



PUBLIC NOTICE

US Army Corps of Engineers, Honolulu District

Regulatory Branch (CEPOH-RO)
Building 230
Fort Shafter, Hawaii 96858-5440

Public Notice Date: **February 13, 2019**
Expiration Date: March 14, 2019
Permit File Number: POH-2017-00198

FEDERAL PUBLIC NOTICE

Interested parties are hereby notified that an application has been received for a Department of the Army permit for certain work in waters of the United States as described below and shown on the attached drawings.

APPLICANT:

Mr. Ross Sasamura
City and County of Honolulu
Department of Facilities Maintenance
1000 Uluohia Street, #215
Kapolei, Hawaii 96707

WATERWAY AND LOCATION OF THE PROPOSED WORK: The proposed stream maintenance activities would take place in various locations around the Island of Oahu, Hawaii. Coordinates of each of the 79 stream maintenance activity locations are shown in the attached table.

PROPOSED PROJECT AND PURPOSE:

The project description is as follows, to be conducted in accordance with the project drawings (enclosed):

The City and County of Honolulu Department of Facilities Maintenance (DFM) is proposing to conduct repeated stream maintenance activities at 92 locations around the Island of Oahu for the next five years. The stream maintenance activities are generally divided into three main categories of work: stream mouth dredging, stream mouth breach opening, and stream maintenance in reaches of streams located mauka of the stream mouth. Of the 92 total stream maintenance activity locations, the DFM plans to apply for a separate Corps permit to conduct stream mouth dredging in 13 of the locations, listed in the "Stream Mouth Dredging Future Projects (separate application)" table below. The subject project currently under review by the Corps is for the remaining 79 stream maintenance projects, including 16 stream mouth breach opening locations and 63 stream maintenance locations in mauka reaches.

The proposed stream mouth breach opening activities, proposed for 16 of the 79 locations (as shown on Figure 7.1 and listed in the "Stream Maintenance Projects" table

below), would involve using heavy equipment (e.g. excavator, bulldozer, backhoe, or loader) to dredge an approximately one to three-foot wide channel through the natural sand berm at the stream mouth, allowing the force of the water backed up behind the berm to naturally widen the created channel. The sand dredged from the berm would be placed in the uplands outside the channel. Green waste, silt, debris, or other unsuitable materials if encountered will be handled separately, removed and disposed of at the City-owned Waimanalo Gulch Landfill or other approved upland disposal site. All of the 16 stream mouth breach opening activities would be located in the DFM's Laie District. Of the 16 locations where stream mouth breach opening activities are proposed, the sand berm at the stream mouths of three of the locations would be breached on a monthly basis, four breached every other month, four breached quarterly, three breached biannually, and one breached immediately prior to storms and routinely every two to three years. The frequency of stream mouth breach opening activities at each of the locations is listed in the "Stream Maintenance Projects" table below. The current condition of some portion of the stream channels may include hardening (e.g. concrete lining); however, none of the 16 locations with proposed stream mouth breach opening activities are completely concrete-lined on both the stream bed and banks.

The remaining 63 stream maintenance activities (as shown on Figure 7.1 and listed in the "Stream Maintenance Projects" table below) would primarily consist of removal of accumulated sediment, trash, and debris by heavy equipment staged in the channel or in the uplands next to the channel. Two of the stream maintenance activities would consist of clearing of one existing boulder basin and one existing catchment basin, respectively, that were constructed in-line with the channel for water and sediment detention. The proposed stream maintenance would involve using an assortment of heavy equipment (e.g. crane, excavator, skid steer, track loader, bulldozer, backhoe, boom truck, tire loader, or tractor loader) staged primarily on the stream banks. Of the 63 locations where stream maintenance activities are proposed, the maintenance dredging would occur for two locations on a monthly basis, 12 locations on a quarterly basis, 21 locations on an annual basis, 11 locations on a biannual basis, four locations dredged every two to three years, nine locations dredged every three to five years, and three locations dredged as needed. The frequency of stream maintenance activities at each of the 63 locations is listed in the "Stream Maintenance Projects" table below.

Over the five year duration of work, the proposed dredging with heavy equipment at the 16 stream mouth breach opening and 63 stream maintenance projects would result in the removal of approximately 448,250 cubic yards of dredged sediment, temporarily disturbing the sediment in a total of 150,900 linear feet of stream.

Equipment operators would be required to comply with the Best Management Practices (BMPs) in the October 2018 Department of Facilities Maintenance Stream Maintenance Manual. Equipment would only be used in the stream channel if there is no other practical way to perform the maintenance activity and if the water level is low enough to insure the axels and all oil and grease-containing parts remain above the water level. Equipment would be temporarily staged in uplands for all 79 project locations. Equipment would access the stream via existing ramps or other access

routes at 71 of the project locations. At the remaining eight project locations, the applicant would construct a temporary rock or gravel access ramp, which would be removed following the maintenance activity and any disturbed streambanks restored to pre-maintenance conditions.

Project isolation BMPs would be used in 31 of the 79 project locations. Bulk sand bags would be temporarily installed for stream diversion in five tidally-influenced stream maintenance project locations in the Waianae DFM District. The bulk bags filled with clean sand or gravel would be installed in the stream channel at low tide on the downstream side of the work area to isolate the project area from the incoming tide and would be removed following the completion of each dredging event. Turbidity curtains would be temporarily installed during dredging at 26 stream maintenance project locations and the stream maintenance portion of the joint stream maintenance and stream mouth breach opening location at Aiea Stream. Turbidity curtains would only be deployed in slow moving streams. In streams that are greater than 3.5 feet deep, turbidity curtains with 3-foot long skirts below the water surface may be used to contain sediment suspended in the upper part of the water column. Turbidity curtains without skirts may be used to collect floatable trash and debris. The temporary installation of turbidity curtains would not completely block the flow of the stream and would not inhibit the movement of aquatic fauna. Turbidity curtains would be cleaned and inspected for damage prior to installation at the stream site and would be removed after the suspended sediment generated by the stream maintenance projects has settled out.

Dredged sediment, as well as any vegetative debris and trash collected during dredging, would be either loaded directly into dumpsters or dump trucks or. At five stream maintenance project locations in the Waianae DFM District, the dredged sediment would be temporarily stockpiled in uplands before being loaded into dumpsters or dump trucks. Dredged sediment, debris, and trash would then be disposed of in the PVT Integrated Solid Waste Management Facility. Temporary stockpiles of sediment dredged from the stream maintenance projects and placed in uplands would be enclosed with filter socks and/or sandbag perimeter barriers, surrounded by high visibility construction fencing, and covered prior to rain events.

Stream maintenance would occur monthly, quarterly, and/or as needed (e.g. prior to a storm event) depending on the activity location. In general, scheduled dredging for stream mouth breach opening project locations would be performed between Monday and Wednesday, avoiding government and school holidays to the greatest extent possible. The majority of stream maintenance activities would be scheduled for the dry season April through October. Dredging for stream mouth breach opening project locations would generally be conducted on a falling (ebb) tide and dredging frequency during the peak coral spawning period of June 1 to September 30 would be minimized to the greatest extent possible. If an affirmative permit decision is made, the DFM would be authorized to conduct stream maintenance and stream mouth breach opening as described in this public notice for a duration of five years.

Project location-specific details about the location (e.g. coordinates), type of maintenance, and frequency of maintenance for each project are located in the table attached to this public notice. Project-specific plans are available upon request during the public notice period. After the end of the public notice period on March 14, 2019, project plans may be requested with a Freedom of Information Act (FOIA) request. Information about FOIA requests can be found on <https://www.poh.usace.army.mil/Media/FOIA/>.

Basic Project Purpose: flood prevention

Overall Project Purpose: To maintain sufficient flow through the stream channels in 79 project locations around the Island of Oahu in order to prevent flooding from storm water retained by in-stream blockages and stream mouth sand berm barriers.

Avoidance and Minimization: The applicant, the Department of Facilities Maintenance of the City and County of Honolulu (DFM), is the government entity charged with maintaining sufficient stream flow to prevent flooding. The applicant has informed the Corps that it is not possible to avoid the impacts associated with the proposed activities as avoidance would not allow the project purpose to be met. The applicant has informed the Corps that, since they are limited to working within City-owned portions of streams, they do not have the responsibility and legal permission to maintain other portion streams on private property or owned by other entities; therefore, minimization through offsite alternatives was not considered by the applicant.

The applicant would minimize impacts by limiting vegetation clearing to the amount needed for stream maintenance and allowing the root systems of vegetation growing on stream banks to remain intact. The applicant would minimize impacts to recreation by scheduling dredging for stream mouth breach opening project locations between Monday and Wednesday, avoiding government and school holidays to the greatest extent possible. The applicant would minimize impacts to water quality by scheduling dredging during the dry season (April through October) and on a falling (ebb) tide for stream mouth breach opening project locations. The applicant would further minimize impacts to water quality by using construction BMPs including the temporary installation of turbidity curtains at 27 total project locations and bulk sand bags at five tidally-influenced stream maintenance project locations. Furthermore, equipment would only be used in the stream channel if there is no other practical way to perform the maintenance activity and if the water level is low enough to insure the axels and all oil and grease-containing parts remain above the water level and equipment would be required to be inspected and cleaned prior to entering the stream. Impacts to biological resources would be minimized though monitoring and stop work procedures for threatened and endangered species, and minimizing dredging frequency during the peak coral spawning period of June 1 to September 30 to the greatest extent possible.

Mitigation: The applicant has not proposed mitigation for the project.

AUTHORITY: A Department of the Army permit is required pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) - To perform work in or affecting navigable waters of the United States.
- Section 404 of the Clean Water Act (33 U.S.C. 1344) - Discharge dredged or fill material into waters of the United States. The Corps' public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413) - Transport dredged material for the purpose of dumping it into ocean waters. The Corps' public interest review will consider the criteria established under authority of Section 102(a) of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (40 CFR Parts 220 to 229), as appropriate.

WATER QUALITY CERTIFICATION: **The proposed action will result in a discharge of dredged or fill material into a water of the U.S.** and will require authorization from the Corps in accordance to Section 404 of the Clean Water Act of 1972 (CWA). Under Section 401 of the CWA (Public Law 95-217), the Corps may not issue a permit for the described work until the applicant obtains a certification, or waiver of certification, from the State of Hawaii, Department of Health – Clean Water Branch (DOH-CWB). The DOH-CWB issued a final Water Quality Certification, WQC0928, on January 4, 2019.

COASTAL ZONE MANAGEMENT ACT CERTIFICATION: **The proposed activity may affect land or water uses in the Coastal Zone.** Under Section 307(c)(3) of the Coastal Zone Management Act of 1972, as amended by 16 U.S.C. 1456(c)(3), the Corps may not issue a permit for the described work until the applicant obtains a Federal Consistency Concurrence from the State of Hawaii, Department of Business, Economic Development, and Tourism – Office of Planning.

HISTORIC PROPERTIES: Pursuant to Section 106 of the National Historic Preservation Act (NHPA), our assessment of the project leads us to a preliminary determination of no adverse effect to historic properties within the project area. Therefore, consultation with the State of Hawaii, Department of Land & Natural Resources, State Historic Preservation Division (SHPD) will be conducted independent of this public notice.

