STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

November 15, 2022
Honolulu, Hawai‘i

Approval of Stream Channel Alteration Permit Application (SCAP.5926.6) Phase 1 Repair, conducted under an Emergency Authorization (EA.5849.6), and
Approval of Stream Channel Alteration Permit Application (SCAP.5914.6) Phase 2 Modification
Wailuku Water Company, Waihee Ditch Siphon Repair and Modification
Wailuku River, ‘Īao Surface Water Management Area, Maui, TMK: (2) 3-3-018:002

APPLICANT
Wailuku Water Company, LLC
PO Box 2790
Wailuku, HI 96793

LANDOWNER
Robert Horcajo Trust
Tamara Horcajo Trust
80 Iao Valley Road
Wailuku, HI 96793

SUMMARY OF REQUEST

Approve Stream Channel Alteration Permit (SCAP.5926.6) Phase 1 Repair by the Wailuku Water Company, LLC (WWC). The Phase 1 repair was conducted under an Emergency Authorization (EA.5849.6) after a storm in December 2021 damaged the 36-inch Waihee Ditch siphon. The SCAP application serves as the report required under the emergency authorization issued December 15, 2021.

Approve SCAP.5914.6 Phase 2 Modification which proposes to install a bumper plate over the exposed metal siphon pipe to prevent damage to the existing structure caused by stream flow erosion. The plate will direct flow further from the base on the downstream side of the structure.

BACKGROUND

On December 5 and 6, 2021, a storm damaged the 36-inch Waihee Ditch Siphon where it crossed the Wailuku River. The Siphon conveys water in the Waihee Ditch, across Wailuku River, from the north side to the south side and was previously encased within concrete with a concrete apron extending just downstream. Over the years, the concrete has eroded to the point that the storm damaged the siphon causing WWC to shut down the Waihee Ditch system for several days.

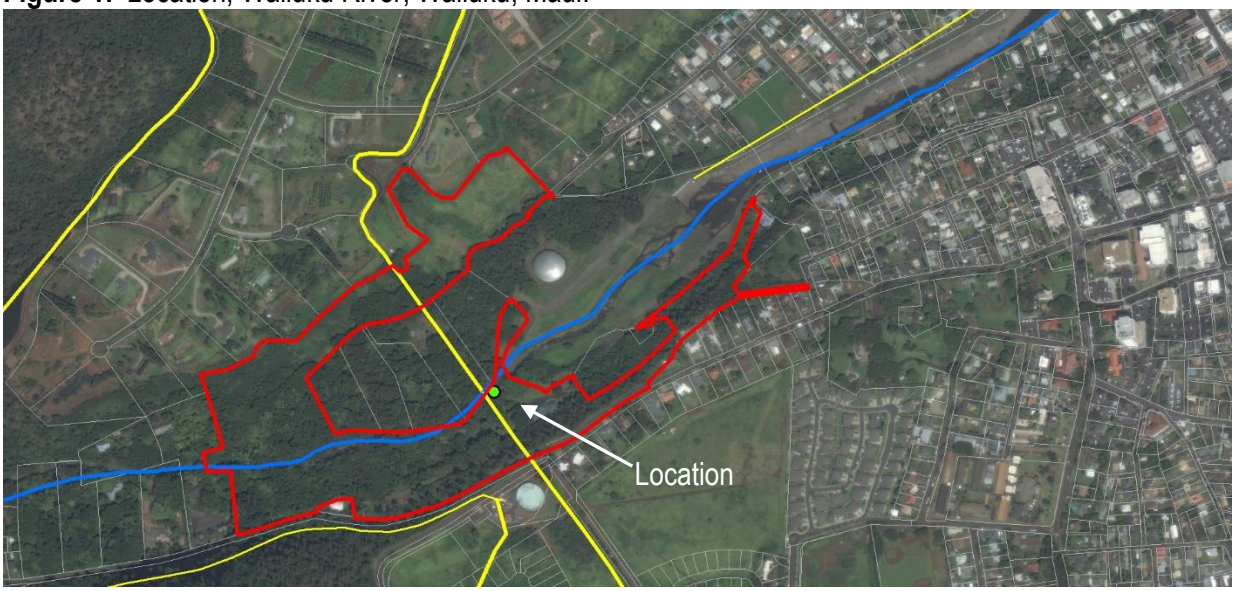
On December 15, 2021, the Commission on Water Resource Management (Commission), under authority of Chairperson Suzanne Case, issued WWC an Emergency Authorization (EA.5849.6) to repair the pipe, in accordance with §13-169-55, Hawaii Administrative Rules (See **Exhibit 1**).

On January 11, 2022, the applicant filed SCAP.5926.6 application for Phase 1 Repair which serves as the report required under EA.5849.6.

On June 22, 2022, the applicant filed SCAP.5914.6 application for Phase 2 Modification. Both applications can be viewed at *https://files.hawaii.gov/dlnr/cwrm/swreview/SCAP_5914_6.pdf*.

LOCATION: Wailuku, Maui. See **Figure 1**.

Figure 1. Location, Wailuku River, Wailuku, Maui.



