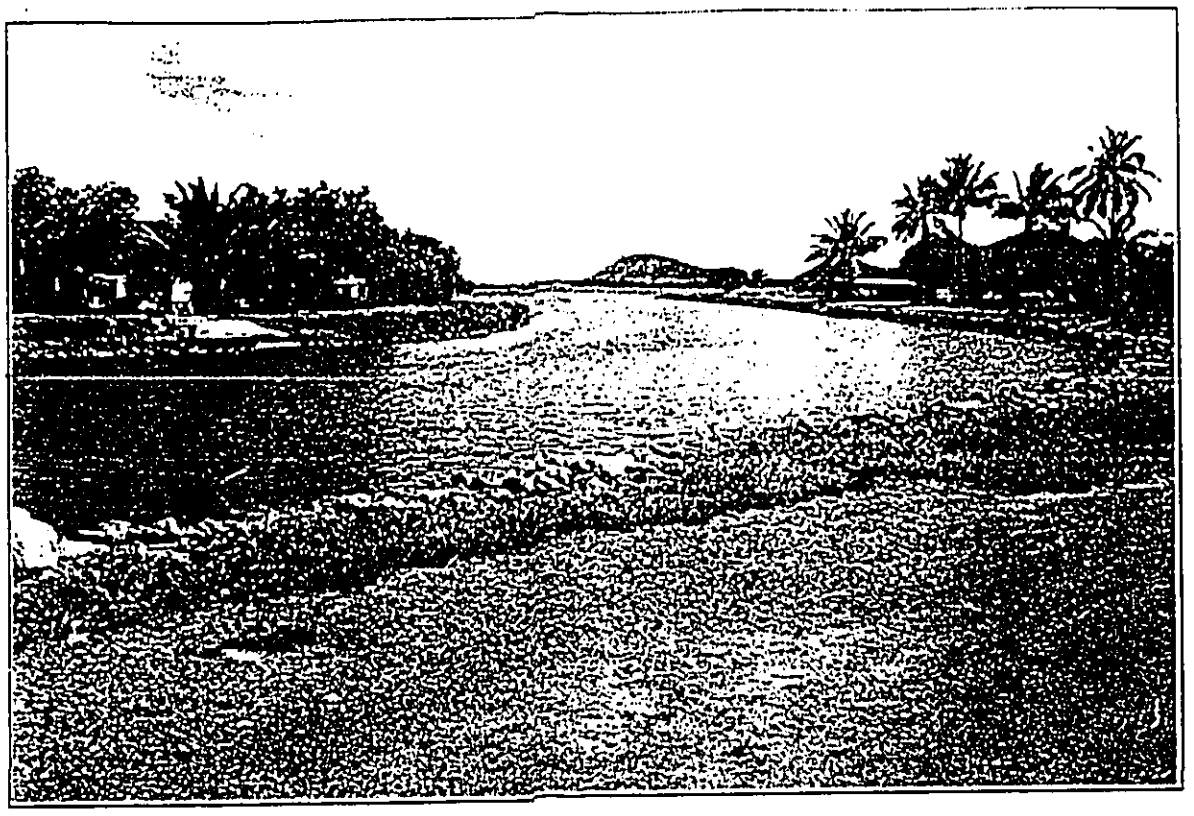
J. Mello, Laboratory Director

CLIENT: Eugene Dashiell

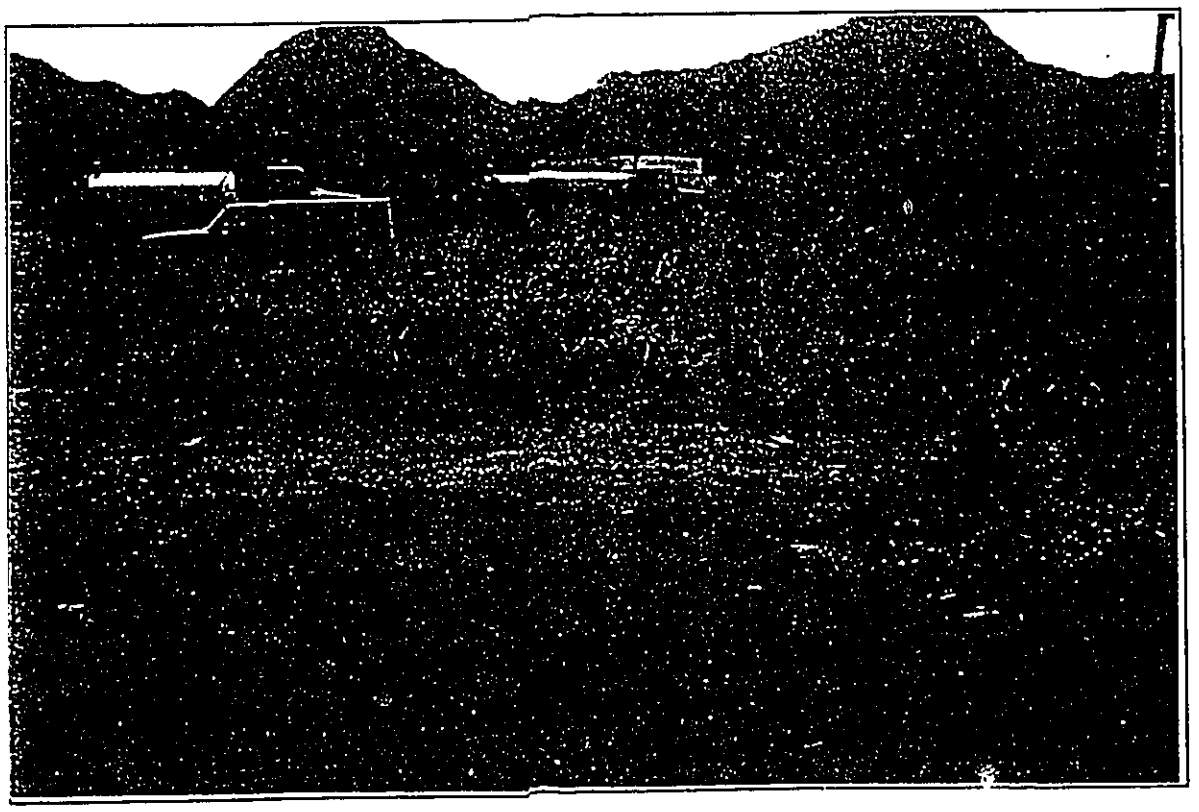
ATTENTION: Eugene Dashiell

FILE No.: 753
REPORT DATE: 05/26/94
PAGE: 2 of 2
LOG No.: 7534

SAMPLE ID ⇨ / ANALYTE ⇩	Station 1	Station 2	Station 3		Analysis Date/ Analyst ID
Endosulfan Sulfate (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Endrin (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Endrin Aldehyde (mg/Kg)	<0.355	<0.030	<0.025		04/16/94 jh
Heptachlor (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Heptachlor Epoxide (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Toxaphene (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
Methoxychlor (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
PCB 1016 (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
PCB 1221 (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
PCB 1232 (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
PCB 1242 (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
PCB 1248 (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
PCB 1254 (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh
PCB 1260 (mg/Kg)	<0.035	<0.030	<0.025		04/16/94 jh

