

STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
Engineering Division

November 9, 2017

Board of Land and Natural Resources
State of Hawai'i
Honolulu, Hawai'i

REQUEST AUTHORITY TO SUBMIT THE FINAL ENVIRONMENTAL IMPACT STATEMENT
(FEIS) FOR ACCEPTANCE BY THE GOVERNOR FOR THE ALA WAI CANAL DREDGING AND
IMPROVEMENTS PROJECT, WAIKIKI, ISLAND OF O'AHU, HAWAI'I

BACKGROUND:

The Ala Wai Canal serves as an essential drainageway and sedimentation basin for the approximately 19 square-mile Ala Wai watershed. Large quantities of sediment deposit into the canal from streams and drainageways, particularly during heavy rainfall. Over time, the build-up of sediments affects the canal's sediment and water holding capacities reducing its ability to temporarily contain and then release storm water when there are heavy storm events. This increases risks associated with flooding and leads to sediment discharges into the ocean decreasing the protection of nearshore State waters. In addition, sections of the canal walls and stairs have been subject to long term damage and dilapidation, becoming a health and safety concern for which repairs are needed.

The proposed action would remove accumulated sediment from the Ala Wai Canal and Mānoa Palolo Drainage Canal (MPDC), south of Date Street, and improve conditions of the canal structures and surrounding waters and area. Water depths in the proposed dredge areas of the canals would restore sediment and water holding capacities to improve protection of State waters by reducing sediment and stormwater discharges, which would decrease the risk of flooding when there are heavy storms. The project would also improve conditions for the recreational use of the Ala Wai Canal and its environs.

The proposed action would address the following project objectives:

Restore water depth and reduce flood risks in the proposed dredge areas.

Restore sediment holding capacities in the proposed dredge areas and ensure protection of nearshore marine waters.

Repair damaged and deteriorating sections of the Ala Wai Canal walls and assess the stairs along the Ala Wai Canal for appropriate treatment.

PROJECT DESCRIPTION:

The Department of Land and Natural Resources (DLNR) proposes the maintenance dredging of the Ala Wai Canal and a portion of the MPDC, the collection and disposal of dredged spoils, and repair broken or damaged portions of the canal walls. Stairwells leading into the Ala Wai Canal will also be examined for treatment including possible repair, backfilling, or demolition. See Exhibit 1, Project Location, identifying the project area and limits of work.

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The proposed project has been coordinated with the Hawaiian Electric Company (HECO) to install two new power lines crossing beneath the Ala Wai Canal, near its confluence with the MPDC. The work will involve removing two existing power lines. Concrete slabs within the Ala Wai Canal, that have been used to anchor and protect the power lines, will also be removed. The installation of the two new power lines would use horizontal directional drilling, so that the concrete slabs will no longer be required.

The limits of dredging extend approximately 7,200 linear feet (lf) from the Ala Moana Boulevard Bridge to the Kapahulu Library, and approximately 2,000 lf within the MPDC from its confluence with the Ala Wai Canal to Date Street.

A tiered dredge design is planned to promote water movement, with water depths of the canals ranging from (-) 2 to (-) 11 feet (ft) mean sea level (msl). Scows (specially constructed barges) would be used to collect mechanically dredged sediment. A push boat would be used to transport empty scows in the canal and dredged sediment filled scows out of the canals. The specific work support locations are under review and will be selected based on the work space needed. Operationally feasible work support sites include: the Ala Wai Neighborhood/Community Park (staging area); and, a portion of the Magic Island (staging area and barge mooring).

Processing of the dredged sediment may be necessary and the method selected will be dependent on both the condition of the sediments following dredging, and the final disposal or reuse location. Disposal sites considered for the project include the South O'ahu Ocean Dredged Material Disposal Site (ODMDS), Reef Runway at the Daniel K. Inouye International Airport (HNL) or approved State land disposal site, and/or the PVT Landfill. The ODMDS is the preferred disposal site based on analysis of the materials planned for disposal.