ENDANGERED SPECIES: Pursuant to Section 7 of the Endangered Species Act (ESA), federal agencies must consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) on any action that may affect a species listed (or proposed for listing) under the ESA as threatened or endangered or any designated critical habitat. Based on the project location, the following protected species have the potential to occur near the project location:

Hawaiian hoary bat (*Lasiurus cinereus semotus*), Endangered
Hawaiian stilt (*Himantopus mexicanus knudseni*), Endangered
Hawaiian coot (*Fulica americana alai*), Endangered
Hawaiian common moorhen/gallinule (*Gallinula galeata sandvicensis*), Endangered
Hawaiian duck (*Anas wyvilliana*), Endangered

Green Sea Turtle (*Chelonia mydas*), Threatened
Hawksbill Turtle (*Eretmochelys imbricata*), Endangered
Hawaiian Monk Seal, (*Monachus schauinslandi*), Endangered
Hawaiian Monk Seal, (*Monachus schauinslandi*) critical habitat
Dwarf naupaka (*Scaevola coriacea*), Endangered
'Ihi 'ihi (*Marsilea villosa*), Endangered
Kuahiwi laukahi (*Plantago princeps* var. *princeps*), Endangered
Round-leaved chaff-flower (*Achyranthes splendens* var. *rotundata*), Endangered

Preliminary determinations indicate that the described activity may affect an endangered or threatened species or its critical habitat. Consultation under Section 7 of the Endangered Species Act of 1973 (87 Stat. 844) will be initiated. A permit decision for the proposed activity will not be issued until the consultation process is completed.

ESSENTIAL FISH HABITAT: The proposed work is being evaluated for possible effects to Essential Fish Habitat (EFH) pursuant to The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), which requires all Federal agencies to consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect EFH. The Honolulu District includes areas of EFH as identified in the Fishery Management Plans. We have reviewed the January 20, 1999, Western Pacific Fishery Management Council's Environmental Assessment to locate EFH area as identified by NMFS. Preliminary determinations indicate that the project area does not contain EFH and therefore the described activity will not have an adverse effect on EFH. Consultation under MSA is not required for the described activity.

FEDERAL EVALUATION OF APPLICATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Native Hawaiian Organizations; and other interested parties in order to evaluate the direct, indirect, and cumulative impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this

decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above.

PUBLIC HEARING: Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state clearly and concisely, the reasons and rationale for holding a public hearing. The District Commander will then decide if a hearing should be held.

COMMENT AND REVIEW PERIOD: Comments on this public notice should be made in writing via conventional mail or e-mail. Comments will be accepted and made part of the record and will be considered in determining whether it would be in the public interest to authorize this proposal. Conventional mail comments should be sent to

U.S. Army Corps of Engineers, Honolulu District
Regulatory Branch, Attn: Ms. Vera Koskelo
Building 230
Fort Shafter, Hawaii 96858-5440.

Alternatively, comments may be emailed to Vera.B.Koskelo@usace.army.mil. Reference POH-2017-00198 in the subject heading of the email. In order to be accepted, e-mail comments must originate from the author's e-mail account. All e-mail comments should be sent to Vera.B.Koskelo@usace.army.mil

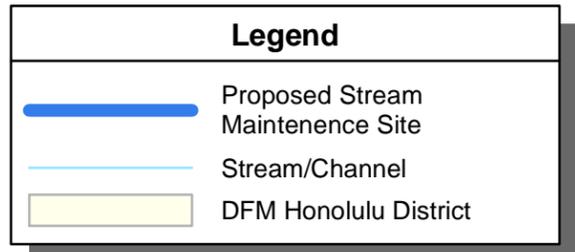
Both conventional mail and e-mail comments must include the DA permit number **POH-2017-00198**, and the commentor's name, address, and phone number. **All comments whether conventional mail or e-mail should be received by the close of business on March 14, 2019.**

PRIVACY & CONFIDENTIALITY: It should be noted that materials submitted as part of the permit application become part of the public record and are thus available to the general public under the procedures of the FOIA. Submissions should not include any information that the submitter seeks to preserve as confidential.

If you have any questions about this project or the permit process, please contact Ms. Vera Koskelo via telephone at (808) 835-4310 or via email at Vera.B.Koskelo@usace.army.mil.

Tunis W. McElwain
Chief, Regulatory Branch

E:\Projects\Legacy\US\GIS\Storm Water Dept\60344779 CCH SWMP - Program Management\0320 Review and Revise\DFM Manual\900-Work\920 GIS\02 Maps\00 Figures\Figure 7.2 - DFM Honolulu District (Ver03a).mxd



Notes

1. Base Map Source: Esri World Imagery
2. Map Projection: NAD83 HARN StatePlane Hawaii
3. Stream/Channel: National Hydrography Dataset features for Hawaii as of December, 2012.

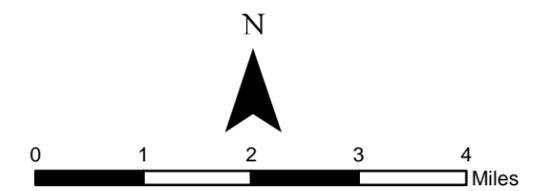


Figure 7.2
DFM Honolulu District
District-Wide Site Location Map
City and County of Honolulu
DFM Stream Maintenance

E:\Projects\Legacy\US\GIS\Storm Water Dept\60344779 CCH SWMP - Program Management\0320 Review and Revise\DFM Manual\900-Work\920 GIS\02 Maps\00 Figures\Figure 7.3 - DFM Kailua-Waimanalo District (Ver03a).mxd

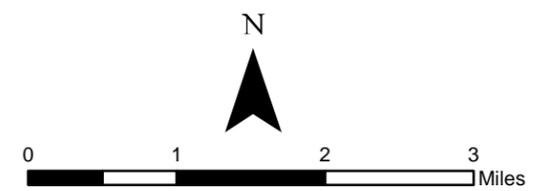
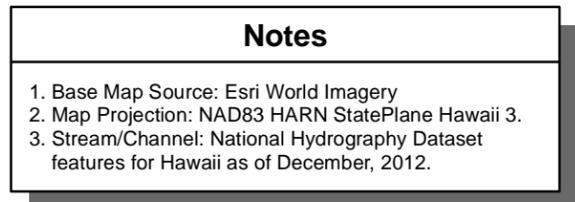
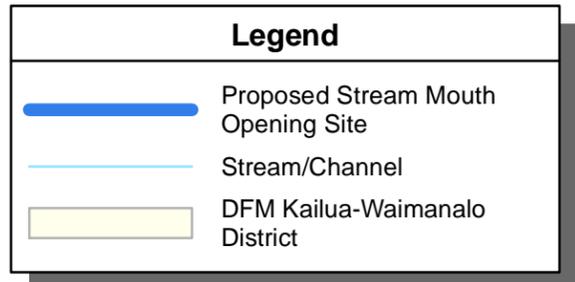
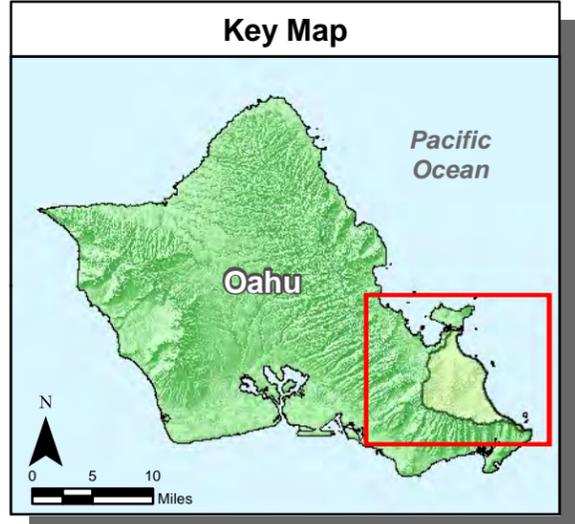
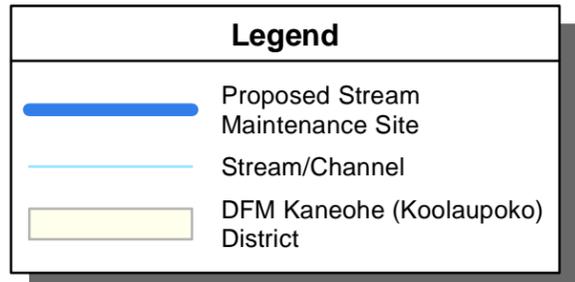
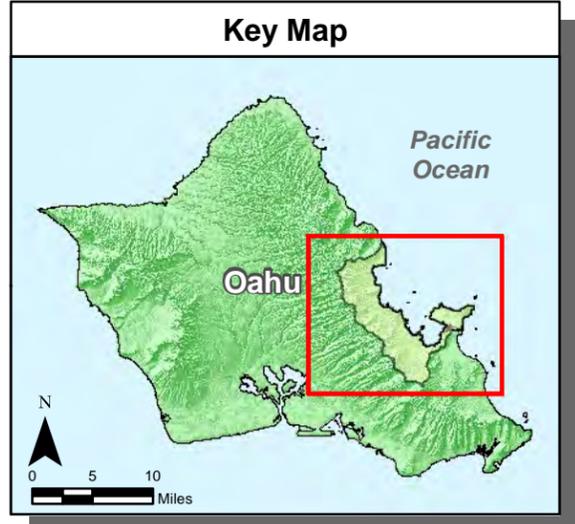


Figure 7.3
DFM Kailua-Waimanalo District
District-Wide Site Location Map
City and County of Honolulu
DFM Stream Maintenance

E:\Projects\Legacy\US\GIS\Storm Water Dept\60344779 CCH SWMP - Program Management\0320 Review and Revise\DFM Manual\900-Work\920 GIS\02 Maps\00 Figures\Figure 7.4 - DFM Kaneohe (Koolaupoko) District (Ver03a).mxd



- Notes**
1. Base Map Source: Esri World Imagery
 2. Map Projection: NAD83 HARN StatePlane Hawaii 3.
 3. Stream/Channel: National Hydrography Dataset features for Hawaii as of December, 2012.

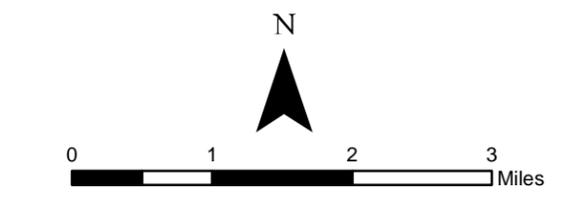
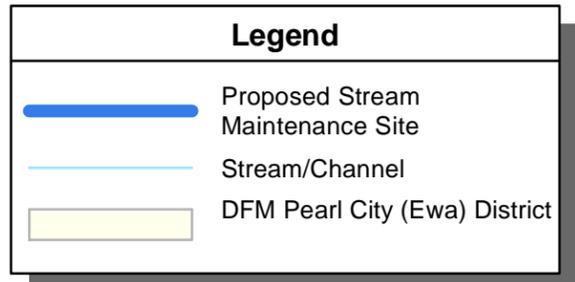
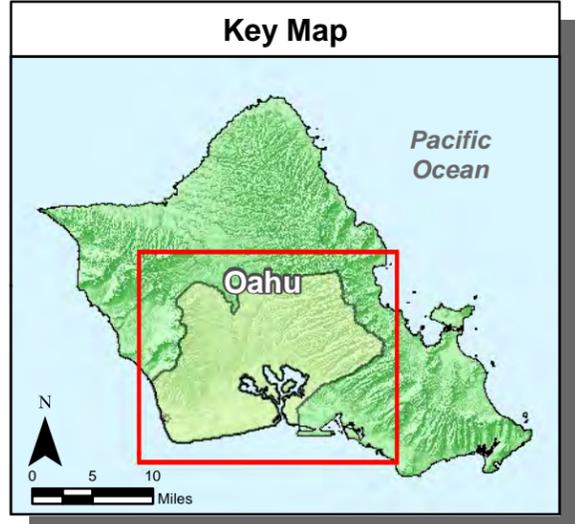


Figure 7.4
DFM Kaneohe (Koolaupoko) District
District-Wide Site Location Map
City and County of Honolulu
DFM Stream Maintenance

E:\Projects\Legacy\US\GIS\Storm Water Dept\60344779 CCH SWMP - Program Management\0320 Review and Revise\DFM Manual\900-Work\920 GIS\02 Maps\00 Figures\Figure 7.6 - DFM Pearl City (Ewa) District (Ver03a).mxd



- ### Notes
1. Base Map Source: Esri World Imagery
 2. Map Projection: NAD83 HARN StatePlane Hawaii
 3. Stream/Channel: National Hydrography Dataset features for Hawaii as of December, 2012.