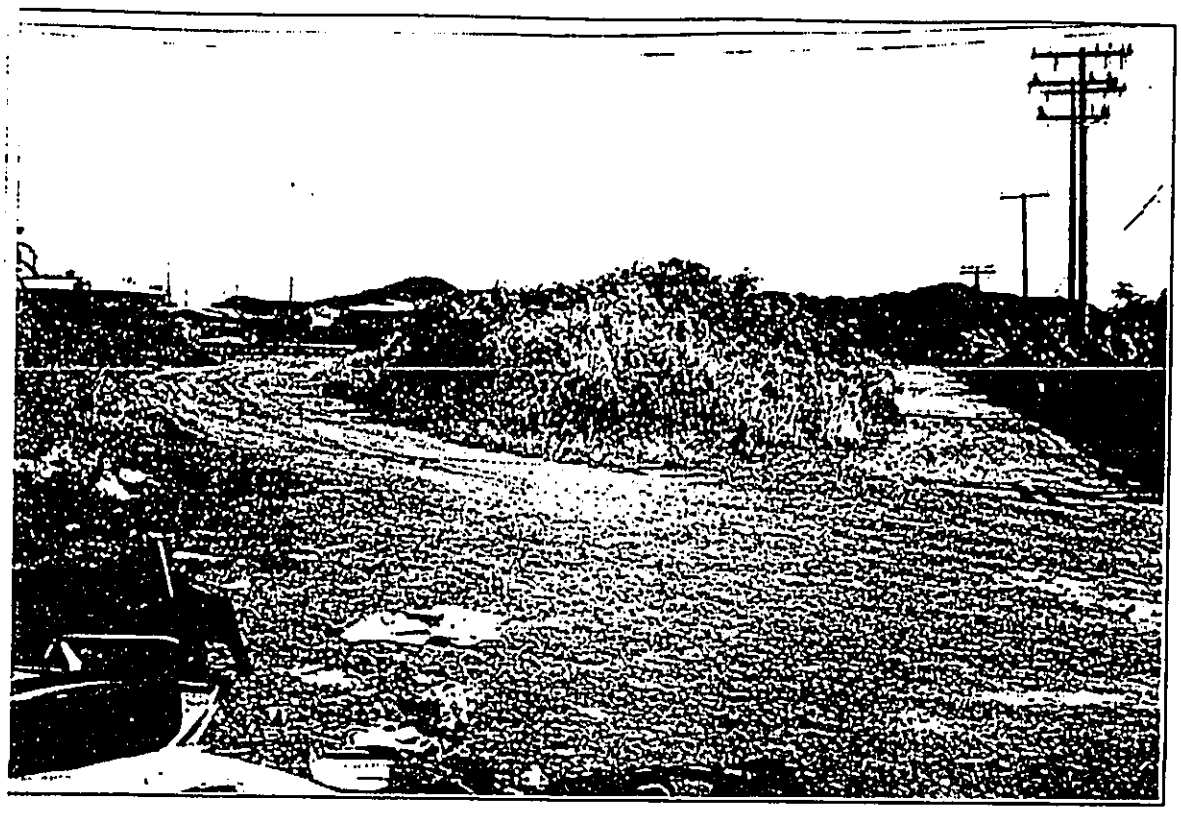


Kaneohe Stream Mouth. Looking towards Kaneohe Bay from the south bank, near the wastewater treatment plant, on the site of temporary silt basin Number 2. Note conditions on both stream banks where rip-rap lining and vegetation have been maintained. No vegetation work is required here. The water area is the location of the site to be dredged.

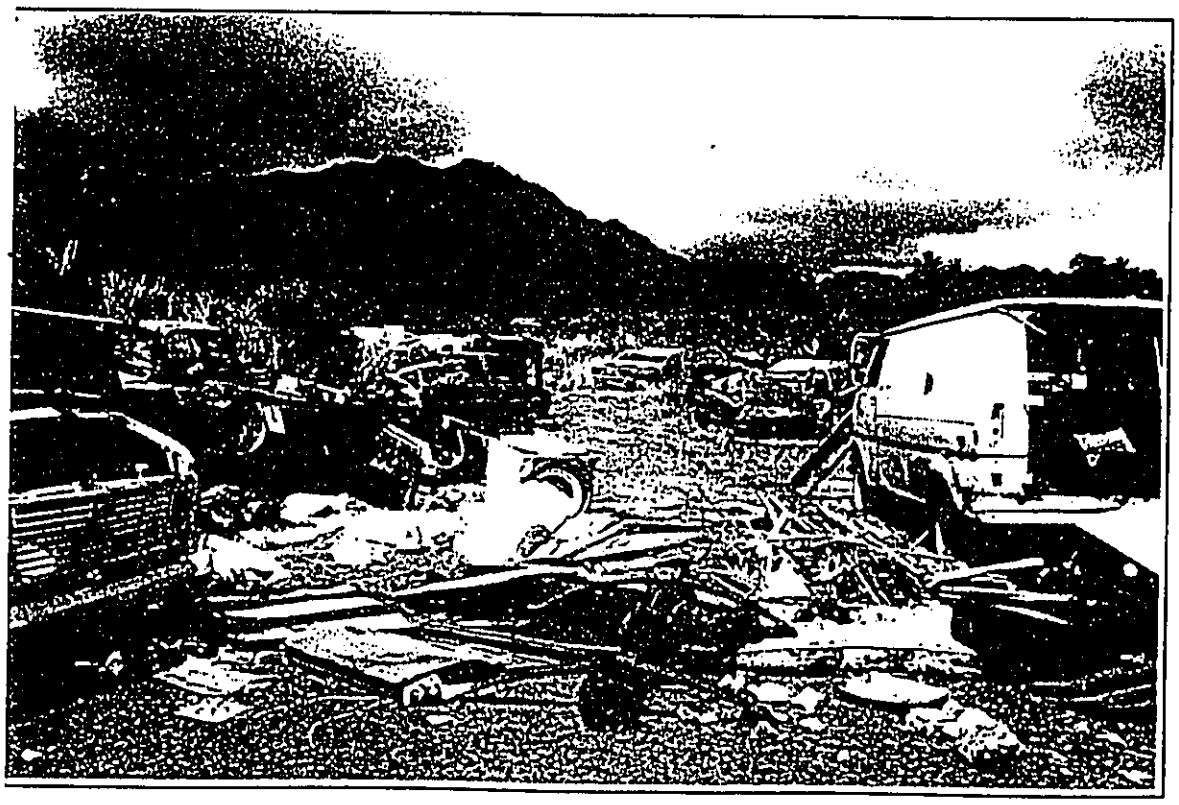


Site of Silt Basin Number 2. Typical condition of the silt basin Number 2 site, looking from the south stream bank towards the wastewater treatment plant in the background.

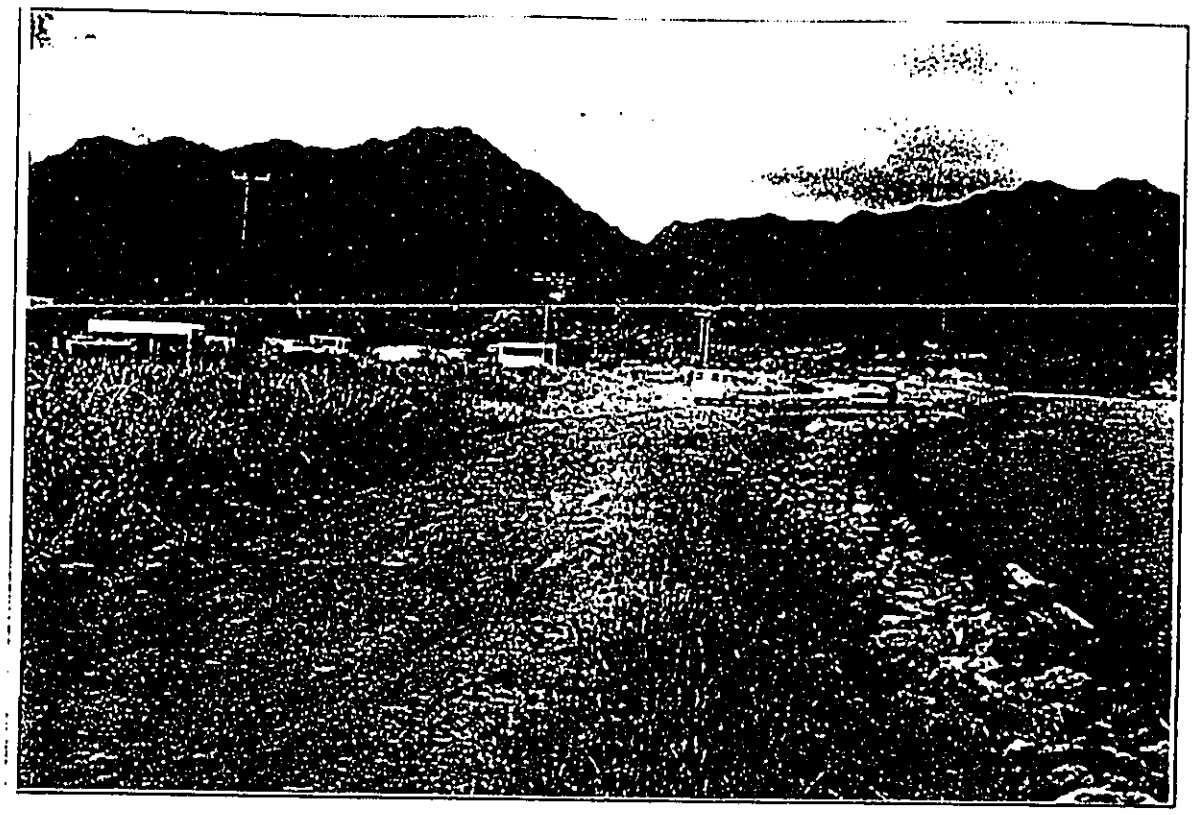
Photographs by Eugene P. Dashiell, AICP • Planning Services • Honolulu, Hawaii