STREAM DESCRIPTION

The siphon is located at the top of a waterfall and just upstream of the U.S. Army Corps of Engineers flood control channel in Wailuku River. A complete description of the Wailuku River can be viewed on the Commission website at:
https://files.hawaii.gov/dlnr/cwrm/cch/cchma1501/CCHMA1501-20210630-D&O.pdf#page=26

PROJECT DESCRIPTION

Phase 1 of the repair project welded a 24-inch x 20-inch x 3/8-inch thick A-6 steel plate over the hole in the siphon. See **Figure 2.** The applicant received Department (Chair) approval to make these emergency repairs and indicated that additional repairs would be required to prevent future damage to the siphon. Phase 1 of the repair project was completed in January 2022 and conducted under Emergency Authorization (EA.5849.6). The SCAP.5926.6 application for

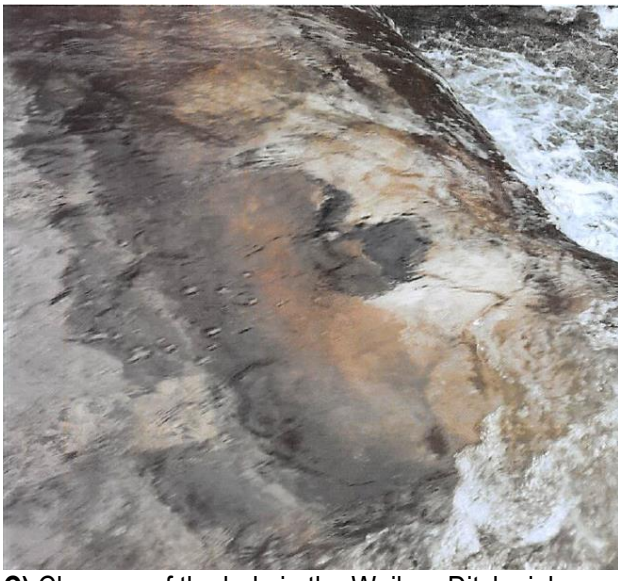
Phase 1 serves as the report required under EA.5849.6. The Commission staff finds no issues with the implementation of Phase 1 of the siphon repair and recommends approval.

The approval of the repair project included Phase 2 which was to install, by arc welding, a bumper plate over the remaining exposed 36-inch metal siphon pipe. Unfortunately, the Phase 2 repairs could not be completed within the time allowed for the emergency repairs due to stream flows and delays in obtaining materials.

Figure 2. Site photos.

A) View downstream of geyser at broken Waihee Ditch siphon, from left bank, December 5, 2021.

B) View upstream of geyser at broken Waihee Ditch siphon, from right bank, December 5, 2021.



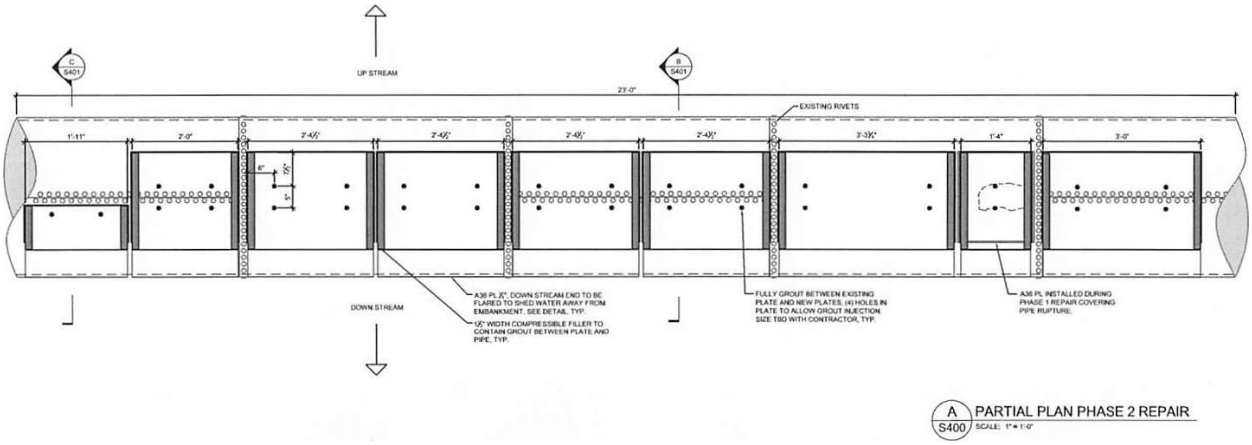
C) Close-up of the hole in the Waihee Ditch siphon.

D) 24-inch x 20-inch steel plate welded over the hole in the siphon

Phase 2 of the project, SCAP.5914.6, is the installation of flared bumper plates to provide protection to prevent damage from future storms and reduce the effect of undermining the existing structure by directing flow further from the base of the siphon and remaining concrete apron. The bumper plates consist of nine (9) separate pieces of A-6 3/8" thick steel plates of