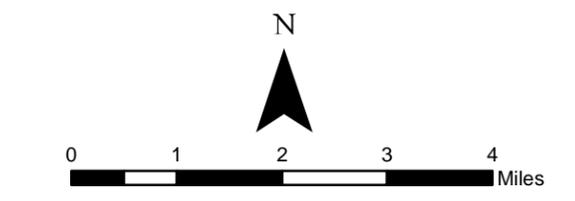


Figure 7.6
DFM Pearl City (Ewa) District
District-Wide Site Location Map
City and County of Honolulu
DFM Stream Maintenance

E:\Projects\Legacy\US\GIS\Storm Water Dept\60344779 CCH SWMP - Program Management\0320 Review and Revise\DFM Manual\900-Work\920 GIS\02 Maps\00 Figures\Figure 7.8 - DFM Waialua District (Ver03a).mxd

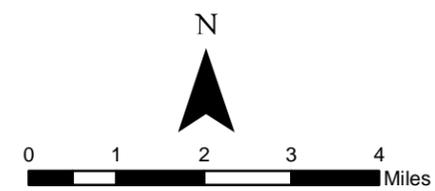
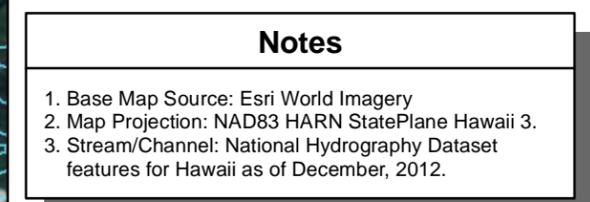
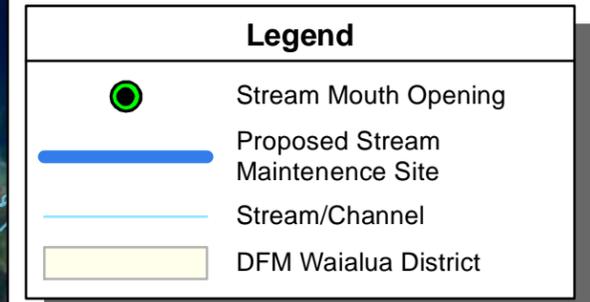
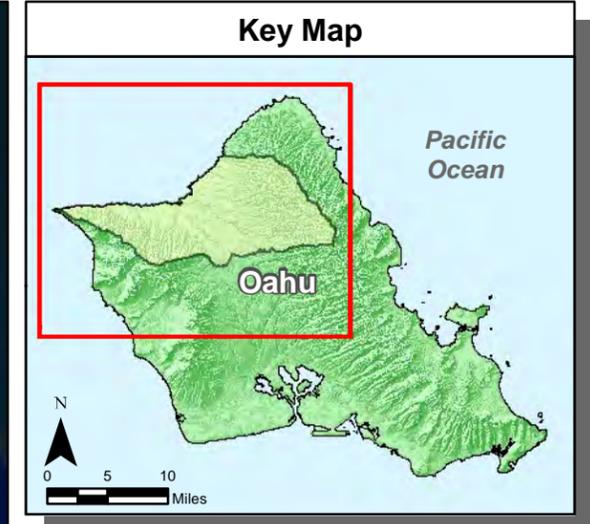
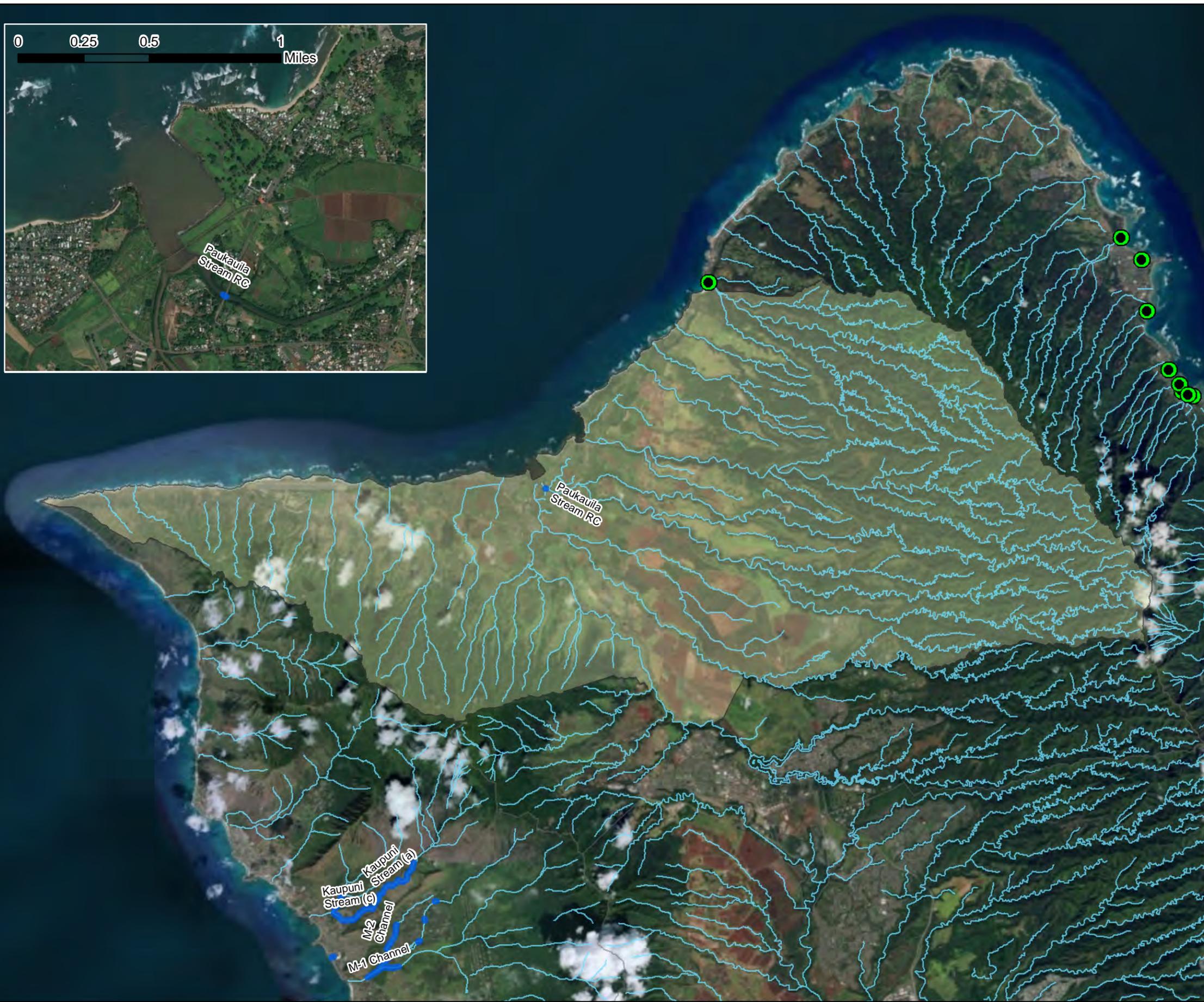
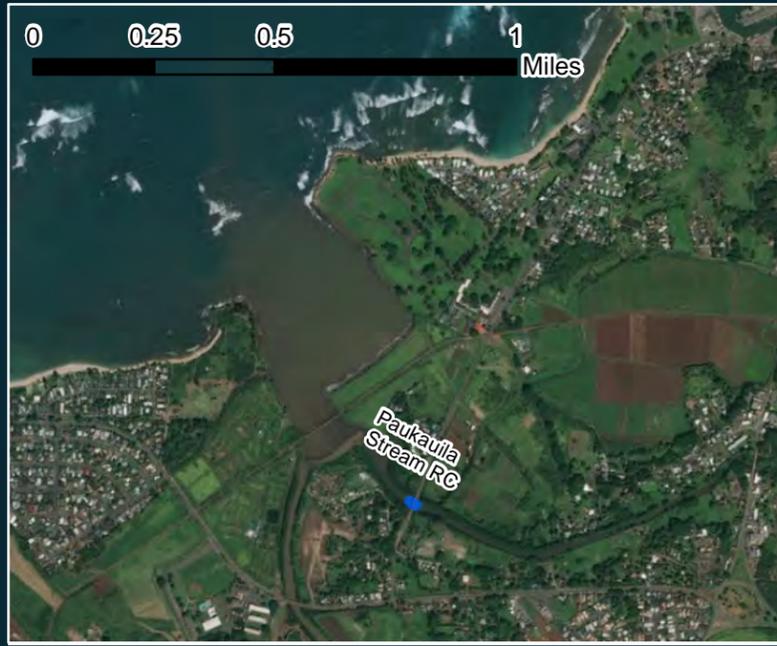
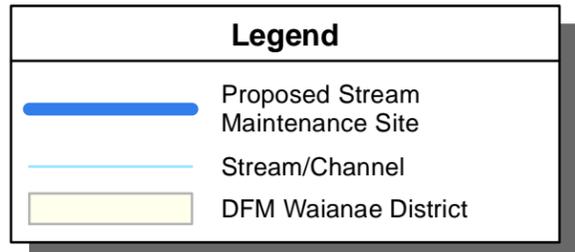
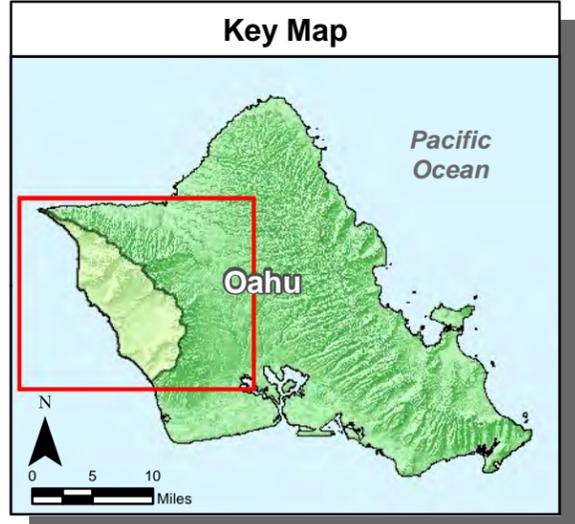


Figure 7.8
DFM Waialua District
District-Wide Site Location Map
City and County of Honolulu
DFM Stream Maintenance

E:\Projects\Legacy\US\GIS\Storm Water Dept\60344779 CCH SWMP - Program Management\0320 Review and Revise\DFM Manual\900-Work\920 GIS\02 Maps\00 Figures\Figure 7.9 - DFM Waianae District (Ver03a).mxd



- Notes**
- 1. Base Map Source: Esri World Imagery
 - 2. Map Projection: NAD83 HARN StatePlane Hawaii
 - 3. Stream/Channel: National Hydrography Dataset features for Hawaii as of December, 2012.