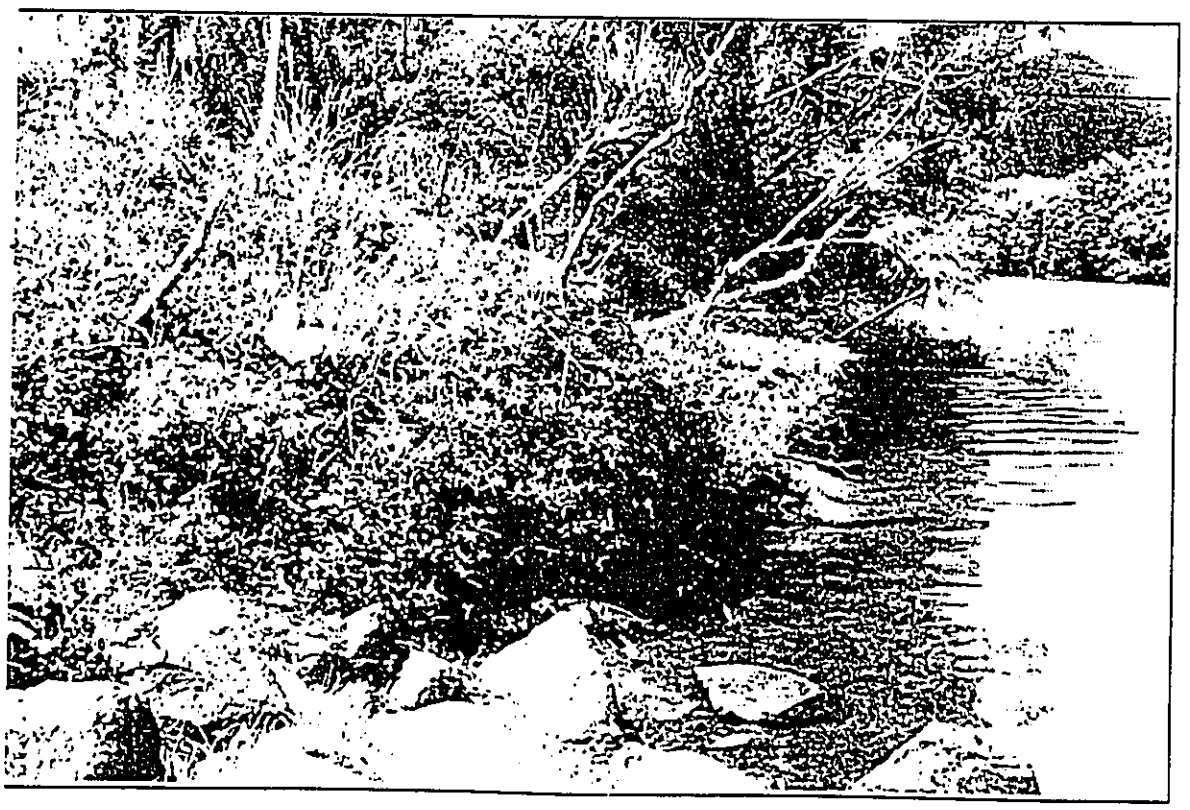
Site of Silt Basin Number 2.
Looking northeast from the inland edge of Silt Basin Number 1 towards the site of Silt Basin Number 2. The stream is in the background and the wastewater treatment plant is on the right.



Site of Silt Basin Number 1.
Looking west on the south bank of the stream. Abandoned vehicles and trash will be removed from this site (which is private land) prior to preparation of the site for construction of the temporary silt basin.



South Bank of Kaneohe Stream. Looking west from the south bank of the stream. Note the site of Silt Basin Number 2 from the stream bank to the left of the photo. Silt Basin Number 1 is in the background. At the far right, vegetation to be cut on the north bank can be seen.



South Bank Vegetation to be Cut. Looking west along the south bank. Note vegetation to be cut.

Photographs by Eugene P. Dashiell, AICP • Planning Services • Honolulu, Hawaii

References

Department of Public Works, City and County of Honolulu, Engineering Evaluation for the Kaneohe Stream Maintenance Dredging Project At Kaneohe, Oahu, Hawaii, n.d.

Appendix A

Water Quality Certification Application to DOH

STATE OF HAWAII
DEPARTMENT OF HEALTH
CLEAN WATER BRANCH

SECTION 401 WATER QUALITY CERTIFICATION (WQC) APPLICATION

FOR OFFICE USE ONLY	
WQC No.:	Assigned to:
Date Rec'd:	Date Assigned:

Prepared by: Department of Public Works
(owner or agent)

Date Submitted:_____

1.a. Applicant and address:	Department of Public Works Division of Engineering City and County of Honolulu 650 S. King St. Honolulu, HI 96813 **Contact:** Richard Nakahara
b. Agent and Address:	NA **Contact:**
2. Project Name and Location:	Kaneohe Stream Maintenance Dredging Kane'ohe, Oahu, Hawaii (TMK 4-5-30:40 & 47)
3. Associated Federal Permit:	U. S. Army Corps of Engineers Permit PODCO-O-GP-82-1E-B

4. Scope Of Work

a. Describe the proposed project including, but not limited to, the construction or operation of facilities which may result in any discharge into navigable waters:

The proposed project involves maintenance dredging of accumulated sediment, silt, debris and vegetation from the mouth and banks of Kane'ohe stream in Kane'ohe Bay to approximately 1,300 lineal feet upstream (Figure 1). The approximate area of dredging is 5.6 acres. This portion of Kane'ohe stream was previously modified by the Army Corps of Engineers in 1980. The modification included realignment, channel dredging and placement of riprap for bank protection. This dredging work is required to restore the stream's drainage capacity to the original improvements, to reduce the risk of injury and property damage due to flooding. The existing depth of the stream varies but is approximately -4 feet below mean sea level. The proposed finished depth will vary but will be approximately -9 feet below mean sea level. The dredging may be done by suction hydraulic dredge, clam shell or other devices depending on the type of material to be removed. The stream bank vegetation will be cut, but not cleared. The root structures will remain to preserve the integrity of the stream banks and the vegetation will eventually regrow. The dredged material will be transported and deposited to predesignated dewatering and spoil areas (Figure 2). Approximately 2.4 acres of land between Kane'ohe stream and the Kane'ohe wastewater treatment plant will be used for this dewatering.

b. Describe the proposed "discharge" activity:

There are two "discharges" that are expected to impact the stream. The first is a temporary increase in turbidity and suspended solids that will occur in the stream during the dredging and bank clearing operations. The second is the point source runoff water from dewatering of the dredged material. This runoff will be allowed to reenter the stream above or within the area currently being dredged. A third source that may never have a discharge are spillways from the dewatering basins that will open directly onto Kane'ohe stream. These two spillways are included in the construction of the silt basins. These spillways will only be used to drain water under intense rainfall conditions when rain falls into the basins faster than it could drain out. It is highly unlikely that these will be used however as the rainfall volume during a 50-year storm event is less than 12 cubic feet per second and the basins are designed to handle 65 cubic feet of water per second. In the event, however that the water does overtop the basins through the spillways there will be a discharge into Kaneohe stream.

c. Indicate the location(s) at which such "discharge(s)" may enter state waters (body of water, latitude, longitude, etc.):

The site of the dredging and dewatering will be in the water and on the south bank of Kane'ohe stream from the stream intersection with Kane'ohe Bay to 1,300 lineal feet upstream (TMK 4-5-30:40) at approximately 47, 21°24'50"N longitude and 157°47'15"W latitude.

d. Specify biological, chemical, thermal and any other pertinent characteristic of the "discharge" activity:

An increase in suspended solids and turbidity is expected in Kane'ohe stream during the dredging and bank clearing.

5. Treatment of Discharge Wastes/Effluents

a. Describe the function and operation of equipment or facilities employed in the treatment of wastes or other effluents which may be discharged:

Silt curtains will be placed downstream of or surrounding the dredge operations. The in-stream silt curtains constructed of interwoven polypropylene fabric (such as Amoco 1380) will be moved from one location to another in order to provide the most effective limit to sediment plume generation. If the curtain is damaged all operations affecting the stream will be suspended until the curtain is repaired and/or replaced.