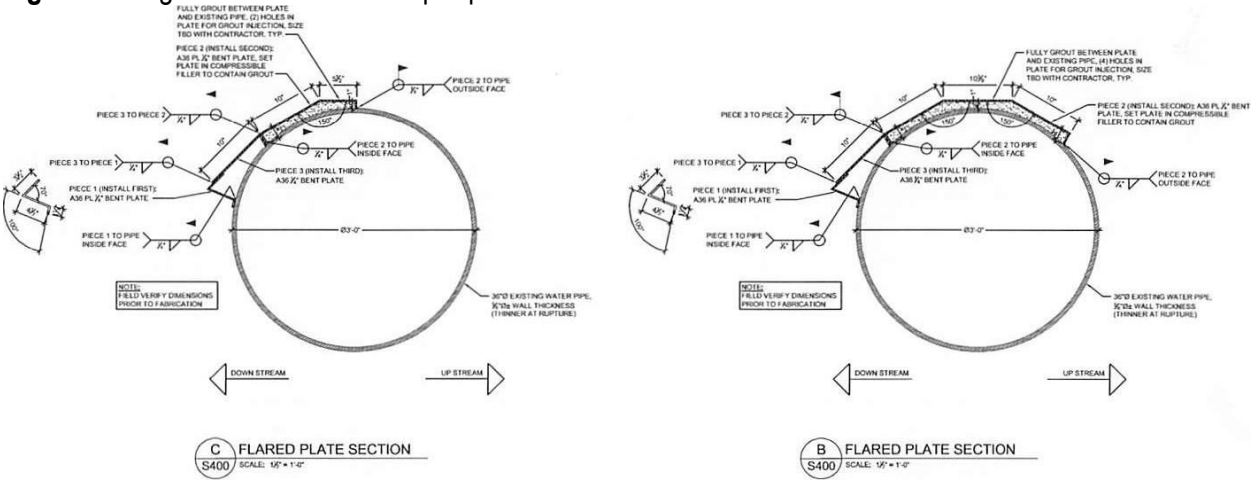
various sizes ranging in length from 23 inches to 39.25 inches, for a total length of 23 feet. See **Figure 3**. The project location sits atop the crest of a waterfall which has eroded upstream over time. The height of the waterfall is not known at this time as the pool below tends to fill and empty with the movement of boulders and sediment with high flows, but the estimated width of Wailuku River at this section is 50 feet.

Figure 3: Diagram of the installation of the nine (9) bumper plates on the Waihee Ditch Siphon across Wailuku River.



The structural engineer designed the bumper plates with a slight curvature on the downstream side to push the flow outward and away as it crosses the siphon. See **Figure 4**. This design should eliminate the undermining of the riverbed below the siphon which could cause failure of the siphon in the future.

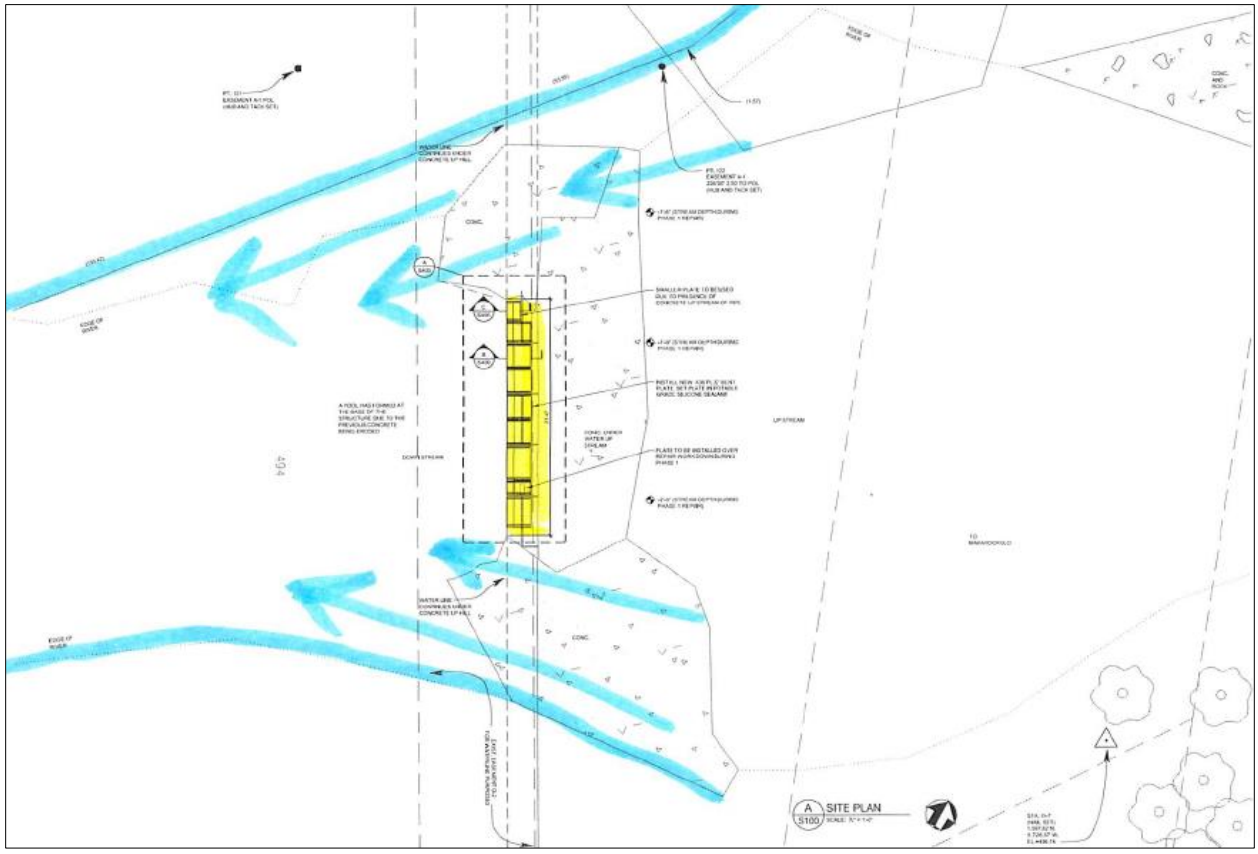
Figure 4: Diagram of the flared bumper plate.



The bumper plates will be installed over the portion of the siphon in the middle of the stream channel. See **Figure 5**. No external materials or boulders from outside of the river channel will be brought into the river bed. A limited number of rocks located in the river bed may be used to divert stream water around the project area during the repairs that will be relocated back to the original locations upon completion of the repair work.

Tarps and sandbags will be used on a temporary basis to divert streamflow away from the project area while the bumper plat is being welded. The required time for construction is estimated to be two (2) separate 8-hour days.