PREVIOUS PUBLIC CONSULTATION/ DOCUMENTS:

Date	Detail	Reference
July 21, 2016	Public Information and Environmental Impact Statement Preparation Notice (EISPN) Scoping Meeting	Held at Ala Wai Elementary School Cafeteria, 6:00 – 8:00 pm
November 8, 2016	Environmental Impact Statement Preparation Notice (EISPN), Ala Wai Canal Dredging and Improvements	Published by Office of Environmental Quality Control (OEQC) in The Environmental Notice
May 23, 2017	Draft Environmental Impact Statement (DEIS), Ala Wai Canal Dredging and Improvements	Published by OEQC in The Environmental Notice

The DEIS was published by the State of Hawai'i, Office of Environmental Quality Control (OEQC), in the May 23, 2017 Environmental Notice, and is posted on the OEQC website at: http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2017-05-23-OA-DEIS-Ala-Wai-Canal-Dredging.pdf. Attached for your information is a CD containing a PDF copy of the subject draft FEIS.

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PROJECT OVERVIEW:

Project Location

The proposed action is located in Waikīkī, island of O‘ahu, Hawai‘i, and involves maintenance dredging and construction to repair damaged and deteriorating sections of canal walls, and potential treatments to select stairs along the canal that have become a safety concern.

Existing Use

In addition to serving the physical function of a drainageway and sedimentation basin, the Ala Wai Canal is an important recreational resource. Recreational facilities in the vicinity primarily consist of State and County parks; a golf course; boating facilities; and the Ala Wai Canal itself. The Ala Wai Canal offers a variety of recreational opportunities including outrigger canoe paddling and kayaking, and supports the single largest concentration of canoe clubs in the State. In addition, the sidewalks and other pathways along the Ala Wai are heavily used for walking, running and biking.

Land Ownership

The Ala Wai Canal, including the walls and stairs, is owned and maintained by the State of Hawai‘i. The sidewalks on both sides of the Ala Wai Canal and the MPDC are owned and maintained by the City and County of Honolulu (CCH).

Project Timeframe and Cost

The DLNR proposes to commence dredging operations and construction of repairs upon approval of all required environmental permits, anticipated to be in mid-2018. The project duration is approximately one year.

The estimated project cost is approximately \$18 million and will be funded by DLNR. The estimated cost for installation of the new, and removal of decommissioned cables and concrete slabs, will be incurred by HECO. According to the HECO Environmental Assessment the preliminary cable replacement cost is approximately \$29 million, of which a portion will be for the cable and concrete slab removal.

SUMMARY OF AFFECTED ENVIRONMENT

Soils and Climate

According to the U. S. Department of Agriculture (USDA), Soil Conservation Service publication, “Soil Survey of the Islands of Kauai, O‘ahu, Maui, Molokai, and Lanai, State of Hawaii, 1972”, there are three soil types within the project area: Fill land, mixed; Water, 0 percent slope; and Kawaihapai clay loam, 0 to 2 percent slopes. The dredged sediment was predominantly fine-grained, consisting of 60.4 to 75.5% clay and silt, with limited amounts of coarse-grained material, consisting of 78.3% sand and gravel.

The average monthly temperature ranges from 71 to 84 degrees Fahrenheit. Average monthly rainfall in the project area varies from a low of 0.93 to 1.35 inches in the summer months to a high of 3.99 inches in December.

Flood and Tsunami Hazards

The Ala Wai Canal and MPDC are located within Federal Emergency Management Agency-Flood Insurance Rate Map (FEMA-FIRM) Zone A and AE. The potential staging areas at the Ala Wai Neighborhood/Community Park and Magic Island are located in Zones X, AE, and AO. This is reflected in FEMA-FIRM maps 15003C0362G, 15003C0366G, and 15003C0368G (HI-NFIP, 2011). The flood zones are defined by FEMA as:

- Zone A: Flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study (FIS) by approximate methods.
- Zone AE: Flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the FIS by detailed methods.
- Zone AO: Flood insurance rate zone that corresponds to the areas of 100-year shallow flooding (usually sheet flow on sloping terrain) when average depths are between 1 and 3 ft.
- Zone X: Area determined to be outside of the 0.2% annual chance floodplain.