The dredged material will be transported and deposited to predesignated dewatering and spoil areas (Figure 2). Approximately 2.4 acres of land between Kane'ohe stream and the Kane'ohe wastewater treatment plant will be used for dewatering. The dewatering areas will be prepared such that two desilting basins (Figure 2) will be constructed to desilt the water before being conveyed back to the stream. The basins have a total capacity of 13,000 cubic yards, and will be constructed by surrounding the basin area with a berm. The berm will be made up of layers of crushed rock, filter cloth (Amoco Engineering Fabric Propex 45-45 or equivalent) and earth fill. Silt curtains (Amoco Propex Silt Stop or equivalent) will be installed on the land between the stream and outside the silt basins and at the upstream and downstream ends of the basins to reduce the amount of silt introduced back into the stream. The clear runoff water will be allowed to reenter the stream upstream of the in-stream silt curtains.

Kane'ohe stream flow is regulated somewhat by the upland dam in Ho'omaluhia Park built by the Army Corps of Engineers to protect lower areas from flooding during intense storm events. The contractor will cease dredging in the event of high rainfall and periodically in order to remove the dewatered dredged material to Kailua landfill. The contractor may also need to replace the filters in the basins to maintain the filtration capacity of the silt basins.

b. Specify the degree of treatment of wastes and/or other effluents expected to be obtained:

The clear runoff water from the silt basins will be discharged into the stream above the in-stream silt curtains. The discharge is not expected to negatively alter the stream and nearshore water quality because the composition of the runoff from the desilting basins and the water in the stream should remain the same as the receiving water with the exception that the runoff may have more or less suspended solids and turbidity then currently exists in the stream. The discharge from the stream into Kane'ohe Bay will be flowing through silt curtains and the turbidity and suspended solids load should have minimal or no impact on the water quality of Kane'ohe Bay.

6. Project Schedule

a. Provide the date(s) on which the project activity will begin and end:

b. Provide the date(s) on which the "discharge(s)" will take place:

7. Monitoring Program

Describe the methods and means that would be used to monitor:

a. Receiving water quality:

Two stations on Kane'ohe stream, one upstream of the dredging operation and one downstream of the in-stream silt curtains will be monitored weekly for turbidity, pH and suspended solids two months prior to the proposed work, weekly during the dredging and bank clearing, and weekly for two months after the work is completed. If the pH is unusually low (acidic) in the discharge, the receiving water after the final treatment techniques may be analyzed for heavy metals that may be released from the dredged material under acidic conditions.

The Department of Health water quality standards for Class A and AA embayments includes limts for Total Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite Nitrogen, Total Phosphorus, Chlorophyll a, Turbidity, pH, Dissolved Oxygen, Temperature, and Salinity. Water samples collected monthly for several months in 1991 and 1992 currently exists and may be used for baseline data. Monthly sampling during dredging and bank clearing operations will be collected and analyzed for those parameters not being analyzed weekly. Monthly samples will be collected for two months after all work is completed.

b. Characteristics of the "discharge":

One station at the point of the dewatering discharge into Kane'ohe stream will be monitored weekly for turbidity and pH during the dredging and bank clearing operations. If the pH is falls below 5.0 in the discharge, analyses for heavy metals may be undertaken.

c. The operation of equipment or facilities employed in the treatment or control of wastes or other effluents:

Turbidity upstream of the dredging operation and downstream of the silt curtains will be visually monitored daily by the contractor during operations. The contractor will cease work and repair, replace or add more silt curtains as needed if a problem of unusual turbidity develops. Turbidity and pH will be measured weekly using a field or laboratory nephelometer (turbidity meter) and pH meter. Water will be collected and taken back to a

laboratory for all other analyses. A final report will be submitted to the Department of Health within four to six weeks of the final sample collection. This report will analyze the data collected prior to, during and after dredging and bank clearing operations.

The laboratory conducting analyses of samples under this program will participate in any DOH and EPA sponsored quality assurance (QA) programs as available for all analyses conducted as part of the monitoring program. EPA recommended QA/QC protocols will be followed for the program. Relevant QA/QC results will be provided to DOH upon request.

8. *Discharge Receiving Waters*

a. Describe the classification of state water(s) and the associated recreational uses at the "discharge" site(s):

Kane'ohe Bay is classified as a Class AA embayment. Kane'ohe stream is classified as a class II stream. There are no public recreational facilities in the area. There may be some fishing, crabbing and boating in the area. Some of the property owners on the north bank have built little docks and stairs going down to the water.

b. Provide a signed statement that, "In accordance with the State of Hawaii, Department of Health, Water Quality Standards, there is reasonable assurance that the proposed activity will be conducted in such a manner which will not violate the basic water quality criteria applicable to all waters and the specific water quality criteria applicable to the class of receiving waters where the proposed "discharge" would take place.

(Note: This statement must be signed by the applicant and included as part of the application package.)

9. **Supporting Documentation**

a. Submit applicable maps, plans, specifications, copies of associated federal permits or licenses, applications, etc., as part of the application package and list here:

(1) Engineering Evaluation for the Kane'ohe Stream Maintenance Dredging Project at Kane'ohe, Oahu, Hawaii (TMK 4-5-30:40 & 47)

(2) Maps and site plan drawings

b. Submit copies or citation of an Environmental Assessment and/or Environmental Impact Statement, as it may apply, and list here:

(1) Environmental assessment enclosed.

10. Additional Information

Explain any irregularities or unique features of the project: None.

Appendix B

Botanical Report

botanical consultants
p.o. box 90765 honolulu, hawaii 96835 (808) 923-4193 fax 923-4193

October 1, 1993

Mr. Eugene P. Dashiell, AICP
Planning Services
1219 Keeaumoku Street, Suite 200
Honolulu, Hawaii 96814-1354

Dear Gene,

Re:Proposed Kaneohe Stream Maintenance and Dredging Project Site

On September 18, 1993 I surveyed the proposed Kaneohe Stream Maintainence Dredging Project Site in Kaneohe, Hawaii. This site is located along the banks of Kaneohe Stream just north of the Kaneohe Wastewater Treatment Plant and the Kaneohe Bay Golf Course. It includes two Silt Basins and two narrow strips of land on either side of Kaneohe Stream (Figure 1).

Silt Basin 1. The area shown as Silt Basin 1 is built up and in places it is two to three meters above the roadway. Several loads of top soil and dredge spoil have been stored in this area. The vegetation of Silt Basin 1 is made up of weedy species such as koa haole (*Leuceana leucocephela* (Lam.) deWit, which varies from one to four meters in height. The understory is mostly guinea grass (*Panicum maximum* Jacq.), with many other weedy species mixed in. There are also several abandoned cars in the area. This vegetation type extends to the stream bank along the south side.

Silt Basin 2. At one time this was a riparian wetland. Since that time a flood control project has stabilized the stream bank and the area in question has been filled. Because the area was levelled at the time the wetland was filled, during heavy weather, sheets of water accumulate and shallow mud puddles are created. As they dry, the uppermost soil layer cracks and curls, giving the appearance of dried, wetland soil. However, this soil layer is very superficial - about one centimeter thick and beyond this cracking there are no hydric soil indicators.

Two facultative wetland species (FACW) are growing on the site, California grass (*Brachiaria mutica* (Forsk.) Stapf.) and sour bush (*Pluchia indica* (L.) Less.). On this site, both taxa are growing under upland conditions which is characteristic of them thiry-five percent of the time. In this situation, these taxa cannot be considered to be wetland indicators.

At this site, none of the wetland indicator criteria are met. Hydrological indicators are missing as is the hydric soil component and as already mentioned, hydrophytic vegetation is also not present.

The narrow strip of land along the northern bank of Kaneohe Stream supports a considerable amount of wetland vegetation. There are three large, mangrove trees (*Rhizophora mangle* L.), a large patch of the sedge *Cyperus*

botanical consultants
p.o. box 90765 honolulu, hawaii 96835 (808) 923-4193 fax 923-4193

alternifolius L., and the nearshore bank is covered with knottgrass (*Paspalum distichum* L. All of these plants are obligate wetland species. However, due to some high fences, access to this part of the site to check the hydrology and for hydric soils was not possible. It is, therefore, impossible to say with certainty if the area is a wetland.

Most of this study site is highly disturbed with a heavy vegetation cover of weedy, introduced grasses, forbs, and woody shrubs. In addition, as I understand, the proposed project is to cut back and trim the vegetation along the stream. Since your client will not be placing any fill on these sites, there can be no problem with Corps of Engineers regulations.

If you have any further questions regarding this site or if I can help in any way, please do not hesitate to call me. Thank you very much.

Sincerely yours,

Evangeline J. Funk, Ph.D.

Evangeline J. Funk, Ph.D.