Figure 5: Site plans. North and south sides of the river (blue). Bumper plate area (yellow).



AGENCY REVIEW COMMENTS

County of Maui, Planning Department: No objections.

Department of Hawaiian Home Lands (DHHL): While DHHL does not have any objections to the application, DHHL has some concerns about the stream being restored, at or as close to its natural condition as possible. In addition we have concerns with the history of communication between the Applicant and the community. Based on the above, the department offers two requests regarding these SCAP Applications, particularly Phase 2 of its repairs to the Waihee Siphon: Request #1: The Applicant be subject to similar conditions regarding stream restoration, monitoring, and reporting under the Commission's previous Emergency Authorization.5849.6. Request #2: The Commission provide notice to key stakeholders (e.g. County of Maui, community groups, and homestead associations in the area) that construction will be commencing at least 30 days prior to the start of repair work on the siphon.

CWRM staff response: A requirement for WWC to notify the Commission, County of Maui Department of Public Works, and Hui o Nā Wai ʻEhā thirty days prior to the start of construction will be added as a special condition.

Dept. of Health (DOH), Clean Water Branch: The DOH standard comments can be reviewed on the DOH website at: https://health.hawaii.gov/cwb/files/2018/05/Memo-CWB-Standard-Comments.pdf.

CWRM staff response: The lead agency for the protection of water quality is the Department of Health, Clean Water Branch, which administers the Federal Clean Water Act (33 U.S.C. §1251 et seq.) and the State Water Pollution Act (HRS Ch. 342D; HAR Ch. 11-54 Water Quality Standards; and HAR Ch. 11-55 Water Pollution Control). HAR §11-54-1 through §11-54-8 defines Best Management Practices and water quality criteria applicable to inland and nearshore waters and are based on the Federal Clean Water Act. HAR Ch. 11-55 Appendix C defines discharges of storm water associated with construction activity. HRS 174C-66 states that the DOH oversees the State's water quality control program.

Department of Land and Natural Resources (DLNR), Aha Moku: No comments received.

DLNR, Aquatic Resources: No objections.

DLNR, Engineering: No comments received.

DLNR, Forestry and Wildlife (DOFAW): No comments received.

DLNR, Historic Preservation (SHPD): No determination letter received.

CWRM Staff Response: The proposed action is subject to SHPD concurrence and will be added as a special condition.

DLNR, Land Division: No comments received.

DLNR, State Parks: No comments received.

Office of Hawaiian Affairs: No comments received.

U.S. Army Corps of Engineers: No comments received.

U.S. Fish and Wildlife Service (FWS): Provided avoidance and minimization measures to avoid take of waterbirds and our Best Management Practices to avoid adverse effects related to in-water work.

*CWRM Staff Response: Comments will be incorporated, by reference, as a special condition (See **Exhibit 2**).*

PUBLIC COMMENTS

No public comments were received.

TRADITIONAL AND CUSTOMARY PRACTICES

1) The identity and scope of cultural, historical, or natural resources in which traditional and customary native Hawaiian rights are exercised in the area.

   The Applicant stated in SCAP.5914.6 Phase 2 "On occasion there may be some limited recreational activity use in the area but due to difficulty in accessing the area, it is not generally used for recreational activity."

   CWRM Staff Response: No comments were received by DLNR Aha Moku. No comments were received from the public. As cited in the Findings of Fact of the Commission's Decision and Order in CCH-MA15-01, "Despite significant challenges, some Native Hawaiian practitioners in Nā Wai 'Ehā continue to exercise traditional and customary rights and practices, including "gathering stream life such as hīhīwai, 'o'opu, and limu for subsistence and medicinal purposes," as well as "cultivating taro for religious and ceremonial uses, gathering materials for hula, lua (ancient Hawaiian martial arts), and art forms." There are no anticipated impacts to traditional and customary practices or the upstream/downstream migration of native macrofauna due to the project's limited impacts to the stream bed and channel. Commission staff offers no further action as can be identified.

2) The extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action.

   The Applicant stated, "Recreational uses will not be impacted or affected by the proposed action because the work will be performed only in a portion of the stream."

   CWRM Staff Response: There are no anticipated impacts to traditional and customary practices or upstream/downstream movement of native macrofauna due to the project's limited impacts to the stream bed and channel.

3) What feasible action, if any, could be taken by the Commission in regards to this application to reasonably protect native Hawaiian rights.

   The Applicant stated, "No action is required as the recreational use of the stream will not be impacted or affected by the work."

   CWRM Staff Response: No further action as identified.

HRS CHAPTER 343 – ENVIRONMENTAL ASSESSMENT (EA) COMPLIANCE

Under Hawaii Revised Statutes (HRS) §343-5(a), an EA shall be required for actions, as summarized in part below, that propose:

(1) use of state land or county lands, or the use of state or county funds;
(2) use within any land classified as a conservation district;
(3) use within a shoreline area;
(4) use within any historic site as designated in the National Register or Hawaii Register;
(5) use within the Waikiki area of O‘ahu;
(6) any amendments to existing county general plans where the amendment would result in designations other than agriculture, conservation, or preservation;
(7) any reclassification of any land classified as a conservation district;
(8) construction of new or the expansion or modification of existing helicopter facilities within the State, that may affect: (A) any land classified as a conservation district; (B) a shoreline area; or (C) any historic site as designated in the National Register or Hawaii Register;
(9) any (A) wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent; (B) Waste-to-energy facility; (C) Landfill; (D) Oil refinery; or (E) Power-generating facility.