The removal of sediment from the Ala Wai Canal and MPDC will increase water depths in the proposed dredge areas and restore sediment holding capacities. This will help to protect nearshore marine waters and decrease the risk of flooding in surrounding areas during high intensity storm events. The risk of erosion during and following construction would be addressed through adherence to appropriate State and CCH guidelines and standards.

The Ala Wai Canal, MPDC, Magic Island, and Ala Wai Neighborhood/Community Park, and portion of the Ala Wai Golf Course are within the 100-year flood inundation zone and the Tsunami Evacuation Zone as identified on the CCH, Department of Emergency Management, Map 1: Waikīkī (CCH, DPP, 2015).

The project site is located within the tsunami evacuation zone. In case of tsunamis during construction, dredging activities would cease and equipment would be secured in work support areas. The dredging crew would follow standard community emergency procedures, and evacuation would progress as required. All structures (i.e., wall repairs and stair treatment) associated with the proposed project, and risk of erosion during and following construction would be addressed through adherence to appropriate Federal, State, and CCH guidelines and standards.

Archaeological and Cultural

The Ala Wai Canal is a historic property on the Hawai‘i Register of Historic Places, State Inventory of Historic Properties (SIHP) # 50-80-14-9757, and eligible for inclusion in the National Register of Historic Places (NRHP). The MPDC, Kalākaua Avenue Bridge, McCully Street Bridge, and Date Street Bridge are eligible for listing on the National/State Register of Historic Places, however, no structural repairs are proposed to these resources and therefore no impacts are anticipated.

The Ala Wai Canal and the MPDC (south of the Date Street Bridge) were dredged as part of the original construction and have been previously maintenance dredged. Subsurface archaeological resources are unlikely to be present. There are no archaeological resources in the sites evaluated for dredging support or for upland processing and placement. Dredge design will incorporate a setback of at least five feet

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from the canal edges to protect shoreline walls and foundations. Dredging work will avoid any impacts to the historic walls. In addition, the canal walls will be covered to prevent damage during transfer of material from the bank of the canal to the barge in the water. No adverse impacts to cultural resources are anticipated.

Repair to sections of the Ala Wai Canal walls and potential treatments to select stairs along the Ala Wai Canal have become a safety concern and would require modification. SHPD will be consulted regarding the necessity for further project-related historic preservation. The final designs for the repairs to the canal walls and treatment to stairs would be completed after the EIS process and based on consultations with the SHPD and community. The project will comply with the requirements of the SHPD.

Visual Resources

The Ala Wai Canal and surrounding park areas provide a major open space resource with views of Diamond Head and the Ko‘olau Mountain Range, including Tantalus, Mānoa Valley, St. Louis Heights, and Palolo Valley. Ala Moana Beach Park is a shoreline area that provides vivid pedestrian views; in particular, Magic Island provides an important stationary view of the Waikīkī skyline. Views from Kapahulu, Ala Wai Neighborhood Park, and Kalākaua across the Ala Wai Canal are towards the high-rise buildings of Waikīkī.

The proposed project would involve the use of construction equipment and materials, which could temporarily reduce the overall aesthetic quality of the Ala Wai Canal and MPDC during maintenance dredging and repair operations. Short-term visual impacts along the Ala Wai Canal and MPDC due to dredging and construction would be limited to views of the canals themselves, and would not impact views of the Ko‘olau or of Diamond Head. Dredging operations would take place primarily at the water surface and are not expected to result in potential for adverse visual impacts. Infrastructure necessary for the project including the planned repairs to the canal walls and potential treatments to select stairs along the canal would be at or near grade. These temporary impacts are not anticipated to be substantial.

The construction site would be kept free of litter and excess equipment and materials, and maintained in a clean and organized condition. Once dredging operations and construction is completed, all equipment no longer necessary to the project will be removed with no further disturbance to the scenic resources of the area.