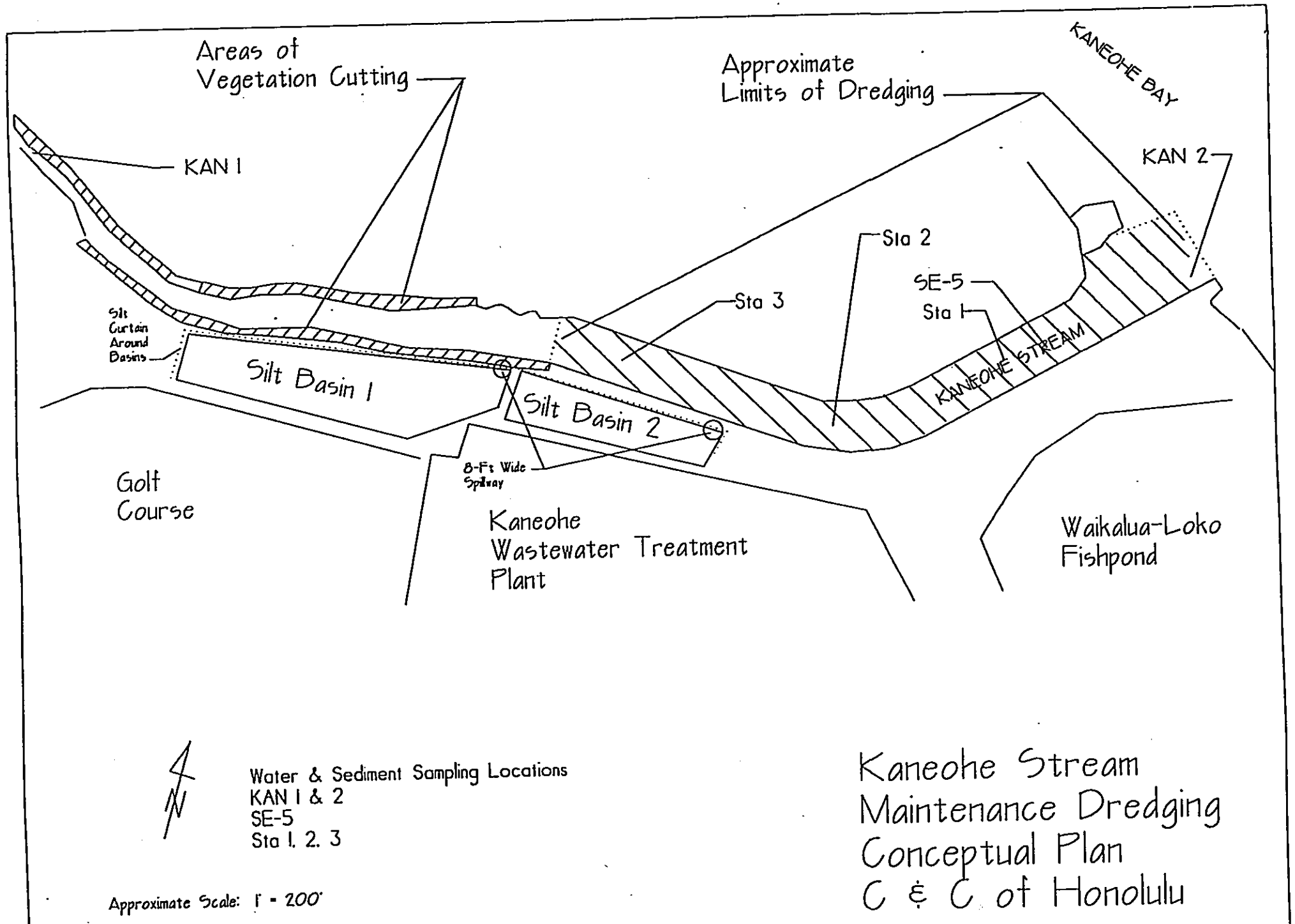


EXHIBIT 2 (EA), (Botanical Report Figure 1)

Appendix C

Conservation District Use Application Permit (Existing)

FEB 19 1988

FILE NO.: OA-12/8/87-779A
180-Day Exp. Date: 6/5/88
DOCUMENT NO.: 2733E

Honorable Alfred J. Thiede
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Thiede:

Conservation District Use Application for
Stream Clearing and Maintenance at
Various Stream Mouths on Oahu

We are pleased to inform you that your Conservation District Use Application for stream clearing and maintenance of various streams on Oahu was approved on February 12, 1988 subject to the following conditions.

1. The applicant shall comply with all applicable statutes, ordinances, rules and regulations of the Federal, State and County governments, and applicable parts of Section 13-2-21, Administrative Rules, as amended;

2. The applicant, its successors and assigns, shall indemnify and hold the State of Hawaii harmless from and against any loss, liability, claim or demand for property damage, personal injury and death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors and agents under this permit or relating to or connected with the granting of this permit;

3. If any unanticipated sites or remains of historic or prehistoric interest (such as shell, bone or charcoal deposits, human burials, rock or coral alignments, paving, or walls) are encountered during construction, the applicant shall stop work and contact the Historic Preservation Office at 548-7460 or 548-6408 immediately;

4. a. That one week prior to the dredging, the applicant shall submit a written, tentative work schedule for stream mouth dredging, furnishing data as to location, method and duration of estimated quantity of spoils to be removed (and disposal sites) to the Chairperson of the Board of Land and Natural Resources on a regular basis; and

   b. That for emergencies and other departures from schedule the applicant shall notify the Chairperson in writing within 48 hours of completion of the work;

5. That this request is for a period of ten years and is subject to time extensions at the discretion of the Board of Land and Natural Resources;

6. In recognizing that other streams and canal outlets, as yet unlisted, may be subjected to such maintenance dredging activity, the applicant is provided the option of adding to or amending the current list of streams, making reference to this application;

7. Maintenance activities shall, when practical, be scheduled for periods of low rainfall and low tide conditions;

8. Extreme care shall be taken to prevent construction related material, debris, petroleum products, and other deleterious materials from falling, flowing, leaching or entering the water;

9. Appropriate measures shall be taken to prevent widespread siltation of waters adjacent to each project site; provision shall also be made to prevent the backflow of silt-laden water into any waterway;

10. Only clean sand shall be allowed to be deposited and spread along the adjacent beach area;

11. All unwanted spoils shall be removed to approved disposal sites;

12. All applicable conditions imposed under CDUA OA-779 approved by the Board on July 9, 1976 (see attached); and

13. Other terms and conditions as prescribed by the Chairperson.

FEB 1 9 1988

Please acknowledge receipt of this permit, with the above noted conditions, in the space provided below. Please sign two copies. Retain one and return the other.

Should you have any questions on any of these conditions, please feel free to contact our Office of Conservation and Environmental Affairs staff at 548-7837.

Very truly yours,

/S/ WILLIAM W. PATY

WILLIAM W. PATY, Chairperson
Board of Land and Natural Resources

Attachment

Receipt acknowledged

Applicant's Signature

cc: Oahu Board Member
Oahu Land Agent
C&C Dept. of Land Utilization
DOH/OEQC/EC/OHA/DBED/DOT

bcc: DAR
DOFAW
State Parks/Historic Sites
Land Management
DOCARE
DOWALD
NARS

Nursor

Appendix D

Correspondence Regarding the Draft Environmental Assesment

List of Correspondence

1. U.S. Army Corps of Engineers to DPW
2. DPW to U.S. Army Corps of Engineers
3. U.S. Fish and Wildlife Service to DPW
4. DPW to U.S. Fish and Wildlife Service
5. State of Hawaii Department of Health to DPW
6. DPW to Department of Health
7. State of Hawaii Department of Land and Natural Resources to DPW
8. DPW to Department of Land and Natural Resources

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

REPLY TO ATTENTION OF

August 22, 1994

94-2505
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Eng

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Planning Division

Mr. Kenneth E. Sprague
Director and Chief Engineer
City and County of Honolulu
Department of Public Works
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Thank you for the opportunity to review and comment on the Environmental Assessment for the Kaneohe Stream Maintenance Dredging Project, Kaneohe, Oahu, Hawaii (TMK 4-5-30: 40 and 47). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

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a. As noted on page 1 of the EA, the proposed work is routine periodic maintenance to be performed by the City and County of Honolulu, as required by the terms of Corps flood control local project sponsorship agreement. The work is consistent with the maintenance requirements outlined in the Kaneohe Stream Flood Control project Operation and Maintenance (O&M) Manual. By letter dated March 23, 1994, the Corps advised DPW of the results of a December 1993 O&M inspection and outlined the deficiencies that require corrective action, including removal of a sunken boat and two unauthorized dock structures.

b. Corps authorization for maintenance clearing of Kaneohe Stream under PODCO GP82-1E-B is limited to maintenance of about 200 feet near the stream mouth and removal of about 4,700 cubic yards of material. The project described in the environmental assessment is for removal of about 20,000 cubic yards of material from a 1,300-foot reach. As stated in the May 29, 1992 General Permit authorization letter, deviations in the scope or limits of the work must be reported for necessary modification of the authorization. The Department of Public Works will need to notify our Operations Divison directly regarding the changes as well as the plans for

dewatering activities which can be authorized separately by nationwide permit. Please contact Ms. Ruby Mizue at 438-9258 for further inquiries.