CWRM Staff Response: The project does not trigger an EA.

CONSISTENCY WITH THE HAWAI‘I WATER PLAN

The Water Resource Protection Plan (WRPP), updated in 2019, provides an outline for the conservation, augmentation, and protection of statewide ground and surface water resources, watersheds, and natural stream environments. The legal framework of the Code for the issuance of Stream Channel Alteration Permits, as outlined in this submittal, is covered in more detail and context in the WRPP, Appendix I.

The proposed stream channel alteration will not divert any water from Wailuku River and should not impact the quantity or quality of water resources, public trust uses, or water rights.

STAFF REVIEW

HAR §13-169-52(b) Based upon the findings of fact concerning an application for a stream channel alteration permit, the Commission shall either approve in whole, approve in part, approve with modifications, or reject the application for a permit.

(1) Channel alterations that would adversely affect the quantity and quality of the stream water or the stream ecology should be minimized or not be allowed.

CWRM Staff Response: Upon approval of the construction plans as proposed, the quantity and quality of stream water should not be adversely affected, given the anticipated impacts to the stream channel will be limited to a small area surrounding the damaged section of the Waihee Ditch siphon.

(2) Where instream flow standards or interim instream flow standards have been established pursuant to subchapters 3 and 4, no permit shall be granted for any channel alteration which diminishes the quantity or quality of stream water below the minimum established to support identified instream uses, as expressed in the standards.

CWRM Staff Response: HRS §174C-71, requires the Commission to protect stream channels from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses. The project is not anticipated to impact the established interim instream flow standard. On page 300, the interim instream flow standard for the Wailuku River was set in the CCH-MA15-01 Surface Water Use Permit Applications, Integration of Appurtenant Rights and Amendments to the Interim Instream Flow Standards, Na Wai Eha Surface Water Management Areas of Waihee, Waiehu, Iao and Waikapu Streams, Maui.

(3) The proposed channel alteration should not interfere substantially and materially with existing instream or non-instream uses or with channel alterations previously permitted.

CWRM Staff Response: The identified instream uses include agriculture, fish habitat and streamflow contribution to the nearshore waters, among others. The bumper plate will create a lip on the downstream side that may impede the upstream migration of native aquatic species. It is anticipated that aquatic species could migrate on the north and south sides, where the bumper plate is not located, when water flows over this section. The Division of Aquatic Resources had no objections.

RECOMMENDATION

That the Commission:

1. Approve Stream Channel Alteration Permit Application (SCAP.5926.6) Phase 1 Repair considered the report required under EA.5849.6.

2. Approve Stream Channel Alteration Permit Application (SCAP.5914.6) Phase 2 Modification subject to the standard conditions in **Exhibit 3** and the special conditions below.

    a. Approval is subject to SHPD concurrence. If SHPD requires conditions, authority shall be delegated to the Deputy Director to attach those as a condition of the stream channel alteration permit.

    b. In conformance with the U.S. Fish and Wildlife Service recommendations, the Applicant shall avoid and minimize project impacts to Hawaiian waterbirds by observing recommended mitigation measures and standard best management practices (incorporated by reference to **Exhibit 2**).

    c. Wailuku Water Company shall notify the Commission on Water Resource Management, County of Maui Department of Public Works, and Hui o Nā Wai ʻEhā thirty days prior to commencement of work.

Ola i ka wai,

M. KALEO MANUEL
Deputy Director

Exhibits:
1. Emergency Authorization (EA.5849.6) letter, dated December 15, 2021
2. U.S. Fish and Wildlife Service comments, dated February 2022
3. Stream Channel Alteration Permit Standard Conditions.
4. Legal Authorities.

APPROVED FOR SUBMITTAL:

SUZANNE D. CASE
Chairperson

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

December 15, 2021

Ref: EA.5849.6

Avery Chumbley, President
Wailuku Water Company, LLC
P.O. Box 2790
Wailuku, HI 96793
Via email: abc@aloha.net

Aloha Mr. Chumbley:

Emergency Authorization
Waihe'e Ditch Siphon Repair
Wailuku River, Wailuku, Maui, Tax Map Key: (2) 3-3-018:002

The Commission on Water Resource Management (Commission) is responding to your December 13, 2021 email regarding your request for an emergency authorization for repair of the Waihe'e Ditch Siphon as it crosses Wailuku River to prevent further damage to the siphon and restore water service to your customers. We understand that this damage occurred as a result of heavy rains and high streamflows on December 5 and 6, 2021.

In your December 13, 2021 email at 8:28 a.m., you provided the following work plan:

> *Step 1: I have a metal fabricator from Maui coming this morning (Dec 13th.) to do a site inspection, he will inspect the pipe based on the K2N engineers proposed repair drawings (see attached PDF), take final measurements and then fabricate a 3/8 inch A-36 metal plate to weld or use Lindapter bolts, depending on the type of metal of the pipe (steel vs- cast iron) over the rupture hole. He will also take a sample of the existing metal pipe which will be sent to the mainland for a metallurgy analysis to ensure the type of welding rods (if welding is to be done) are used to adhere the larger metal bumper plate in the phase 2 steps explained below, are compatible to the old pipe. His certified welder will use a rod that they feel best for the short-term immediate repair if it is to be welded vs- Lindapter bolts. I am calling this Phase 1 Temp repair, this will get the diversion flows back on line quickly.*
>
> *Step 2: Once we have the results of the metallurgy analysis, we will go back into the site during a low flow time and weld or bolt, a second layer of a 3/8 or 1/2 inch steel plate over the existing exposed pipe (approx. 20+ feet long), this will act as a bumper protection layer for future boulders coming down stream during high flow events and push the water out into the basin*

EXHIBIT 1

to prevent any furthering curling and undermining of the earthen under area, and will buy us some time to get to the phase 3 or permanent replacement project.