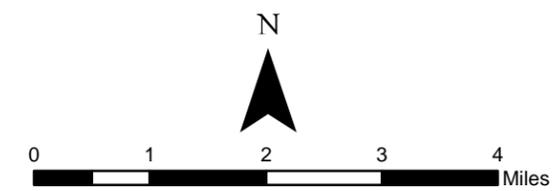
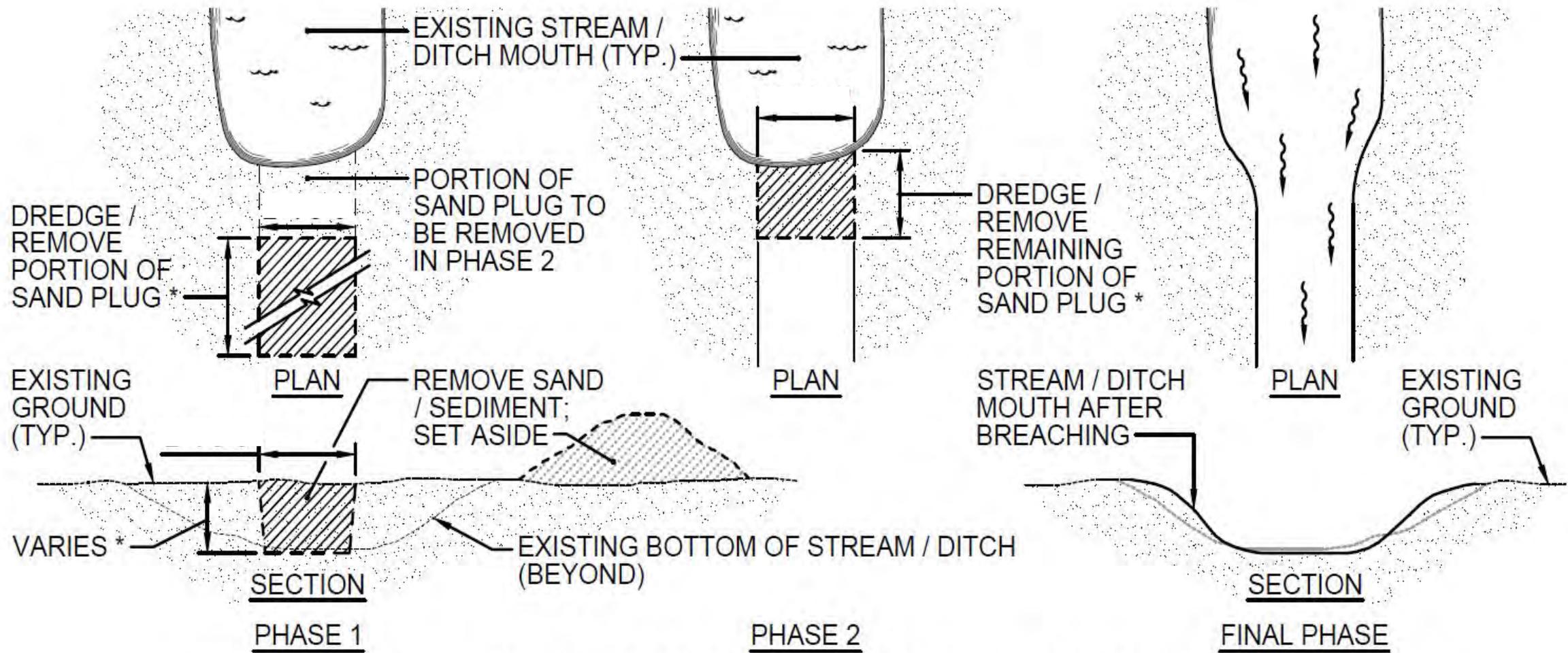


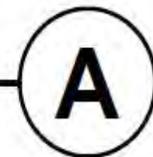
Figure 7.9
DFM Waianae District
District-Wide Site Location Map
City and County of Honolulu
DFM Stream Maintenance