No long-term visual impacts are anticipated; the proposed project does not involve construction of permanent structures that could potentially block important views. No adverse visual impacts are anticipated from the proposed project

Flora and Fauna

Within the vicinity of the project area, the vegetation is significantly limited by urban development and consists largely of landscaped vegetation or ruderal, weedy species. Vegetation along the Ala Wai Canal is generally limited to landscaping, with a single row of trees lining the majority of both sides of the canal, including niu, with some milo and monkey pod. Mangrove trees are present in some areas in the lower estuarine reaches of the MPDC and the Ala Wai Canal, although CRM walls constructed as banks along the canals have eliminated much of the riparian vegetation (USACE, 2015).

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Proposed activities are not expected to have a detrimental effect on botanical resources. Based on the botanical resources known to be present in the project area and Best Management Practices (BMPs) that would be employed during construction, the project is not anticipated to affect threatened or endangered plants.

Terrestrial wildlife in the project vicinity is primarily comprised of feral species (such as mongoose, cats, rats, and others). It is likely that one or more of the four established alien rodents found on O‘ahu – roof rat, brown rat, black rat, and European house mouse – utilize resources found within the project area on a seasonal basis. All of these introduced rodents are deleterious to native ecosystems and native faunal species.

With the exception of the ‘ōpe‘ape‘a or Hawaiian hoary bat, all terrestrial mammals found on O‘ahu are alien species. Given the habitat present and the lack of suitable roosting trees, any potential usage of the area by this species would be of an incidental foraging nature. It is not expected that this project would result in deleterious impacts to this threatened and/or endangered listed species.

Shoreline areas may be used by waterbird species. Indigenous seabird species that have been previously documented in this area include the great frigatebird, white-tailed tropicbird, white tern, and brown booby. Migratory species include the Pacific golden plover, wandering tattler, and ruddy turnstone. None of these are listed as threatened or endangered under Federal or State law.

The only suitable habitat for Hawaiian waterbird (Hawaiian coot, Hawaiian stilt, Hawaiian moorhen, and Hawaiian duck) are very small pockets of isolated wetland features within the Ala Wai Golf Course and possibly along Husten Ditch and/or the upper edges of the Ala Wai Canal. The extent and quality of potentially suitable habitat for Hawaiian waterbirds within the project area is very limited, and is likely to only be used as resting habitat (if at all).

Following construction, the extent and quality of habitat is not expected to be adversely affected. Based on the minimal extent and quality of suitable habitat coupled with the nature of the proposed activities, impacts to Hawaiian waterbirds are expected to be insignificant, such that the proposed action is not anticipated to adversely affect the species.

The aquatic environments within the project area provide suitable habitat for the Hawaiian duck. However, given extensive urban development, it is unlikely that these areas would be utilized by the species. The species is not expected to occur in the project area.

The principal potential impact of the proposed project to Hawaiian Petrels and Newell’s Shearwaters is the increased threat that birds will be downed after becoming disoriented by exterior lighting or night work requiring lighting. The proposed project would be constructed during daylight hours with no night work planned. No impacts to seabirds are therefore anticipated from night work.

During interagency consultation pursuant to Section 7 of the ESA, the USFWS will be consulted regarding the proposed project’s potential to affect threatened or endangered faunal and avifaunal species.

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Water Resources

No adverse effects to surface water resources are anticipated. Project activities potentially affecting water quality involve maintenance dredging, collection and disposal of dredged spoils, coordination with HECO for the removal of existing cables and concrete slabs from the Ala Wai Canal, repairs to the Ala Wai Canal walls, and potential treatments to select stairs along the Ala Wai Canal.

During construction, there is the potential for storm water runoff and non-storm water runoff to discharge from the project site into nearby surface waters. The mitigation of storm water and non-storm water pollutants would be addressed through the development of a BMPs Plan, a Storm Water Pollution Prevention Plan (SWPPP) and an Erosion Control Plan (ECP), as required by the NPDES permit for construction-storm water in accordance with HAR, §11-54 and §11-55.