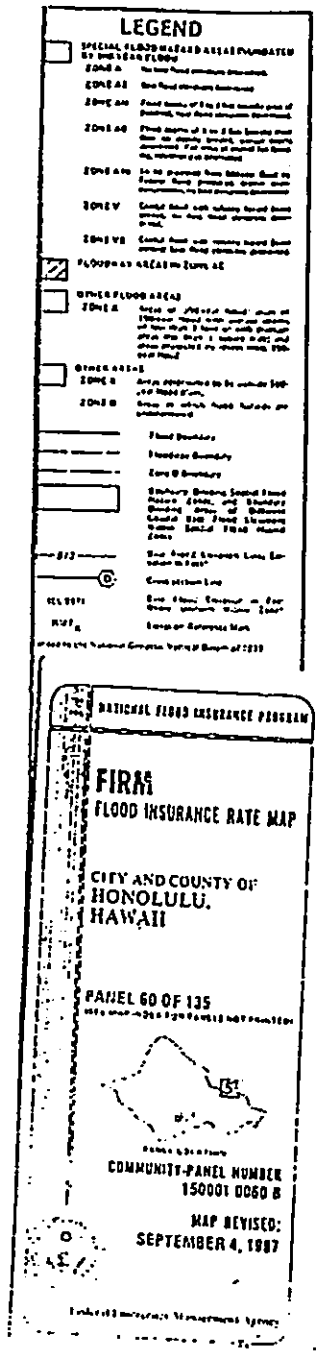
c. According to the enclosed Federal Emergency Management Agency's Flood Insurance Rate Map, panel number 150001 0060B dated September 4, 1987, the project site is located in Zone AE (special flood hazard area inundated by the 100-year flood with base flood elevations of 8 to 12 feet above mean sea level). Should you require additional information regarding this evaluation, please contact Ms. Jessie Dobinchick of my planning staff at 438-7008.

Sincerely,

Ray H. Jyo, P.E.
Director of Engineering

Enclosure

191 P05 AUG 31 '94 09:14



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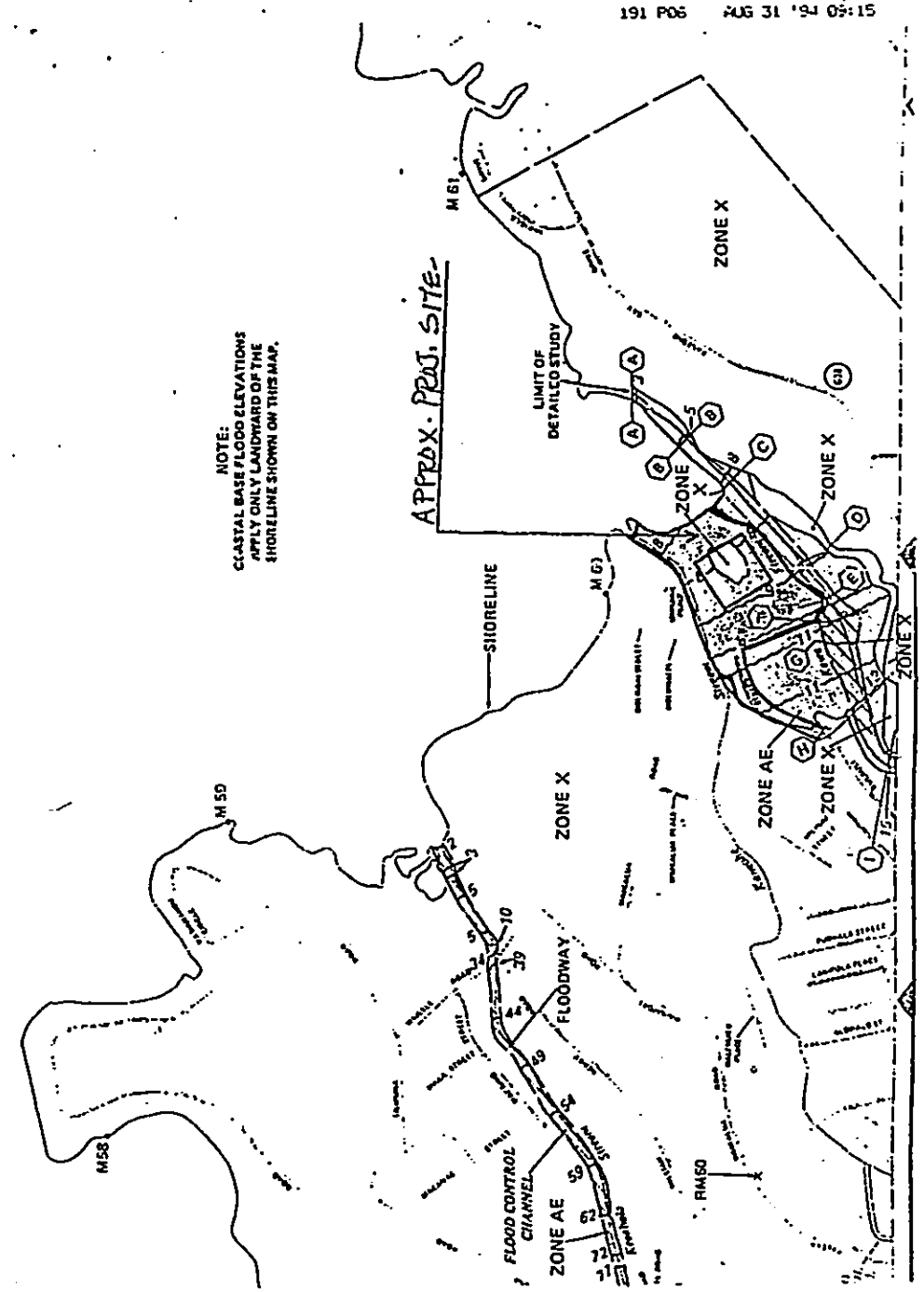
191 P06 AUG 31 '94 09:15



315 P02 MAY 12 '95 08:49

DEPARTMENT OF PUBLIC WORKS

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR

Kenneth E. Sprague
Acting Director and Chief Engineer

IN REPLY REFER TO:
95-12-0077

February 21, 1995

Mr. Ray H. Jyo, P.E.
Director of Engineering
U.S. Army Engineer District, Honolulu
Building T-1, Room 105
Fort Shafter, Hawaii 96858-5440

Attention: Planning Division

Dear Mr. Jyo:

Subject: Comments Regarding the Environmental Assessment for the Kaneohe Stream Maintenance Dredging Project

Thank you for your letter of August 22, 1994 concerning the subject project.

1. *Requisite Corrective Actions.* We have taken appropriate action to remedy the problems of a sunken boat and two unauthorized dock structures in order to maintain consistency with the maintenance requirements of the Operations and Maintenance Manual for the project.

2. *Changes in Authorized Maintenance Clearing.* We have coordinated with your office regarding this project and will continue to do so. We will formally notify your office in writing at the time a firm construction schedule is established and when a Water Quality Certification has been obtained from the State Department of Health. Our understanding is that such notification, as proposed, will enable the modification of the General Permit No. PODCO GP 82-1E in order that this necessary project may proceed.

3. *Flood Insurance Rate Map.* We are aware of the base flood elevations in the project area and will so note them in the final Environmental Assessment.

Should you have any questions, please call Richard Nakahara of the Division of Engineering at 523-4932.