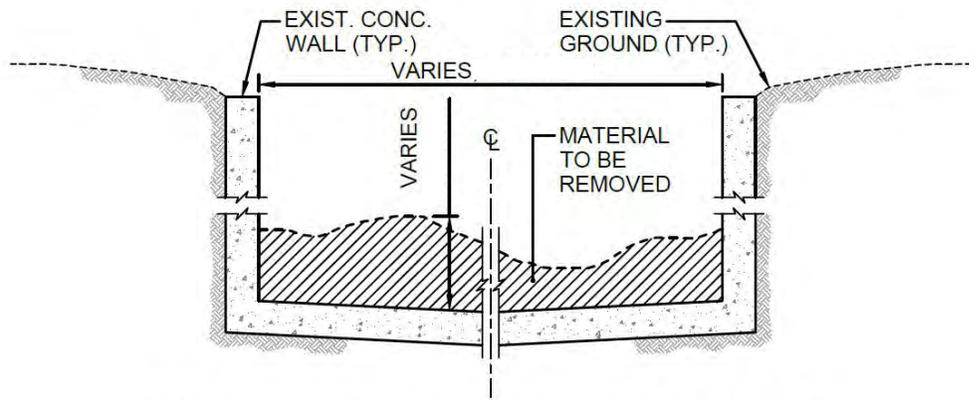


* LENGTHS & DEPTHS OF DREDGING AREA SHALL BE AS REQUIRED FOR EFFECTIVE BREACHING

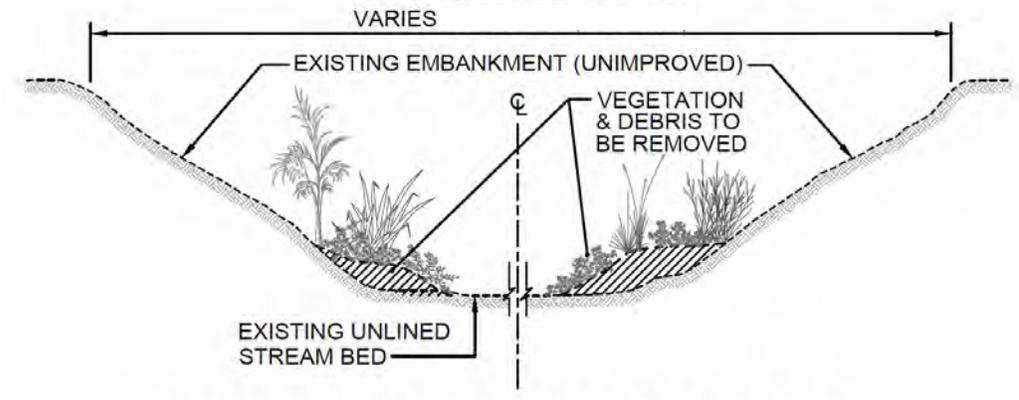
TYPICAL STREAM MOUTH BREACHING DETAIL

NOT TO SCALE

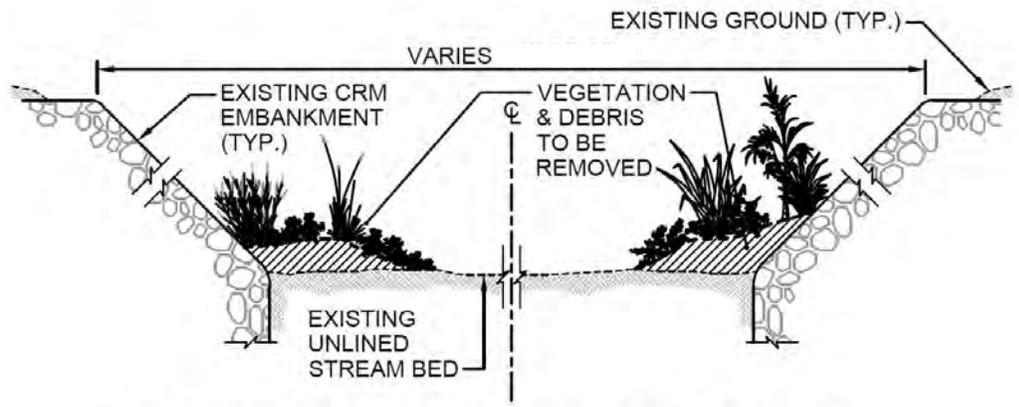




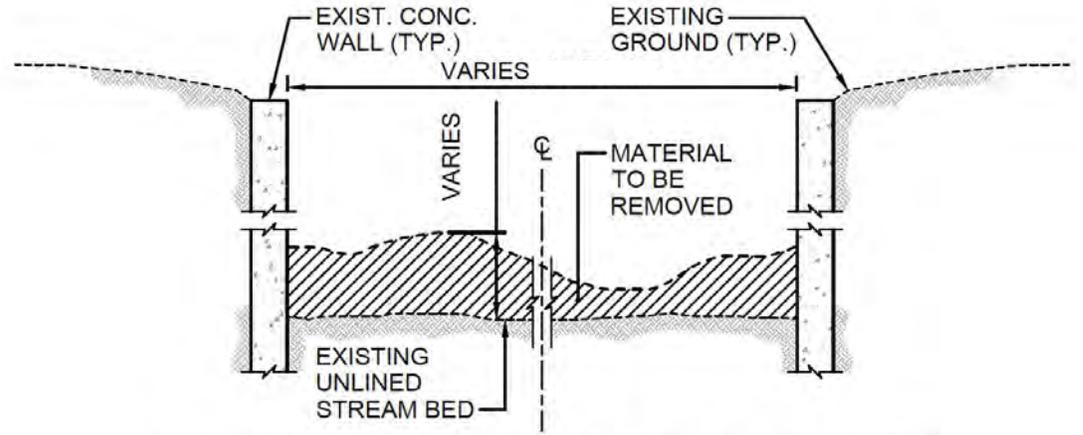
TYPICAL STREAM CROSS SECTION (A)
NOT TO SCALE



TYPICAL STREAM CROSS SECTION (A)
NOT TO SCALE



TYPICAL STREAM CROSS SECTION (C)
NOT TO SCALE



TYPICAL STREAM CROSS SECTION (A)
NOT TO SCALE

Stream maintenance example cross-sections

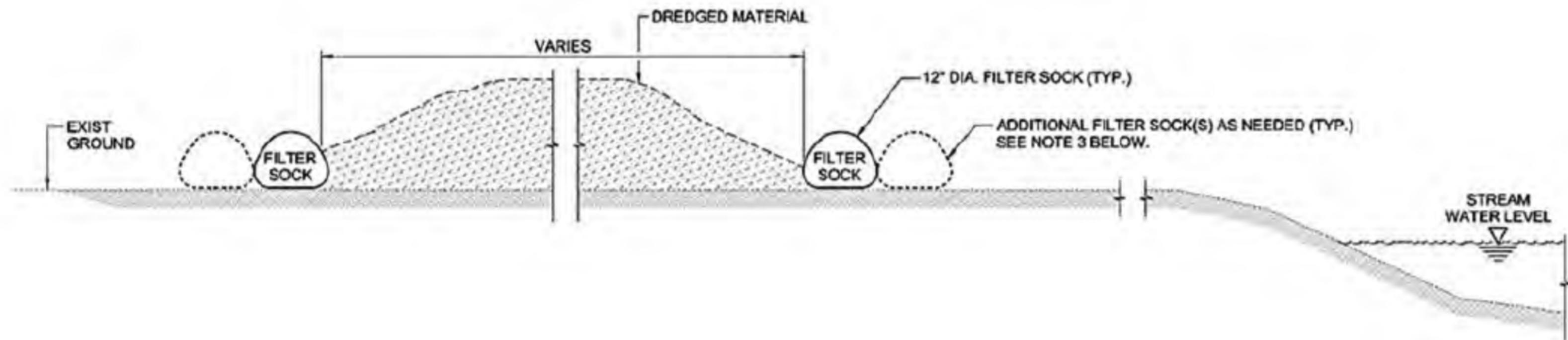
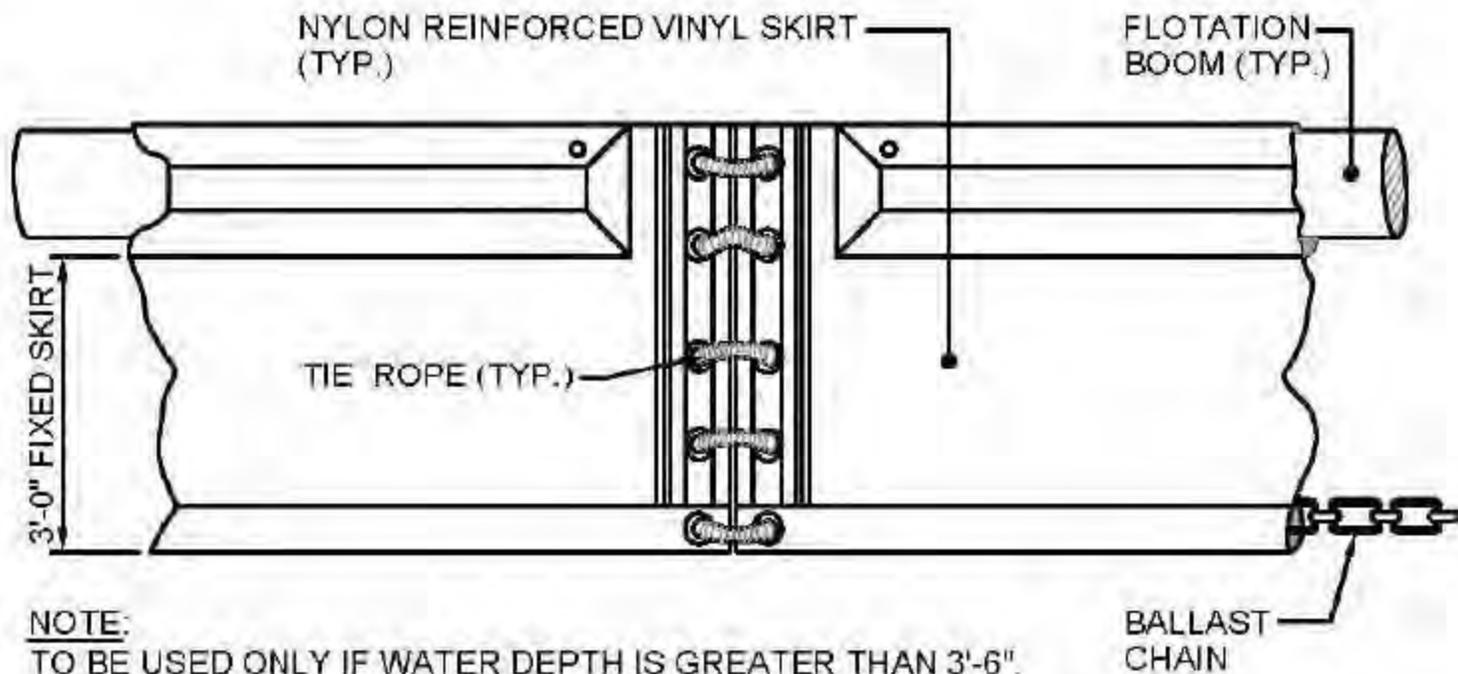
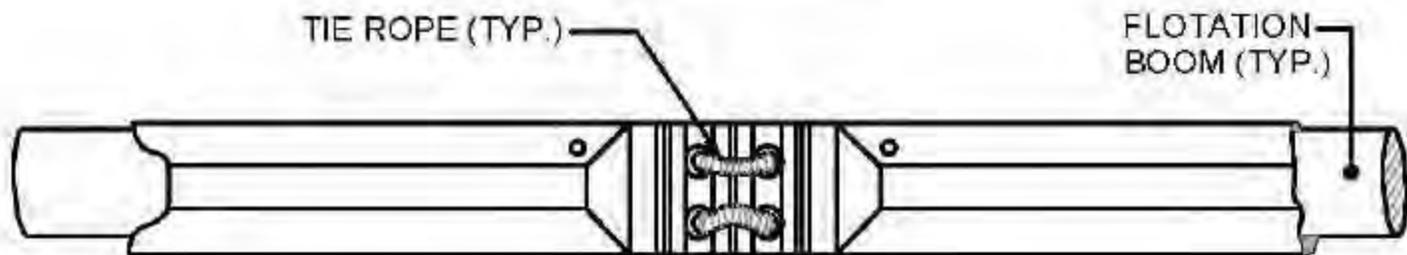


Figure 4-6 Perimeter Barrier to be Installed Around Dredge Material Stockpiles



WITH 3'-0" SKIRT



NOTE:
TO BE USED IF WATER DEPTH IS LESS THAN 3'-6"

WITHOUT SKIRT

Figure 4-1 Types of Turbidity Curtains Used by DFM

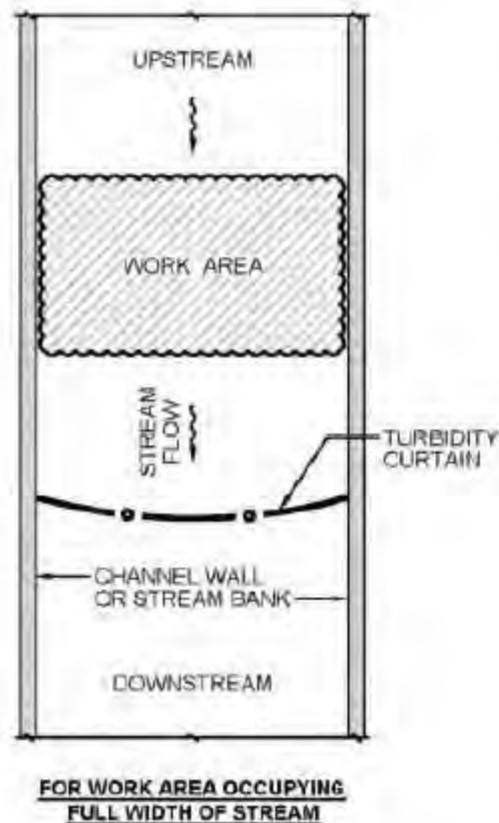


Figure 4-2 Turbidity Curtain Run Perpendicular across the Stream Channel, for Work Area Occupying Full Width of the Stream

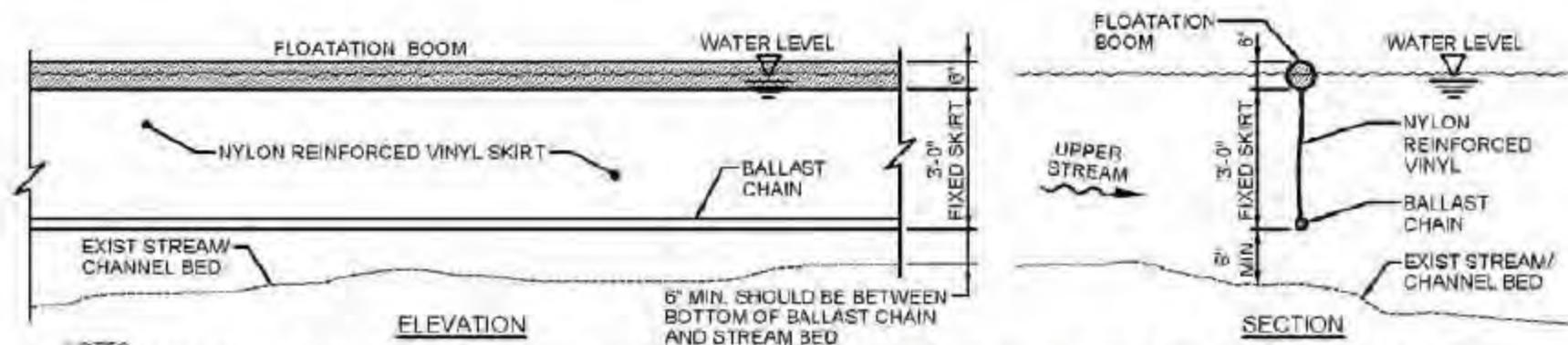


Figure 4-3 Gap between the Bottom of the Turbidity Curtain and the Existing Stream Bed/Channel Bottom

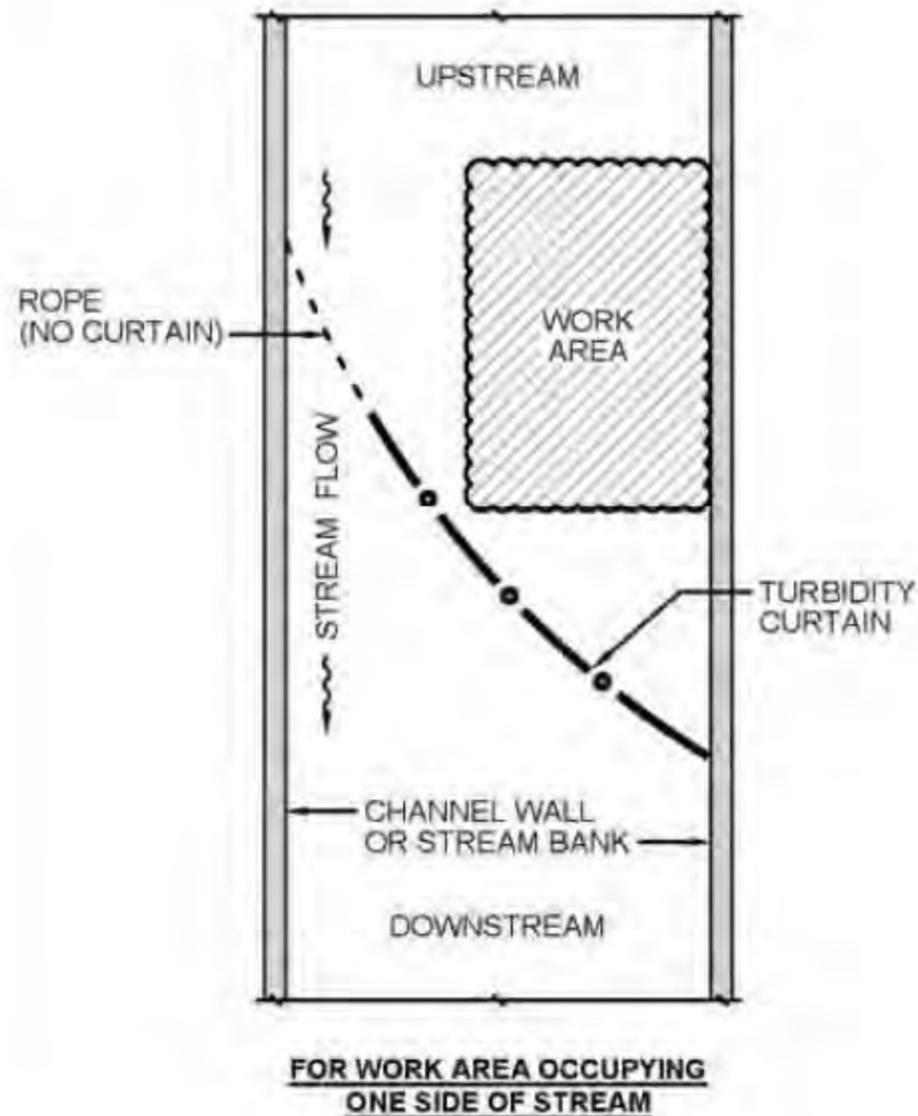


Figure 4-4 Turbidity Curtain Run at an Angle with a Gap on One Side, for Work Area Occupying One Side of the Stream