Work proposed within the Ala Wai Canal, MPDC, and Pacific Ocean, is also anticipated to require the filing of a Department of the Army permit. All work in “Waters of the United States” (WOUS) and potential mitigation, will be coordinated with the USACE, Honolulu Branch. All work within State waters will be coordinated with the Department of Health, Clean Water Branch (DOH, CWB) to identify requirements pertaining to their jurisdiction under Section 401, WQC (see Section 9.3).

Short-term negative effects on water quality are expected from the temporary resuspension of sediment and potential pollutants at the specific areas where dredging takes place, the location of the concrete slab and cable removal, and the wall construction sites. Suspended sediment would be contained with a curtain wall and containment booms during the period it takes for localized suspended sediments to settle. While this would limit and contain the bulk of re-suspended sediments in the work area, it is likely that some fine material may escape and be transported out of the canal. Conditions resulting from the suspension of fine materials are expected to be similar to those experienced during storm runoff periods and are not likely to substantially affect pollutant levels in the canal or ocean.

The transfer of sediment from a scow to an ocean-going barge at the proposed mooring location at Magic Island has the potential for spills and over topping, introducing pollutants into near-shore waters. Some spillage could occur during transfer by bucket from scow to barge. This would be avoided by use of a water-tight bucket, careful equipment operation, tight mooring of the scow and receiving barge, use of a curtain wall and containment booms to contain any spillage that occurs, and maintaining adequate free board in the transport barge.

Long-term water clarity and quality improvements to the Ala Wai Canal, MPDC, and nearshore waters are expected as a result of the proposed action. The removal of sediment and accumulated organic material from the canals would benefit water quality. Removal of shoal areas would improve water exchange and reduce bacterial concentrations. With greater water depths in the canals, flow velocity would decrease, reducing the total sediment load reaching the ocean. Thus, improvements to water quality in the canal would help to ensure the protection of nearshore State marine waters.

SUMMARY OF MAJOR IMPACTS:

Short Term: Construction associated activities are expected to constitute the major short term impacts associated with the project. These include the generation of vehicle and equipment noise and engine

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exhausts, views of construction equipment and personnel within and along the canal, and at construction staging areas which could temporarily remove the use of some parking at Magic Island.

The use of the Ala Wai Canal during dredging would also require temporary closures of the immediate surrounding waters of the canal to maintain public safety. Other nearby resources such as the Ala Wai Neighborhood/Community Park, and Ala Wai Boat Harbor may also be affected as portions of these facilities may also need to be temporarily cordoned off from public access to maintain safety of the area.

Upon the termination of project related construction activities access to the area would be restored as all equipment and personnel necessary to the project will be removed. As required, any damage to public facilities associated with construction would be restored or repaired.

Long Term: No long term adverse environmental impacts associated with the proposed project are anticipated or expected. The major long term impact associated with the completion of dredging and improvements to the Ala Wai Canal are primarily improved capacity to handle storm water runoff and sediments, improved water quality, and improved aesthetic quality of the Ala Wai Canal structure.

ALTERNATIVES CONSIDERED:

Three alternatives were considered to address the purpose and need for the project: (1) No Action; (2) Delayed Action; and (3) Build Action Alternatives.

The No Action Alternative includes not dredging the Ala Wai Canal or MPDC, and not performing repairs to the damaged sections of the Ala Wai Canal walls or addressing treatment of the stairs that have become a safety concern. The No Action Alternative does not address the objectives of the project and are therefore rejected from further consideration.

The Delayed Action Alternative is similar to the no build alternative but would provide for project construction at a later date. This alternative also does not address the purpose and need for the project and can be expected to incur higher costs due to price escalation and/or inflation, while failing to improve the existing condition of the Ala Wai Canal and MPDC. It is therefore also rejected from further consideration.