Very truly yours,

KENNETH E. SPRAGUE
Acting Director and Chief Engineer

cc: Engineers Surveyors Hawaii, Inc.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pacific Islands Ecoregion
300 Ala Moana Blvd, Room 6307
P.O. Box 50167
Honolulu, Hawaii 96850

94-2410
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Eng

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DIV. OF ENGINEERING
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In Reply Refer To: CAW

Mr. Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Re: Environmental Assessment for the Kaneohe Stream Maintenance Dredging Project, Kaneohe, Oahu, Hawaii

Dear Ms. Louis:

The U. S. Fish and Wildlife Service (Service) has reviewed the Draft Environmental Assessment (EA) for the Kaneohe Stream Maintenance Dredging Project, Kaneohe, Oahu, Hawaii. The project sponsor is the Department of Public Works. The Service offers the following comments for your consideration.

The proposed project includes maintenance dredging of approximately 20,000 cubic yards of sediment, silt, and debris from the stream mouth (at the entrance to Kaneohe Bay) to approximately 1,300 lineal feet upstream. Two silt basins to dewater and filter the dredged material will be constructed adjacent to the south bank of the stream. The drained dredged materials will be disposed of at a sanitary landfill site. Existing stream bank vegetation will be cut back within limited project segments. The proposed maintenance dredging is required to maintain the stream's discharge capacity in order to reduce the risk of damage due to flooding.

During our review of the project location and scope, we noticed a deviation from the scope permitted by the U.S. Army Corps of Engineers' (Corps) existing General Permit 82-1E-B, which includes maintenance dredging of Kaneohe Stream. In the General Permit, dredging activities are limited to approximately 200 linear feet upstream of the stream mouth. The proposed dredging is approximately 1,100 linear feet beyond the limit authorized in the Corps permit, and the project includes two siltation basins. The scope of the project should be clarified in the EA, and the Corps should be contacted for information on additional permit requirements for the project.

The silt basins may attract and provide foraging habitat for endangered and other waterbirds as dredged materials will likely contain an abundant invertebrate population. The Service would appreciate being contacted if any endangered or other waterbirds make use of the silt basins.

Finally, the Service recommends that along with those measures outlined in the project description to minimize the degradation of water quality and impacts to fish and wildlife resources and habitats, the following additional measures be incorporated into the design and construction of the flood control project:

a. All construction-related materials should be placed or stored in ways to avoid or minimize disturbance to the aquatic environment;

b. All construction-related materials should be free of pollutants;

c. No contamination of the aquatic environment (trash or debris disposal etc.) should result from construction activities; and

d. A contingency plan to control accidental spills of petroleum products should be developed. Absorbent pads and containment booms should be stored on-site to facilitate the clean-up of petroleum spills.

Provided that the Final EA includes a commitment to implement the foregoing conservation measures as an integral part of the flood control project and that the Corps is notified of the deviation from the scope of the General Permit, the Service will concur with a Negative Declaration finding and determination that an Environmental Impact Statement is not required for the project.

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

Sincerely,

Brooks Harper

Brooks Harper
Field Supervisor
Ecological Services

cc: COE, Hawaii
DAR, Hawaii
DLNR, Hawaii
CZMP, Hawaii
CWB, Hawaii

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR

Kenneth E. Sprague
Acting Director and Chief Engineer

IN REPLY REFER TO:
95-12-0075

February 23, 1995

Mr. Brooks Harper
Field Supervisor
Ecological Services
U.S. Fish and Wildlife Services
P.O. Box 50167
Honolulu, Hawaii 96850

Dear Mr. Harper:

Subject: Reference CAW -- Environmental Assessment for Kaneohe Stream Maintenance Dredging

Thank you for your letter received in our office on August 15, 1994 concerning the environmental assessment for the subject project.

1. *U.S. Army Corps of Engineers (COE) Permit.*

On page 10 of the draft Environmental Assessment we noted that to activate the General Permit we would notify the COE by letter of the volume of material to be dredged, provide them with a map of the project, and that we would include a copy of the Water Quality Certification Permit when it is issued by the State Department of Health.

We have discussed the extent of coverage of the General Permit 82-1E-B with the COE. The map included the present General Permit applied to the proposed maintenance work under an earlier version (March 12, 1992) of the General Permit. In the current General Permit Notice of Authorization (may 29, 1992) from the COE to the Department of Public Works, Mr. Michael T. Lee, Chief, Operations Branch notes that, "Should there be any deviations from the locations, scope and limits of work as shown in the attached drawings, you should notify our office for necessary modification of this authorization."

Our understanding that the COE considers our proposed work to be acceptable under the terms of the General Permit and that our contacts with them (including the Environmental Assessment and discussions and meetings) along with the formal letter described above will be adequate to comply with the terms of the General Permit. We will submit the formal letter later, when we have obtained the Water Quality Certification Permit, and when we have established the construction schedule.

Please note that this maintenance dredging is being done in compliance with Federal law and COE's regulations. The Kaneohe Stream Flood Control Project includes the upstream dam and reservoir as well as the stream bank and dredging maintenance in the subject project.

We will include a summary of the above discussion and a copy of your letter in the final Environmental Assessment.

2. *Waterbird Use of Silt Basins.*

If, during our inspections of the subject project, we note the presence of waterbirds in the temporary silt basins we will inform your office.

3. *Additional Measures Recommended by the Service.*

We will include your recommended measures into the contract specifications for the subject project.

Should you have any questions, please call Richard Nakahara of the Division of Engineering at 523-4932.

Very truly yours,

KENNETH E. SPRAGUE
Acting Director and Chief Engineer

cc: U.S. Army Corps of Engineers
(Attn: Honolulu District Engineer)
Engineers Surveyors Hawaii, Inc.

JOHN WAIHEE
GOVERNOR OF HAWAII

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183 P03 AUG 23 '94 09:35

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

P.O. BOX 621
HONOLULU, HAWAII 96809

DEPUTIES
JOHN P. KEPPELER II
DONA L. HANAIKE

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

REF:OCEA:DKP

94-2411

AUG 15 1994

FILE NO.: 95-030
DOC. ID.: 4798

The Honorable Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

SUBJECT: Environmental Assessment (EA): Kaneohe Stream Maintenance Dredging Project, Kaneohe, Oahu: TMK: 4-5-30: 40 & 47

We have reviewed the assessment information for the subject project transmitted by your letter dated July 14, 1994, and have the following comments:

Division of Aquatic Resources

The Division of Aquatic Resources (DAR) comments that previous work by the permittee at numerous stream outlets on Oahu has not generated significant reports of adverse impacts or detrimentally affected aquatic or other natural resources. Accordingly, DAR has no objection to the proposed project provided the conditions established by the Board for the 10-year time extension of CDUP OA-779A (dated February 12, 1988) remain applicable for the Kaneohe Stream.

Historic Preservation Division

The Historic Preservation Division (HPD) comments that a review of their records shows that there are no known historic sites at this parcel. This project proposes maintenance dredging of Kaneohe Stream from its intersection with Kaneohe Bay inland for 1300 ft. In addition, two temporary silt basins for dewatering of the dredge material will be constructed adjacent to the stream channel in areas that have been modified and lined and has undergone periodic maintenance since 1980. Because prior improvements would have destroyed any historic sites that might have been present at this portion of the stream, HPD believes this project will have "no effect" on historic sites.

183 P04 AUG 23 '94 09:33

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa of our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,

KEITH W. AHUE

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR

Kenneth E. Sprague
Acting Director and Chief Engineer

IN REPLY REFER TO:
95-12-0076

February 23, 1995

Mr. Lawrence Miike
Director
Department of Health
State of Hawaii
P. O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Miike:

Subject: Comments on the Draft Environmental Assessment (DEA) for Kaneohe Stream Maintenance Dredging Project, Kaneohe, Oahu, Hawaii, Tax Map Key: 4-5-30: 40 and 47

Thank you for your letter of August 15, 1994 concerning the environmental assessment for the subject project.

1. As noted in the Environmental Assessment (EA), page 6, paragraph 2.5, based on a site inspection by a botanist, no wetlands are present on the subject site.

2. Although a copy of the Water Quality Certification (WQC) application is included in the EA as Appendix A, we will formally apply to your office for the WQC permit.

3. The discharge from the dewatering basins is acceptable to the U.S. Army Corps of Engineers (COE), subject to the issuance of a WQC under provisions of the Federal Clean Water Act by your department. When we have the WQC, and have a firm construction schedule, we will formally notify the COE of our intent to begin construction and we will keep you apprised of these events. We will specifically request the COE to inform you of receipt of our formal notification for your use.

4. The WQC application includes the components of a best management practices plan, an effluent and receiving water quality monitoring plan including the parameters to be monitored and the frequency of monitoring. The monitoring plan covers preconstruction, construction and post-construction periods and we have provided existing baseline data in the EA (Exhibits Section, following page 11). The monitoring plan provides for reporting of results from each period of monitoring. Proposed monitoring includes tests for pH and Hawaii Administrative Rules will be followed regarding the restriction on effluent not to be lower than a pH of 5.5.