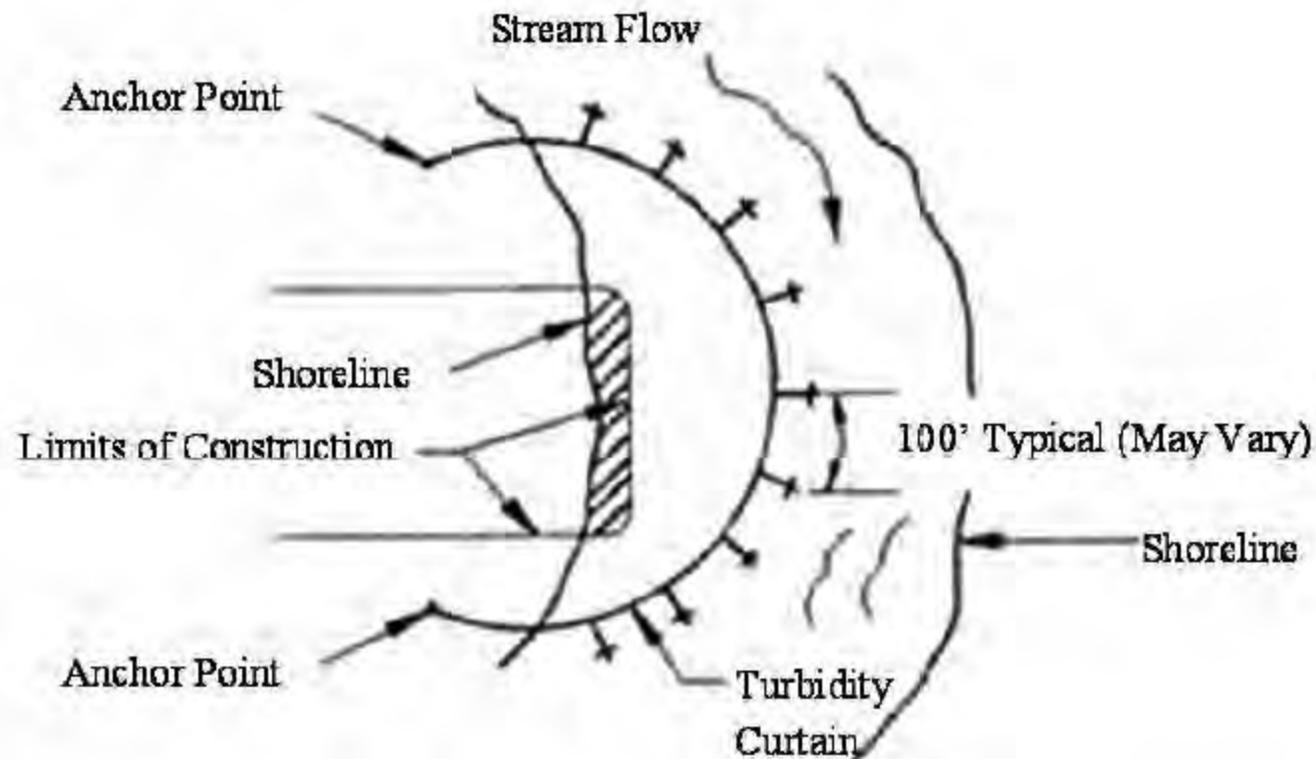
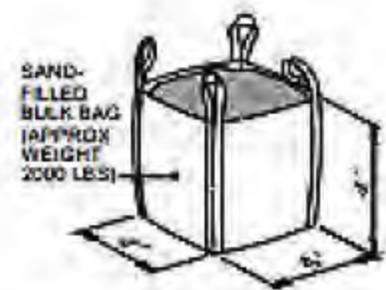
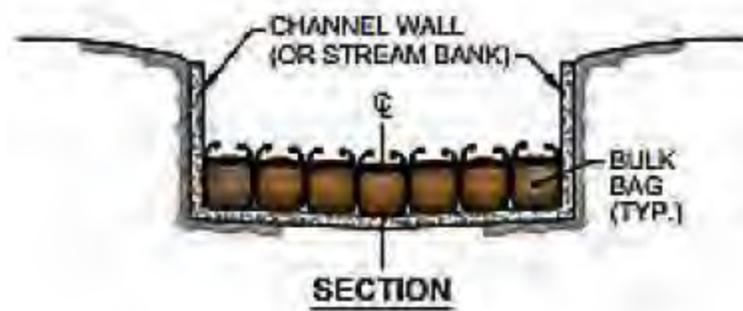


Figure 4-5 Turbidity Curtain Anchored to the Same Side of the Stream, Upstream and Downstream of the Work Area for Work Area Occupying One Side of the Stream



TYPICAL BULK BAG DETAIL **B**
NOT TO SCALE

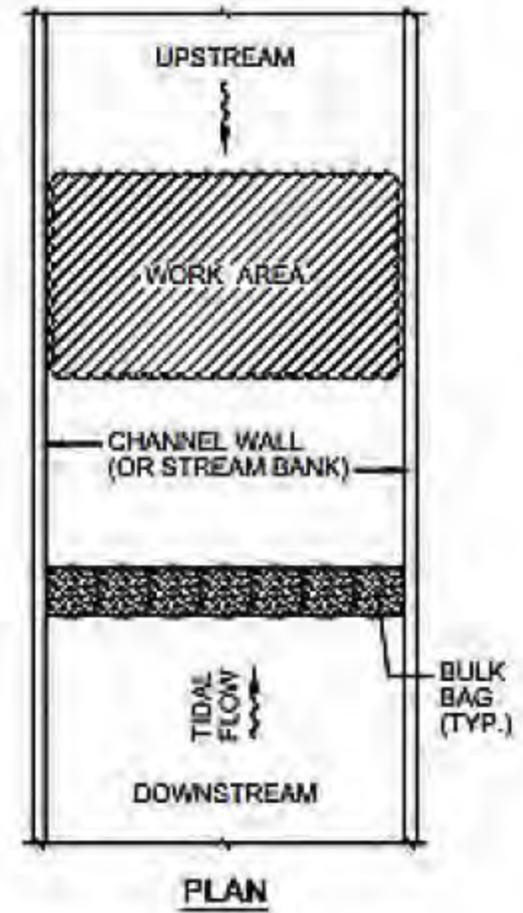


Figure 4-7 Bulk Bag Isolation Barrier used to isolate the Work Area from Incoming Tide

Project Number	Location Name	Work Type	Upstream Limit Coordinates	Downstream Limit Coordinates	Location Description	TMKs
01-006	Kapakahi Stream Mouth	Stream Mouth Dredging	21°16'12.6"N 157°46'40.8"W	21°16'08.9"N 157°46'37.2"W	From Kahala Avenue to Ocean	(1) 3-5-023:004
01-015a	Muliwai Ditch Mouth	Stream Mouth Dredging	21°16'04.2"N 157°46'48.3"W	21°16'01.3"N 157°46'43.7"W	From Kahala Avenue to Ocean Outlet	(1) 3-5-007:044; (1) 3-5-015:053 & 054; (1) 3-5-016:003; (1) 3-5-026:048 & 049; (1) 3-5-034:015; and (1) 3-5-035:061
01-022	Hoana Ditch	Stream Mouth Dredging	21°16'44.6"N 157°44'49.9"W	21°16'40.9"N 157°44'49.0"W	From Kalaniana'ole Highway to Ocean Outlet	(1) 3-6-003:044
02-003	Kaelepulu Stream Mouth	Stream Mouth Dredging	21°23'47.46"N 157°43'36.45"W	21° 23' 50" N 157° 43' 33" W	From the makai side of Lihivai Road Bridge to Ocean	(1) 4-3-010:084 AND (1) 4-3-011:074
05-002	Campbell Industrial Park (East)	Stream Mouth Dredging	21°17'58.2"N 158°05'55.7"W	21°17'43.6"N 158°05'53.2"W	Olai Street to Ocean	(1) 9-1-031:001 AND 012
05-003	Campbell Industrial Park (West)	Stream Mouth Dredging	21°17'49.5"N 158°06'10.6"W	21°17'45.9"N 158°06'13.6"W	Olai Street to Ocean	(1) 9-1-026:052
05-004	Ewa Line Channel Outlet	Stream Mouth Dredging	21°18'42.84"N 158°0'21.36"W	21°18'37.4"N 158°00'20.1"W	Channel Mouth - expand location	(1) 9-1-007:071
07-001	Lokoea Stream	Stream Mouth Dredging	21°35'44.47"N 158°6'11.26"W	21°35'43.73"N 158° 6'11.18"W	Kam Highway to 30' makai Kam Highway	(1) 6-2-003:002 AND (1) 6-2-003:040
07-003	Kiapoko Ditch	Stream Mouth Dredging	21°34'51.9"N 158°07'48.4"W	21°34'56.1"N 158°07'47.6"W	Waiialua Beach Rd to Ocean	(1) 6-7-001:006 & 026; (1) 6-7-007:040 AND (1) 6-7-014:017, 043 & 046
08-004	M-4 Maili Flood Control	Stream Mouth Dredging	21°25'25.0"N 158°10'30.9"W	21°24'32.7"N 158°10'38.1"W	End of M-4 to Ocean	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 068
08-006	Pokai Bay Road Ditch #1	Stream Mouth Dredging	21°26'26.46"N 158°11'11.66"W	21°26'22.6"N 158°11'17.2"W	Farrington Highway to Ocean	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 068
08-007	Pokai Bay Road Ditch #2	Stream Mouth Dredging	21°26'17.32"N 158°11'8.78"W	21°26'16.1"N 158°11'12.9"W	Farrington Highway to Ocean, southeast of Pokai Bay Road Ditch #1	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 069
08-010	Ulehawa Channel Mouth	Stream Mouth Dredging	21°23'42.27"N 158°9'10.64"W	21°23'31.6"N 158°09'27.3"W	Ulehawa Channel - U1 Mouth	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 074

Stream Mouth Dredging Future Projects
(separate application)