The Build Action Alternatives included alternatives for the dredging of the Ala Wai Canal and MPDC, repairs to the canal walls, and potential treatment to select stairwells along the Ala Wai Canal. The proposed project considered the use of mechanical dredging and hydraulic dredging. Mechanical dredging was selected as the preferred alternative based on its successful use in past dredging of the Ala Wai Canal, and known ability to address all potential environmental impacts.

PROPOSED MITIGATION MEASURES

Geology, Topography, and Soil Resources – Erosion control measures will be employed during construction, and potential for impacts involving soils stability or erosion addressed by use of State, Federal, and CCH guidelines governing development. Any excavated material would be disposed of at an approved facility or location in accordance with regulations.

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Groundwater, Surface Water, Drainage, and Water Quality – During construction, work activities will be in compliance with HAR 11-54 Water Quality Standards (WQS) and HAR 11-55 Water Pollution Control. Discharge pollution prevention measures will be employed in all phases of the project and will include use of a curtain wall and containment booms. Following construction all areas of ground disturbance will be stabilized with appropriate materials including the use of vegetative ground cover.

Dewatering to surface waters at the upland sites will not be allowed. Surface runoff during processing of dredged materials for upland placement will be controlled through containment. Processing of sediment will involve mixing with lime or other binding agents. Potential leaching, if any, of contaminants from sediment into groundwater or dispersal of fugitive dust are also prevented by these measures. The need for liners or covers will be determined during design and permitting and used as required.

Scenic and Aesthetic Environment – Equipment will be confined to work areas. All construction related equipment will be removed following the completion of work. These temporary impacts during dredging will not be substantial.

Air Quality – Construction equipment and vehicles shall be maintained in proper working order to reduce air emissions. During construction, work activities will be in compliance with HAR, Chapter 11-59 and 11-60. Sediment dredged from the canals will be removed daily or contained in a closed receptacle for removal by the contractor when it is full.

Noise – During construction, noise would be attenuated to conform to regulatory requirements, or a noise permit or noise variance will be obtained. As required by the DOH, a public hearing may be held to describe and discuss the noise attenuation measures that would be employed as part of a noise variance.

Terrestrial Faunal and Avifaunal Resources – No night work is proposed for the project to reduce the potential for negative adverse effects to flying seabirds. The use of barbed wire fencing will be prohibited to avoid entanglement of Hawaiian hoary bats. During interagency consultation, pursuant to Section 7 of the Endangered Species Act, the U. S. Fish and Wildlife Services (USFWS) will be consulted and appropriate measures taken to mitigate against adverse effects.

Marine Biological Resources – For project related work within marine waters (i.e., ocean disposal at the South O‘ahu ODMDS, placement of dredge spoils at the Reef Runway, and mooring within the Ala Wai Boat Harbor), ESA-listed or protected species (sea turtles, Spinner dolphins, Hawaiian monk seal, and humpback whale) may be exposed to project-related activities. Mitigation to avoid adverse effects would include BMPs, to reduce the likelihood of interactions with protected species, and watching for and avoiding protected species before commencing work and postponing or halting operations when protected species are within 50 yards of project activities in accordance with USFWS recommendations.

Recreational Facilities – Shore-side and water areas used for recreation will be avoided where possible, or if practicable, alternative areas for access will be found. The existing bike path at Ala Wai Neighborhood Park may be temporarily rerouted and would be replaced to its original position and re-landscaped upon completion of dredging. Use of small portions of the Ala Wai Neighborhood/Community Parks are under consideration for construction staging. To ensure the safety of the public, limited access along a small portion of the shoreline (approximately 100-ft of the length of the canal) fronting these parks may be required; however, this would be temporary and would not preclude the use of the Neighborhood/Community Parks.

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Some recreational events in the Ala Wai Canal will be temporarily affected, where space available for use could be temporarily reduced to maintain public safety. These activities are not planned to be displaced. Dredge vessels will be moored to allow continued access to the ocean for recreational users. The mooring cables and buoys will be clearly marked day and night to prevent hazards. The State DLNR will also instruct the contractor to inform government agencies and users of the Ala Wai Canal to maintain communication and coordinate activities, access, and uses.