Step 3: This would be known as the long-term replacement and refortification for future operations of the Waihee ditch flows in the pipe thru Wailuku River, this would be phase 3 which will be a huge project requiring many Government agency permits, community input involvement and a big investment. It may be 1 to 2 years until this would be a finished project, thus the need for the phase 2 project described above.

There will be NO excavation and/or fill of channel alterations to complete phase 1 & 2 of the project, WWC MAY utilize a mini-excavator located on the north side of the edge of the river to temporarily place some larger boulders in the area up-stream (mauka) of the rupture (which would be removed upon completion of the step 1 repair) and utilize sand bags to divert flows for personal safety allowing access directly over the break area during the phase 1 immediate repair.

By this communication I am requesting immediate emergency approval to proceed with phase 1 repairs described above, and consideration for phase 2 approvals to proceed when the metal results from the mainland have been received and fabrication of the bumper plate is completed, the timing would be at WWC discretion based on river flows for personal safety.

In response to subsequent questions from Commission staff, you provided the following responses in an email at 12:07 p.m. on December 13, 2021.

Commission: Once you are able to take measurements and complete fabrication, how much lead time will you need in order to be ready for on-the-ground work to occur for Step 1?

WWC: *Fabrication of the repair plate will be fast, it's only a matter of bending the plate to match the curvature of the siphon pipe the steel material should be available on Island, once we are able to do the closer inspection of the damaged area during low flows, the certified welder MAY be able to make a determination if we will need to weld or use bolts to attach the repair plate based on his professional judgement. Work can then be done right away provided flows for safety reasons are acceptable.*

Commission: Assuming working conditions are favorable (low streamflows), how long is the instream work on Step 1 expected to take?

WWC: S*tep 1 repair plate attachment can be done in a single day.*

Commission: Can you provide more details about work in or adjacent to the stream channel, related to the use of the mini-excavator? Will boulders located in the stream channel be used? Will sandbags be placed temporarily in the stream channel?

WWC: *I don't believe it is realistic to expect that sand bags alone will be able to provide a temporary water flow blockage in order to be in the stream and or on top of the siphon pipe to make the repair safely, we do not know the depth of the channel in front of the damage area. The concept would be to have the mini-excavator on site and at the edge of*

the channel to grab large boulders from around or above the high water mark to temporarily place them in front of the damaged area to assist in moving the flow around which would then be supplemented with sand bags. Any boulders placed would then be removed back above the high water mark and sand bags also removed after the step 1 repair plate is installed.

Commission: Are you able to provide notice within 24 hours prior to implementing the work on Phase 1?

WWC: *That should not be a problem.*

Pursuant to Hawaii Administrative Rules (HAR), Section 13-169-55, provides for emergency work and states:

§13-169-55 Emergency work. (a) When emergency channel alteration is necessary to prevent or minimize loss of life or damage to property, including the repair or restoration of structures damaged by a sudden and unforeseen event, a person may proceed to effect the channel alteration without a permit.

(b) In general, protective, health, and sanitation measures shall be limited to the minimum amount necessary to remove immediate threats to health and safety or to prevent immediate or further damage to property, and emergency repairs or restoration of structures shall be based on their replacement by a minimum facility of the same general type.

(c) No later than the first working day after initiation of any emergency work, the person effecting the work shall notify the department and describe the nature and circumstances of the remedial work so that the department may issue an emergency authorization.

(d) Within thirty days of his notification to the department, the person effecting the emergency work shall submit to the commission a report describing the nature and extent of the emergency work performed, including relevant maps and diagrams showing the location and details of the channel alteration completed.

(e) No fee will be required for the filing of a report for emergency channel alteration work. [Eff. MAY 27 1988] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-71)

In accordance with §13-169-55, HAR, the Commission approves your request for an Emergency Authorization per your provided work plan for Steps 1 and 2 only. Repairs to the siphon will be limited to your proposed "short-term immediate repair" (Step 1) and installation of a second layer steel plate to provide a "bumper protection layer" (Step 2). Work in the stream channel may require use of a mini-excavator located on the north bank of the river to temporarily place larger boulders, in addition to sand bags, to provide some protection of the work site from streamflows during repairs. This work is subject to the following conditions:

1. The mini-excavator must be kept on the streambank and out of the water to minimize any fuel spills or other water quality issues.

2. Only boulders and rocks currently located in the stream channel may be used or temporarily placed around the work site at the Siphon. No outside boulders or rocks from off-site may be used or placed in the stream channel.
3. All boulders temporarily replaced must be moved back to or near to their original locations in the stream channel. All sandbags must be removed from the stream channel. The stream channel should be restored to as close to a natural condition as possible.
4. WWC must provide notice via email to the Commission staff within 24 hours once the repair work on the Siphon is scheduled to proceed, and within 24 hours of completion of the work.

We understand that streamflows on Wailuku River continue to remain high and assessment of the damaged Siphon may be delayed. However, all work must be completed within 30 days of issuance of this Emergency Authorization. Following completion of the work, WWC shall submit a Stream Channel Alteration Permit (SCAP) application providing final details of the work performed. No application fee is required. The SCAP application, upon acceptance, shall be forwarded for agency review, then taken to the Commission for action to ensure that the work completed is consistent with the Emergency Authorization issued.