If there are any questions, please call Richard Nakahara of the Division of Engineering at 523-4932.

Very truly yours,

KENNETH E. SPRAGUE
Acting Director and Chief Engineer

cc: Engineers Surveyors Hawaii, Inc.

Appendix E

U. S. Army Corps of Engineers Permit
(Existing)

MAY 29 1992

Operations Division

NOTICE OF AUTHORIZATION
File No. PODCO-O GP 82-1E-B

Mr. C. Michael Street
Acting Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Street:

This is to inform you that the written request of February 10, 1992, supplemented by your letter of March 17, 1992 for maintenance clearing of rivers, streams, storms drains and beach areas on Oahu, in accordance with the attached drawings, (36 sheets), is hereby approved. The work would involve maintenance clearing at the mouths of each of 36 streams on Oahu to minimize the threat of flooding in upstream areas.

This authorization shall be subject to the terms and conditions of the General Permit, PODCO-O GP 82-1E (copy attached) issued by the Honolulu District on May 6, 1992. In addition to this authorization, you must acquire the appropriate local and State permits, and comply with their regulations.

Please notify our office at least seven days prior to initiating the work. In emergency situations when flooding is imminent, notification by phone will suffice.

In view of the number of streams involved, the consistent scope, location and limits of work, and the ongoing need for maintenance in the interest of public health and safety, this authorization will remain in effect for the life of the general

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CEPOD-OC
CEPOD-PA
(ELSIE)

TIONAL FORM 99 (7-90)
FAX TRANSMITTAL # of pages ▶ 3
Gene Bashiell From Ruby Mizue
Phone # 438-9258 x14
/Agency

permit, which expires on May 6, 1003. Should there be any deviations from the locations, scope and limits of work as shown in the attached drawings, you should notify our office for necessary modification of this authorization.

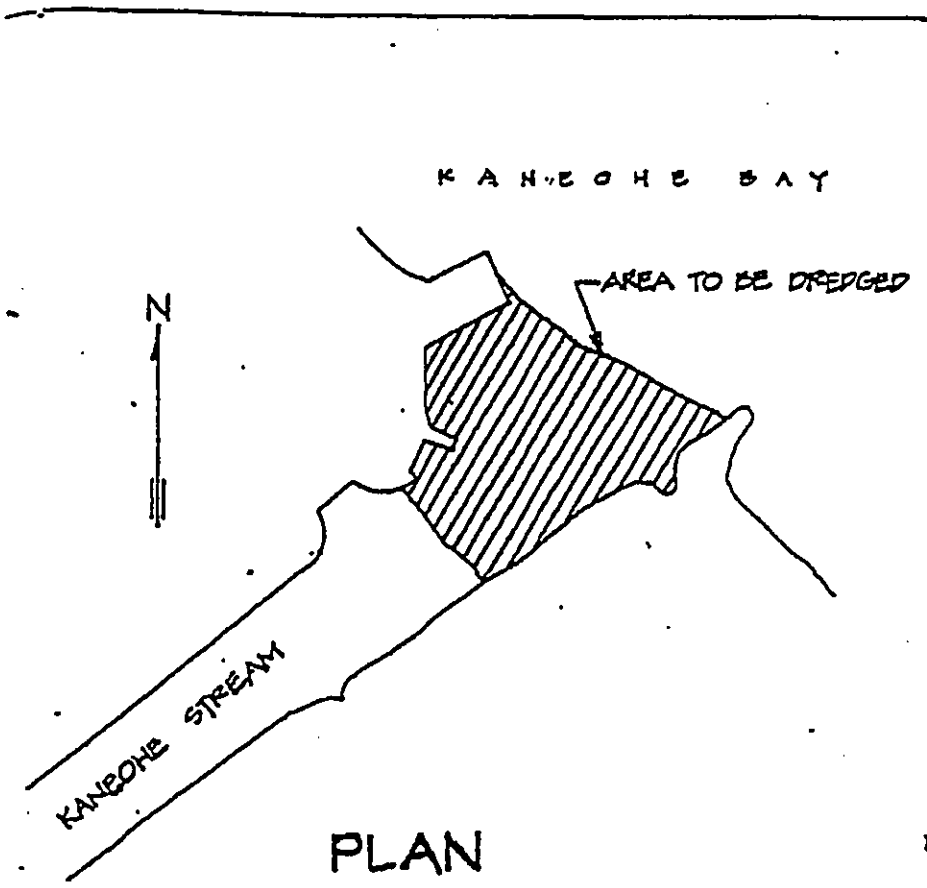
Sincerely,

Michael T. Lee
Chief, Operations Division

Attachment

Copies Furnished: (w/drawings)

U.S. Fish & Wildlife Service, Honolulu, HI
National Marine Fisheries Service, Endangered Species Coordinator Honolulu, HI
National Marine Fisheries Service, ATTN: Mr. John Naughton, Honolulu, HI
U.S. Environmental Protection Agency, San Francisco, CA
Planning Office, Dept. of Land & Natural Resources, Honolulu, HI
State Historic Preservation Officer, Honolulu, HI
Office of State Planning, CZM Program, Honolulu, HI
Dept. of Health, Clean Water Br, Honolulu, HI
Dept. of Land Utilization, City & County of Honolulu, Honolulu, HI



PLAN

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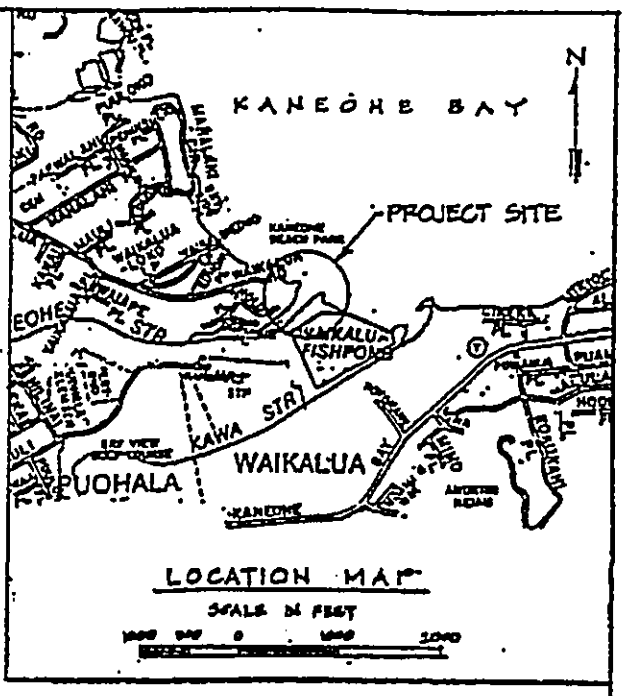
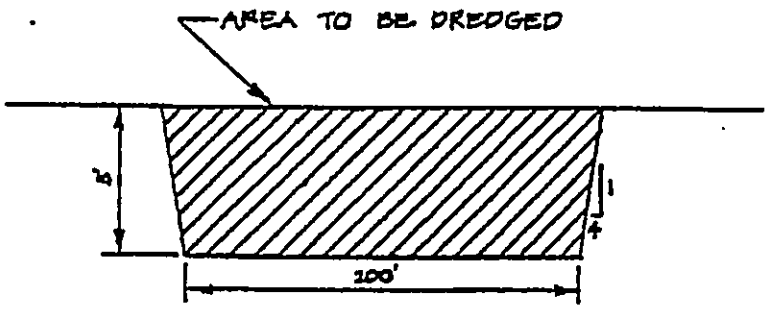


LOCATION MAP

SCALE IN FEET

NOTES:

APPROXIMATELY 4,700 CY OF SILT, ROCKS & GRAVEL WILL BE DREDGED BY A CRANE. DREDGED MATERIAL WILL BE DISPOSED OF AT KAILUA LANDFILL.



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PROPOSED KANEOHE STREAM MAINTENANCE DREDGING IN KANEOHE AT KOOLAUPOKO CITY & COUNTY OF HONOLULU STATE OF HAWAII APPLICATION BY: CITY & COUNTY OF HONOLULU	PURPOSE: STREAM MAINTENANCE DATUM: MEAN SEA LEVEL 0.0 ADJACENT PROPERTY OWNERS: 1.ALFRED M. ANAMIZU & wf. NANCY Y. 2.STANLEY M FUJISAKA & wf. ELAINE E. 3.WAIKALUA-LOKO FISH-POND