Solid and Hazardous Waste – If during dredging operations further testing of the sediment is required by the DOH and/or the U. S. Environmental Protection Agency (USEPA) and a portion of the material is found not to be suitable for ocean disposal, the sediment would be further analyzed to ensure proper disposal and protection of the environment. Disposal of solid waste will be handled in accordance with applicable Federal, State, and CCH rules and regulations.

Power and Communications – The relocation of the HECO cables is being coordinated between DLNR and HECO to ensure both projects run smoothly and minimize impacts to one another and the environment. In the event that other abandoned cables are encountered within the planned dredged depths, the abandoned cables will be removed by DLNR and disposed of by HECO to an authorized upland disposal facility (e.g., PVT Landfill or other approved disposal site).

Historic and Archaeological Resources – There are no archaeological resources in the sites evaluated for dredging support or for upland processing and placement. Dredge design will incorporate a setback of at least five feet from the canal edge in the Ala Wai Canal and MPDC to protect shoreline walls and foundations, and will incorporate a stable cut-slope grade. This will allow dredging work to avoid any impacts to the historic walls. In addition, the canal walls will be covered to prevent damage during transfer of material from the bank of the canal to the barge in the water. With the implementation of the above, no adverse impacts to cultural resources are anticipated.

The final designs for the repairs to the canal walls and treatment to stairs would be completed after the EIS process and based on consultations with the SHPD and community. The project will comply with the requirements of the SHPD.

Cultural Resources – While the proposed project would temporarily reduce the available space within the canal for certain activities such as outrigger canoeing, a traditional Hawaiian sport, it would not displace these activities altogether, and will ultimately result in positive long-term benefits for canoeing since removal of shallow areas would make more of the Ala Wai Canal passable for canoes. Only open work areas within the canal will be unavailable and will be designed to allow for passage of canoes, kayaks, etc., where possible.

FINDINGS AND REASONS SUPPORTING ANTICIPATED DETERMINATION:

Potential effects associated with the proposed project are evaluated based on the significance criteria in HAR, Section 11-200-12. The significance criteria are discussed below:

Involves an irrevocable commitment to loss or destruction of natural or cultural resources;

No irrevocable commitment to loss or destruction of natural or cultural resources is expected. Repair and improvement to the deteriorating sections of the Ala Wai Canal walls (SIHP # 50-80-14-9757) would be

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designed to be consistent with existing aesthetics of the canal and surrounding area, and would facilitate the preservation and restoration of this historic landmark. Repairs to the stairs would alter the cultural resource while at the same time preserving and restoring it; this would not result in a loss of the cultural resource. The SHPD will be consulted for project-related historic preservation and comply with requirements.

The use of the canal for historic and traditional cultural practices would be temporarily interrupted but not displace users. The project will ultimately result in positive long-term benefits for canoeing and recreational use since removal of shallow areas would make more of the Ala Wai Canal passable by canoes and watercraft.

Curtails the range of beneficial uses of the environment;

The proposed action will not curtail the range of beneficial uses of the environment. DLNR will accommodate canoeing during the dredging and construction phase through coordination with canoe clubs and the CCH, DPR Canoe Council. The dredging contractor shall also inform government agencies and users of the Ala Wai Canal of the proposed improvements project to maintain communication and coordinate activities, access, and uses.

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

The proposed project is consistent with the environmental policies established in HRS, Chapter 344, *State Environmental Policy*, and the State of Hawai‘i’s long-term environmental policies, which are to conserve natural resources and enhance the quality of life.

Substantially affects the economic or social welfare of the community or State;

The proposed action will not substantially affect the economic or social welfare of the community or State. Some employment will be generated during construction activities; however, all employment associated with the project will be short term and last only until the completion of the project. Funds for dredging the Ala Wai Canal and MPDC, and improvements to the Ala Wai Canal structure were appropriated by the State Legislature.