Please be advised that should the project extend beyond the minimum amount necessary to remove immediate threats to health and safety or prevent immediate or further damage to property, you may be required to apply for a stream channel alteration permit. Also, the project may require other agency approvals regarding wetlands, water quality, grading, stockpiling, and floodways. This emergency authorization should not be used for other regulatory jurisdictions or used to imply compliance with other federal, state, or county rules. Work performed without appropriate permits or authorizations may be subject to fines and/or remedial actions.

If you have any questions, contact Rebecca Alakai at (808) 587-0266, or via email at rebecca.r.alakai@hawaii.gov.

Sincerely,

Suzanne D. Case

SUZANNE D. CASE
Chairperson

c.: U.S. Army Corps of Engineers
Department of Health, Clean Water Branch
Hui o Nā Wai ʻEhā

FINAL Avoidance and Minimization Measures (AMMs)
Final revised Feb 2022

ESA Listed Species

Endangered Hawaiian waterbirds (Hawaiian stilt, *Himantopus mexicanus knudseni*; Hawaiian coot, *Fulica alai*; Hawaiian duck, *Anas wyvilliana*): Hawaiian waterbirds are currently found in a variety of wetland habitats including freshwater marshes and ponds, coastal estuaries and ponds, artificial reservoirs, kalo or taro (*Colocasia esculenta*) lo`i or patches, irrigation ditches, sewage treatment ponds, and in the case of the Hawaiian duck, montane streams and marshlands. Hawaiian stilts may also be found wherever ephemeral or persistent standing water may occur. Threats to these species include non-native predators, habitat loss, and habitat degradation. Hawaiian ducks are also subject to threats from hybridization with introduced mallards.

Based on the project details provided, your project may result in the creation of standing water or open water that could attract Hawaiian waterbirds to the project site. In particular, the Hawaiian stilt is known to nest in sub-optimal locations (e.g., any ponding water), if water is present. Hawaiian waterbirds attracted to sub-optimal habitat may suffer adverse impacts, such as predation and reduced reproductive success, and thus the project may create an attractive nuisance. Therefore, we recommend you work with our office during project planning so that we may assist you in developing measures to avoid impacts to listed species (e.g., fencing, vegetation control, predator management).

To avoid and minimize potential project impacts to Hawaiian waterbirds we recommend you incorporate the following measures into your project description:

- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.
- If water resources are located within or adjacent to the project site, incorporate applicable best management practices regarding work in aquatic environments into the project design (see enclosure).
- Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest). If a nest or active brood is found:
    - Contact the Service within 48 hours for further guidance.
    - Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
    - Have a biological monitor that is familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

EXHIBIT 2

U.S. Fish and Wildlife Service
Recommended Standard Best Management Practices

The U.S. Fish and Wildlife Service (USFWS) recommends the following measures to be incorporated into project planning to avoid or minimize impacts to fish and wildlife resources. Best Management Practices (BMPs) include the incorporation of procedures or materials that may be used to reduce either direct or indirect negative impacts to aquatic habitats that result from project construction-related activities. These BMPs are recommended in addition to, and do not over-ride any terms, conditions, or other recommendations prepared by the USFWS, other federal, state or local agencies. If you have questions concerning these BMPs, please contact the USFWS Aquatic Ecosystems Conservation Program at 808-792-9400.

1. Authorized dredging and filling-related activities that may result in the temporary or permanent loss of aquatic habitats should be designed to avoid indirect, negative impacts to aquatic habitats beyond the planned project area.

2. Dredging/filling in the marine environment should be scheduled to avoid coral spawning and recruitment periods, and sea turtle nesting and hatching periods. Because these periods are variable throughout the Pacific islands, we recommend contacting the relevant local, state, or federal fish and wildlife resource agency for site specific guidance.

3. Turbidity and siltation from project-related work should be minimized and contained within the project area by silt containment devices and curtailing work during flooding or adverse tidal and weather conditions. BMPs should be maintained for the life of the construction period until turbidity and siltation within the project area is stabilized. All project construction-related debris and sediment containment devices should be removed and disposed of at an approved site.

4. All project construction-related materials and equipment (dredges, vessels, backhoes, silt curtains etc.) to be placed in an aquatic environment should be inspected for pollutants including, but not limited to; marine fouling organisms, grease, oil, etc., and cleaned to remove pollutants prior to use. Project related activities should not result in any debris disposal, non-native species introductions, or attraction of non-native pests to the affected or adjacent aquatic or terrestrial habitats. Implementing both a litter-control plan and a Hazard Analysis and Critical Control Point plan (HACCP – see https://www.fws.gov/policy/A1750fw1.html) can help to prevent attraction and introduction of non-native species.

5. Project construction-related materials (fill, revetment rock, pipe, etc.) should not be stockpiled in, or in close proximity to aquatic habitats and should be protected from erosion (*e.g.*, with filter fabric, etc.), to prevent materials from being carried into waters by wind, rain, or high surf.

6. Fueling of project-related vehicles and equipment should take place away from the aquatic environment and a contingency plan to control petroleum products accidentally spilled during the project should be developed. The plan should be retained on site with the person responsible for compliance with the plan. Absorbent pads and containment booms should be stored on-site to facilitate the clean-up of accidental petroleum releases.

7. All deliberately exposed soil or under-layer materials used in the project near water should be protected from erosion and stabilized as soon as possible with geotextile, filter fabric or native or non-invasive vegetation matting, hydro-seeding, etc.