Project #	Location Name	Work type	Upstream Limit Coordinates	Downstream Limit Coordinates	Location Description	TMKs	Anticipated Frequency Of work
01-001	Ala Naio Stream	Stream maintenance	21°17'13.8"N 157°49'43.8"W	21°17'10.8"N 157°49'47.7"W	From Marco Polo Condo to Ala Wai Canal	(1) 2-7-036:001	Every 2-3 years
01-002	Kalihi Stream (a)	Stream maintenance	21°20'10.2"N 157°52'37.3"W	21°20'04.0"N 157°53'06.5"W	From Kalihi Waena School to Umi Street	(1) 1-2-014:100, 102 & 103; (1) 1-2-017:011; (1) 1-2-999:999; (1) 1-3-002:044; and (1) 1-3-008:005	Every 3-5 years
01-003	Kalihi Stream (b)	Stream maintenance	21°20'04.0"N 157°53'06.5"W	21°19'58.9"N 157°53'17.0"W	From Umi Street to Kam Highway	(1) 1-2-018:012 to 016	Every 3-5 years
01-004	Kamanaiki Stream	Stream maintenance	21°20'51.9"N 157°51'22.6"W	21°20'51.5"N 157°51'23.4"W	From 2834 Nihi Street to 2828 Nihi Street	(1) 1-4-003:001 & 073	Every 3-5 years
01-005	Kapakahi Stream	Stream maintenance	21°16'40.1"N 157°46'57.0"W, 21°16'39.9"N 157°46'51.4"W	21°16'13.0"N 157°46'41.3"W	From Kam Hwy to Kahala Avenue	(1) 3-5-008:025 to 027, and (1) 3-5-023:001	Monthly
01-007	Kapalama Drainage Canal	Stream maintenance	21°19'54.0"N 157°52'00.8"W	21°19'37.1"N 157°52'02.4"W	From Houghtailing Street to Halona Street	(1) 1-6-000:000	as needed
01-008	Kapalama Inc. Ditch	Stream maintenance	21°19'21.1"N 157°52'10.7"W	21°19'24.8"N 157°52'13.0"W	From Hikina Ln to Kokea Street	(1) 1-5-018:002 to 004	as needed
01-009	Lunalilo Terrace Ditch	Stream maintenance	21°16'39.2"N 157°41'47.6"W	21°16'49.4"N 157°42'14.6"W	From Anapalau St, Kaumakani St to Kuapa Pond	(1) 3-9-012:002; (1) 3-9-042:142 & 143; and (1) 3-9-048:002 & 029	as needed
01-010	Makiki Stream/Ditch	Stream maintenance	21°17'42.3"N 157°50'11.7"W	21°17'21.1"N 157°50'03.2"W	Two sections: From Philip Street to Fern Street, then from Fern Street to Ala Wai Canal	(1) 2-3-023:010 & 023; (1) 2-3-024:031, 032 & 037; (1) 2-3-032:048; and (1) 2-3-034:036	Every 2-3 years
01-011	Manaiki Stream	Stream maintenance	21°21'21.1"N 157°52'58.5"W	21°20'55.8"N 157°53'26.1"W	From Debris Catcher at mauka of Ala Mahamoe Street to mauka of Moanalua Gardens	(1) 1-1-032:001 & 061; (1) 1-1-033:074; (1) 1-1-034:043 & 044; and (1) 1-1-047:064	Every 2-3 years
01-012	Manoa Palolo Stream	Stream maintenance	21°17'26.9"N 157°48'53.3"W	21°17'05.4"N 157°49'13.9"W	From Manoa Palolo Stream Interceptor to Date Street	(1) 2-7-024:000	Every 3-5 years
01-013	Manoa Stream	Stream maintenance	21°18'55.5"N 157°48'19.0"W	21°18'36.7"N 157°48'34.5"W	From Napuaa Pl to E. Manoa Road	(1) 2-9-021:002, 040, 041, 049, 050 & 054; (1) 2-9-026:001, 002, 003, 014, 043 & 046; (1) 2-9-029:036 & 053; (1) 2-9-036:003 & 024; (1) 2-9-037:012, 025 & 064; and (1) 2-9-065:011 & 013	Every 3-5 years
01-014	Moanalua Stream	Stream maintenance	21°20'50.6"N 157°53'38.7"W	21°20'06.5"N 157°53'36.8"W	From Moanalua Highway to Kikowaena Street	(1) 1-1-035:010	Every 3-5 years

Stream Maintenance Projects

Project #	Location Name	Work type	Upstream Limit Coordinates	Downstream Limit Coordinates	Location Description	TMKs	Anticipated Frequency Of work
01-015	Muliwai Ditch	Stream maintenance	21°16'42.7"N 157°47'18.0"W	21°16'04.2"N 157°46'48.3"W	From Lunalilo Fwy to Kahala Avenue	(1) 1-1-035:010	Every 3-5 years
01-016a	Nuuanu Stream (a)	Stream maintenance	21°19'59.0"N 157°50'20.4"W	21°19'48.8"N 157°50'31.7"W	From Laimi Road to Klebahn Place	(1) 3-5-006:033	Annually
01-016c	Nuuanu Stream (c)	Stream maintenance	21°19'15.5"N 157°51'06.4"W	21°19'06.6"N 157°51'26.4"W	from Nuuanu - N. School to DPR-Liliuokalani Gardens	(1) 2-2-031:053; (1) 2-2-032:001, 002, 003 & 084; and (1) 2-2-033:073	Annually
01-016d	Nuuanu Stream (d)	Stream maintenance	21°18'59.6"N 157°51'35.0"W	21°18'53.6"N 157°51'40.4"W	from North School Street to footbridge	(1) 1-7-010:001; (1) 1-7-011:001, 002 & 018; (1) 1-7-014:044; and (1) 1-7-020:001	Annually
01-017	Palolo Stream	Stream maintenance	21°18'00.3"N 157°47'36.2"W	21°17'26.6"N 157°48'53.1"W	From Mauka Kiwila Street to Keanu Street	N/A	Annually
01-018	Pauoa Stream	Stream maintenance	21°19'05.5"N 157°50'40.1"W	21°19'03.6"N 157°51'05.8"W	From Liko Lane to Pali hwy.	(1) 2-8-028, (1) 3-3-001, (1) 3-3-002, (1) 3-3-038, (1) 3-3-040, (1) 3-3-041, (1) 3-3-042, (1) 3-3-044, (1) 3-3-045, (1) 3-4-001, (1) 3-4-002 and (1) 3-4-007	Annually
01-019	Waialii Stream	Stream maintenance	21°16'56.7"N 157°45'38.1"W	21°16'36.5"N 157°45'38.8"W	From Poola Street to Debris Catcher	(1) 3-5-046:012, (1) 3-5-046:028 and (1) 3-6-023:018	Annually
01-020	Wailupe Stream	Stream maintenance	21°17'57"N 157°45'22"W	21°16'42.8"N 157°45'03.1"W	From Boulder Basin to Kalaniana'ole Highway	(1) 3-6-005:093, (1) 3-6-013:120, (1) 3-6-015:125, (1) 3-6-017:077, (1) 3-6-019:037, (1) 3-6-021:071 and (1) 3-6-024:002	Every 3-5 years
01-021	Wawamalu Stream	Stream maintenance	21°17'44.8"N 157°40'24.0"W	21°17'50.0"N 157°39'45.3"W	From Hawaii Kai Drive to Kalaniana'ole Highway (at Queen's Beach)	(1) 3-9-010:028	Every 3-5 years
02-001	Alahaki Ditch	Stream maintenance	21°22'28"N 157°44'02"W	21°22'35"N 157°43'54"W	From 1080 Alahaki Street to Kahili Street	(1) 4-2-056:063	Biannually
02-002	Hele Drainage Ditch	Stream maintenance	21°22'35.0"N 157°43'29.2"W	21°22'43.4"N 157°43'44.9"W	From Liku Street to Ben franklin / gas station	(1) 4-2-021:027 TO 34; (1) 4-2-024:002, 017 & 018; AND (1) 4-2-050:001 & 009	Biannually
03-001	Anolani Stream	Stream maintenance	21°24'13.8"N 157°48'20.9"W 21°24'15.8"N 157°48'24.9"W	21°24'39.8"N 157°48'02.0"W	From Likelike Hwy. to Kapunahala Stream	(1) 4-7-052:088, 118 & 119; (1) 4-7-054:044; (1) 4-7-065:078 & 080; (1) 4-7-066:083; AND (1) 4-7-067:043	Annually
03-002	Hui Ulili Lined Channel	Stream maintenance	21°26'14.9"N 157°50'16.3"W	21°26'47.5"N 157°49'59.6"W	From end of lined channel to KA-1 Channel	(1) 4-7-004:040; (1) 4-7-025:039 & 040; (1) 4-7-028:003; (1) 4-7-037:020 & 032; AND (1) 4-7-039:012 & 023	Biannually
03-003	KA-1 Channel	Stream maintenance	21°26'29.0"N 157°49'55.6"W	21°27'09.9"N 157°50'06.8"W	Mauka of Sewer Treatment Plant to Flood Control	(1) 4-7-004:040; (1) 4-7-025:039 & 040; (1) 4-7-028:003; (1) 4-7-037:020 & 032; AND (1) 4-7-039:012 & 023	Biannually

Stream Maintenance Projects

Project #	Location Name	Work type	Upstream Limit Coordinates	Downstream Limit Coordinates	Location Description	TMKs	Anticipated Frequency Of work
03-004	KA-2 Channel Boulder Basin	Stream maintenance	21°26'37.9"N 157°50'31.1"W	21°26'41.1"N 157°50'30.2"W	Hio Place Boulder Basin	(1) 4-7-029:034	Annually
03-005	KA-2 Channel	Stream maintenance	21°26'41.1"N 157°50'30.2"W	21°27'09.9"N 157°50'06.8"W	From Hio Place Boulder Basin to KA-1 Channel	(1) 4-7-025:040; (1) 4-7-028:003 & 041; (1) 4-7-029:034; AND (1) 4-7-050:046	Biannually
03-006	Kahaluu Flood Control	Stream maintenance	21°27'09.9"N 157°50'06.8"W	21°27'17.4"N 157°50'12.2"W	Ahaolelo Road to Kam. Hwy.	(1) 4-7-028:003 & 040	Biannually
03-007a	Kaneohe Stream (a)	Stream maintenance	21°24'43.0"N 157°47'42.2"W	21°24'39.4"N 157°47'19.9"W	From Foot Bridge at Wena St to Puohala St	(1) 4-5-030:001, 041 & 049	Annually
03-007c	Kaneohe Stream (c)	Stream maintenance	21°24'39.0"N 157°48'02.9"W	21°24'42.3"N 157°47'54.6"W	Falls to behind library	(1) 4-5-020:036; (1) 4-5-028:040; AND (1) 4-5-072:074	Annually
03-007d	Kaneohe Stream (d)	Stream maintenance	21°24'13.1"N 157°48'07.5"W	21°24'39.0"N 157°48'02.9"W	Likelike Viaduct to Falls	(1) 4-5-072:074 & 075	Annually
03-007e	Kaneohe Stream (e)	Stream maintenance	21°23'58.4"N 157°48'09.7"W	21°24'13.1"N 157°48'07.5"W	Luluku Road Bridge to Likelike Viaduct	(1) 4-5-085:049 & 050	Annually
03-007f	Kaneohe Stream (f)	Stream maintenance	21°23'33.6"N 157°48'15.2"W	21°23'58.4"N 157°48'09.7"W	Kaneohe Dam (Basin) to Luluku Road Bridge	(1) 4-5-037:063; (1) 4-5-040:028; (1) 4-5-085:049; (1) 4-5-087:036; AND (1) 4-5-099:077	Annually
03-008	Kawa Stream	Stream maintenance	21°23'45.0"N 157°47'35.4"W 21°24'03.2"N 157°47'18.6"W	21°24'20.6"N 157°47'25.7"W	Mokulele Bridge to Kaneohe Bay Drive	(1) 4-5-066:063; (1) 4-5-067:065; (1) 4-5-070:049; (1) 4-5-084:058; (1) 4-5-084:059 AND (1) 4-5-103:006	Annually
03-009	McDougal Ditch	Stream maintenance	21°27'06.5"N 157°49'23.3"W	21°27'10.1"N 157°49'23.0"W	Mauka side of Kam. Hwy. to Kaneohe Bay	(1) 4-7-030:007 AND (1) 4-7-034:001 & 002	Annually
04-001	Hanohano Stream Mouth	Stream mouth breach opening		21°35'21.11"N 157°53'19.87"W	North of Haleaha Road next to Kam. Hwy. and 'Hanohano Hale	(1) 5-3-006:027 AND (1) 5-3-008:001	prior to storms and 2-3 years
04-002	Hauula Stream Mouth	Stream mouth breach opening		2121°36'30.08"N 157°54'31.85"W	Between Kukuna Road and Koolau Road.	(1) 5-4-001:038 & 045	Monthly
04-003	Kaaawa Park Ditch Mouth	Stream mouth breach opening		21°32'59.20"N 157°50'49.30"W	South of Ohelokai Road and next to Kaaawa Beach park	(1) 5-1-002:025	Monthly