Substantially affects public health;

The proposed action will not substantially affect public health. Contamination of water and fish in the Ala Wai Canal is an existing public health risk. This risk may marginally increase in the short-term during construction. However, in the long-term, the risk will diminish. The proposed project will improve public safety by addressing damaged and deteriorating portions of the Ala Wai Canal walls and stairs that have become a safety concern. The proposed dredging and improvement work will decrease the potential for property damage from flooding during high intensity storm events and the long term effect of the project is expected to be beneficial.

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

No substantial secondary impacts will be involved. There will be temporary, short-term impacts that will result in disruption and inconveniences to recreational facilities, but in the long term the proposed action will benefit recreational activities related to the use of the Ala Wai Canal.

Involves substantial degradation of environmental quality;

No substantial degradation of environmental quality will occur at the Ala Wai Canal, MPDC, work support areas, barge mooring site, or disposal/reuse sites. Long-term water quality improvements to the Ala Wai Canal, MPDC, and nearshore waters are expected to result from removal of sediment and accumulated organic material from the Ala Wai Canal and MPDC. Removal of shoal areas would also improve water exchange and reduce bacterial concentrations.

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

Implementation of the proposed project will not cause any significant cumulative effects in combination with any currently ongoing or planned projects. Positive long-term cumulative effects are anticipated to result from the proposed action in conjunction with ongoing projects in the watershed to improve water quality. The proposed action does not involve a commitment for larger actions.

Substantially affects any rare, threatened or endangered species or its habitat;

The proposed action will not substantially affect a rare, threatened, or endangered species or habitat. As required the appropriate mitigation measures described in the project FEIS will be employed.

Detrimentially affects air or water quality or ambient noise levels;

None of the estimated emissions from the dredging and supporting equipment are anticipated to have a substantial adverse effect on air quality. Water quality in the Ala Wai Canal will be temporarily affected by dredging activities, but will improve in the long-term after dredging and construction is completed. Ambient noise levels are affected by existing noise from vehicle and air traffic, respectively. Noise levels will temporarily increase due to use of construction equipment but will be addressed by conforming to regulatory requirements. A noise permit or noise variance will be obtained as needed. The proposed action will not detrimentally affect air or water quality or ambient noise levels.

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

The Ala Wai Canal is an estuary in which accumulated sediment will be removed to improve conditions for recreational use of the Ala Wai Canal and its environs. The Ala Wai Canal, MPDC, and Magic Island are within the 100-year flood inundation zone. Areas within tsunami zones include all of the Ala Wai Canal MPDC, Magic Island, Ala Wai Boat Harbor, and the Reef Runway. Although dredging would be affected by a 100-year flood or tsunami, it is unlikely that these events would occur during the approximate one-year period of dredging.

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Substantially affects scenic vistas and view planes identified in county or State plans or studies;

No long-term visual impacts will occur because infrastructure necessary for the project including the planned repairs to the canal walls and potential treatments to select stairs along the canal would be at or near grade and designed to be consistent with exiting aesthetics of the canal and surrounding area. Visual impacts along the Ala Wai Canal due to dredging will be limited to views of the canal itself, and will not impact views of the Ko‘olau Mountains or of Diamond Head. These temporary impacts during dredging will not be substantial.

Requires substantial energy consumption.

Energy will be consumed to operate the equipment associated with the dredging activity. The energy consumed for the project will be sufficient to complete the proposed action and will not be substantial.

RECOMMENDATIONS:

That the Board of Land and Natural Resources:

1. Based on the review of the FEIS and the comments received during the 45-day comment period to the DEIS, in addition to our responses, find that the project will not have a significant effect on the environmental and cultural resources of the area.
2. Approve submission of the FEIS to the OEQC and the Governor for acceptance.
3. Authorize the Chairperson to sign all necessary forms to submit the FEIS to OEQC and the Governor for acceptance.

Respectfully submitted,



GARY S. CHANG
Chief Engineer

Approved for submittal:



SUZANNE D. CASE
Chairperson

Attachment: Exhibit 1, Project Location

Exhibit 1 – Project Location