STREAM CHANNEL ALTERATION PERMIT STANDARD CONDITIONS
(Revised December 15, 2020)

1. The permit application and staff submittal approved by the Commission at its meeting on the above date shall be incorporated herein by reference.
2. The project may require other agency approvals regarding wetlands, water quality, grading, stockpiling, endangered species, and floodways. The permittee shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments, including, but not limited to, instream flow standards.
3. The permittee, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the permittee or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
4. The permittee shall notify the Commission, by letter, of the actual dates of project initiation and completion. The permittee shall submit a set of as-built plans and photos in pdf format of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
5. Before proceeding with any work authorized by the Commission, the permittee shall submit one set of construction plans and specifications in PDF format to determine consistency with the conditions of the permit and the declarations set forth in the permit application.
6. The permittee shall implement site-specific, construction Best Management Practices in consultation with the DOH Clean Water Branch and other agencies as applicable, that are designed, implemented, operated, and maintained by the permittee and its contractor to properly isolate and confine activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting State waters per HRS Ch. 342D Water Pollution; HAR §11-54-1 through §11-54-8 Water Quality Standards; and HAR Ch. 11-55 Water Pollution Control, Appendix C.
7. The permittee shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The permittee shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.
8. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the permittee shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.

EXHIBIT 3

LEGAL AUTHORITIES

Water as a Public Trust. The four public trust purposes are:

1. Maintenance of waters in their natural state;
2. Domestic water use of the general public, particularly drinking water;
3. The exercise of Native Hawaiian and traditional and customary rights, including appurtenant rights. Waiahole I, 94 Hawaii 97; 9 P.3d 409 (2000).
4. Reservations of water for use on Hawaiian home lands. Waiola O Molokai, Inc., 103 Hawaii 401; 83 P.3d 664 (2004).

Activities on undeveloped lands. Public Access Shoreline Hawaii v. Hawaii County Planning Commission (PASH I). 79 Hawaii 246 (1993).

HRS §174C-71 Protection of instream uses. The commission shall establish and administer a statewide instream use protection program. In carrying out this part, the commission shall cooperate with the United States government or any of its agencies, other state agencies, and the county governments and any of their agencies. In the performance of its duties the commission shall:

(2) Establish interim instream flow standards;
  (D) In considering a petition to adopt an interim instream flow standard, the commission shall weigh the importance of the present or potential instream values with the importance of the present or potential uses of water for non-instream purposes, including the economic impact of restricting such uses;
(3) Protect stream channels from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses;
  (A) The commission shall require persons to obtain a permit from the commission prior to undertaking a stream channel alteration; provided that routine streambed and drainageway maintenance activities and maintenance of existing facilities are exempt from obtaining a permit;
  (C) The commission shall establish guidelines for processing and considering applications for stream channel alterations consistent with section 174C-93;

HAR §13-169-2 Definitions.

"Channel alteration" means to obstruct, diminish, destroy, modify, or relocate a stream channel; to change the direction of flow of water in a stream channel; to place any material or structures in a stream channel; or to remove any material or structures from a stream channel.

"Stream channel" means a natural or artificial watercourse with a definite bed and banks which periodically or continuously contains flowing water.

HAR §13-169-50 Permit required. (a) Stream channels shall be protected from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses. No stream channel shall be altered until an application for a permit to undertake the work has been filed and a permit is issued by the commission; provided that routine streambed and drainageway maintenance activities and maintenance of existing facilities are exempt from obtaining a permit.

EXHIBIT 4

HAR §13-169-52 Criteria for ruling on application. (a) The commission shall act upon an application within ninety calendar days after acceptance of the application.

(b) Based upon the findings of fact concerning an application for a stream channel alteration permit, the commission shall either approve in whole, approve in part, approve with modifications, or reject the application for a permit.

(c) In reviewing an application for a permit, the commission shall cooperate with persons having direct interest in the channel alteration and be guided by the following general considerations:

(1) Channel alterations that would adversely affect the quantity and quality of the stream water or the stream ecology should be minimized or not be allowed.

(2) Where instream flow standards or interim instream flow standards have been established pursuant to subchapters 3 and 4, no permit shall be granted for any channel alteration which diminishes the quantity or quality of stream water below the minimum established to support identified instream uses, as expressed in the standards.

(3) The proposed channel alteration should not interfere substantially and materially with existing instream or non-instream uses or with channel alterations previously permitted.

(c) Notwithstanding subparagraph (b) above, the commission may approve a permit pursuant to subparagraph (a) above in those situations where it is clear that the best interest of the public will be served, as determined by the commission.

HAR §13-169-53 Term of permit. (a) Every permit approved and issued by the commission shall be for a specified period, not to exceed two years, unless otherwise specified in the permit.

HAR§13-169-55 Emergency work. (a) When emergency channel alteration is necessary to prevent or minimize loss of life or damage to property, including the repair or restoration of structures damaged by a sudden and unforeseen event, a person may proceed to effect the channel alteration without a permit.

(b) In general, protective, health, and sanitation measures shall be limited to the minimum amount necessary to remove immediate threats to health and safety or to prevent immediate or further damage to property, and emergency repairs or restoration of structures shall be based on their replacement by a minimum facility of the same general type.

(c) No later than the first working day after initiation of any emergency work, the person effecting the work shall notify the department and describe the nature and circumstances of the remedial work so that the department may issue an emergency authorization.

(d) Within thirty days of his notification to the department, the person effecting the emergency work shall submit to the commission a report describing the nature and extent of the emergency work performed, including relevant maps and diagrams showing the location and details of the channel alteration completed.

(e) No fee will be required for the filing of a report for emergency channel alteration work. [Eff. MAY 27 1988] (Auth: HRS §174C-8) (Imp: HRS §§174C-5, 174C-71)