Stream Maintenance Projects

Project #	Location Name	Work type	Upstream Limit Coordinates	Downstream Limit Coordinates	Location Description	TMKs	Anticipated Frequency Of work
04-004	Kaaawa Stream Mouth	Stream mouth breach opening		21°32'40.29"N 157°50'44.42"W	South of Kaaawa Place	(1) 5-1-001:001 & 009	Every other month
04-004a	Kalaeoio Ditch Mouth	Stream mouth breach opening		21°32'43.1"N 157°50'45.9"W	Between Pohuehue Road and Kaaawa Place	(1) 5-1-009:009 & 027	Every other month
04-005	Laie Stream Mouth	Stream mouth breach opening		21°39'18"N 157°55'44"W	Between Malaekahana State Park and Hukilau Beach Park	(1) 5-5-009:011	Every other month
04-006	Laie Maloo Stream Mouth	Stream mouth breach opening		21°37'57.88"N 157°55'13.75"W	North of Laie Beach Park	(1) 5-5-001:018, 048 AND (1) 5-5-006:010	Annually
04-007	Laieloa Stream Mouth	Stream mouth breach opening		21°38'53.76"N 157°55'19.56"W	On Hukilau Beach, northwest of the end of Naupaa Street and east of Puuahi Street, Laie	(1) 5-5-011:067, 068 & 070	Quarterly
04-008	Lau Place outlet	Stream mouth breach opening		21°33'28.5"N 157°51'28.2"W	Northwest of the intersection of Lau Place with Kamehameha Highway	(1) 5-1-003:014	Quarterly
04-009	Maakua Stream Mouth	Stream mouth breach opening		21°36'37.74"N 157°54'34.35"W	On Hauula Beach Park north of the intersection of Uuna Road with Kamehameha Highway	(1) 5-4-001:032 AND (1) 5-4-002:022	Biannually
04-010	Meheiw Stream Mouth	Stream mouth breach opening		21°36'25.14"N 157°54'19.20"W	northeast of the intersection of Hauula Homestead Road and Kamehameha Highway in Laie	(1) 5-3-016:001, 002 AND (1) 5-4-010:001	Biannually
04-011	Punaluu Stream NB Mouth	Stream mouth breach opening		21°34'56.99"N 157°53'12.45"W	Located north of the intersection of Punaluu Valley Road with Kamehameha Highway, next to the North Punaluu Stream Bridge	CityROW	Every other month

Stream Maintenance Projects

Project #	Location Name	Work type	Upstream Limit Coordinates	Downstream Limit Coordinates	Location Description	TMKs	Anticipated Frequency Of work
04-012	Punaluu Valley Road Ditch	Stream mouth breach opening		21°34'48.57"N 157°53'9.15"W	Located across intersection of Punaluu Valley Road with Kamehameha Highway,	CityROW	Quarterly
04-013	Waimea Stream Mouth	Stream mouth breach opening		21°38'29"N 158°03'47"W	In the center of Waimea Bay Beach Park, west of the intersection of Waimea Valley Road and Kamehameha Highway	(1) 6-1-001:003	Quarterly
04-014	Waipilopilo Stream Mouth	Stream mouth breach opening		21°36'53.78"N 157°54'47.24"W	Between Imua Place and Waikulama Street	(1) 5-4-002:022 AND (1) 5-4-017:021	Biannually
04-015	Waipuhi Stream Mouth	Stream mouth breach opening		21°36'26.05"N 157°54'24.61"W	Between Koolau Road and Hauula Homestead Road	(1) 5-4-010:018	Monthly
05-001	Aiea Stream	Stream maintenance	21°22'39.2"N 157°55'58.4"W	21°22'37.8"N 157°56'02.8"W	Foot bridge to Kam Hwy	(1) 9-9-044:070	Annually
05-005	Kapakahi Stream (Ewa)	Stream maintenance	21°23'00.3"N 158°00'23.6"W	21°22'48.8"N 158°00'17.9"W	Farrington Hwy. Waipahu Dump (foot bridge)	(1) 9-4-011:011 AND 027	Biannually
05-006	Navy Bike Path Swale	Stream maintenance	21°22'47.8"N 157°56'32.5"W	21°22'46.7"N 157°56'24.0"W	Aiea Kai Place, along bikepath	(1) 9-8-015:047	Every 2-3 years
05-007	Wailani Stream	Stream maintenance	21°23'56.4"N 157°59'59.9"W; 21°23'53.8"N 157°59'50.8"W	21°23'30.0"N 157°59'58.5"W	Queen Liliuokalani (H1) Freeway to Peke Lane	(1) 9-4-009:004; (1) 9-4-058:023 & 130 AND (1) 9-4-060:049 & 050;	Annually
05-008	Waipahu Stream	Stream maintenance	21°23'13.6"N 158°01'31.4"W	21°22'29.9"N 158°01'06.3"W	Crossing Freeway, Waipahu Street, Leonui Street and gas lines	(1) 9-4-032:100; (1) 9-4-047:003; (1) 9-4-049:003 & 013 AND (1) 9-4-052:005 & 074;	Annually
05-009	Honouliuli Stream	Stream maintenance		21°21'48.0"N 158°01'22.0"W	Fort Weaver Road	(1) 9-1-017:006	Annually
07-002	Paukauiia Stream	Stream maintenance		21°34'43.7"N 158°06'58.3"W	30' both sides of Haleiwa Bridge	N/A	Annually

Stream Maintenance Projects

Project #	Location Name	Work type	Upstream Limit Coordinates	Downstream Limit Coordinates	Location Description	TMKs	Anticipated Frequency Of work
08-001rc1	Kaupuni Stream RC1	Stream maintenance	21°27'52.6"N 158°09'33.1"W		From road Crossing #1 include 100 ft. upstream /downstream of Haleahi Road	(1) 8-5-004:057, 075 AND (1) 8-5-005:029	Quarterly
08-001a	Kaupuni Stream (a)	Stream maintenance	21°27'52.6"N 158°09'33.1"W	21°27'27.6"N 158°10'05.3"W	From Haleahi Road near intersection of Waianae Valley Road	(1) 8-5-004:004, 041, 057, 071 TO 075, 093 AND (1) 8-5-029:002	Biannually
08-001rc2	Kaupuni Stream RC2	Stream maintenance	21°27'27.6"N 158°10'05.3"W		road Crossing #2 of Waianae Valley Road	(1) 8-5-029:002, 011, 020 AND (1) 8-5-032:040	Quarterly
08-001b	Kaupuni Stream (b)	Stream maintenance	21°27'27.6"N 158°10'05.3"W	21°27'09.1"N 158°10'18.4"W	From Kaneaki Street near Kepaula Street above the Boulder Basin	(1) 8-5-004:042 & 053; (1) 8-5-019:021 AND (1) 8-5-029:011 & 019	Biannually
08-001rc3	Kaupuni Stream RC3	Stream maintenance	21°27'09.1"N 158°10'18.4"W		Road Crossing #3, Boulder basin	(1) 8-5-004:053 AND (1) 8-5-019:002 & 071	Quarterly
08-001bb	Kaupuni Stream BB	Stream maintenance	21°27'04.3"N 158°10'20.6"W		Boulder basin	(1) 8-5-019:071	Quarterly
08-001c	Kaupuni Stream (c)	Stream maintenance	21°27'03.5"N 158°10'23.0"W	21°26'58.5"N 158°11'06.5"W	Boulder basin to K2 Debris Catcher	(1) 8-5-003:038, (1) 8-5-019:071 AND 073	Biannually
08-001dc	Kaupuni Stream DC	Stream maintenance	21°26'58.5"N 158°11'06.5"W		K2 Debris Catcher	(1) 8-5-003:038	Quarterly
08-002	Kawiwi Stream	Stream maintenance	21°27'19.1"N 158°10'56.1"W	21°27'03.3"N 158°11'05.7"W	Lined portion of Kawiwi Stream	(1) 8-5-003:038	Quarterly
08-003	M-1 & M-3 Channel	Stream maintenance	21°26'13.5"N 158°09'57.9"W; 21°25'57.8"N 158°09'57.9"W	21°25'48.2"N 158°10'26.8"W	From Farrington Hwy to Naval fence line, Lualualei reservoir end to M-1	(1) 8-6-002:001 TO 003, (1) 8-6-003:051, (1) 8-6-013:009 AND (1) 8-7-003:061	Annually
08-005	Mailiili Stream M-2	Stream maintenance	21°26'45.7"N 158°09'53.1"W; 21°26'29.0"N 158°09'58.3"W	21°26'11.7"N 158°10'01.2"W	From 86-439 Puuhulu Road to Mailiili M-3 Channel	(1) 8-6-011:012, (1) 8-6-012:021, (1) 8-6-013:009 AND (1) 8-6-024:008	Biannually
08-008	Pokai Bay Road Ditch #3	Stream maintenance		21°26'09.7"N 158°11'08.9"W	On Pokai Bay Street across #86-98 Pokai Bay Street	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 070	Monthly

Stream Maintenance Projects

Project #	Location Name	Work type	Upstream Limit Coordinates	Downstream Limit Coordinates	Location Description	TMKs	Anticipated Frequency Of work
08-009rc1	Puuhulu Stream RC1	Stream maintenance	21°27'12.1"N 158°09'07.7"W		100 ft. either side of uhawai Road	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 071	Quarterly
08-009rc2	Puuhulu Stream RC2	Stream maintenance	21°26'51.9"N 158°09'19.9"W		100 ft. either side of Puuhulu Road	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 072	Quarterly
08-009rc3	Puuhulu Stream RC3	Stream maintenance	21°26'28.1"N 158°09'26.7"W		100 ft. either side Kuwale Road	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 073	Quarterly
08-010a	Ulehawa Channel U-2	Stream maintenance	21°23'34.19"N 158°09'25.22"W	21°23'43.84"N 158°09'33.97"W	U-2 and U-1 confluence to the terminus at Princess Kahanu Avenue	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 075	Quarterly
08-010b	Ulehawa Channel U-3	Stream maintenance	21°23'34.18"N 158°09'23.78"W	21°23'07.70"N 158°08'51.90"W	U-3 and U-1 confluence to the terminus at Nanakuli DHHL property	(1) 8-6-001:006 & 007, AND (1) 8-6-015:043 & 076	Quarterly
08-011	Mailii Channel M-5	Stream maintenance	21°24'52.70"N 158°10'24.90"W	21°24'46.34"N 158°09'58.06"W	End to Mamoalii Way	(1) 8-7-005:013 AND (1) 8-7-010:013	Quarterly

Stream Maintenance Projects