

**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Engineering Division
Honolulu, Hawaii 96813**

January 9, 2026

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Approval to Authorize the Chairperson to Negotiate, Award, Amend, Manage Enforce or Revoke State Grant Awards for the Act 134, SLH 2023 Dam and Appurtenance Improvement or Removal Grants to Owners of the Waiakalua Reservoir, Kauai (KA-0010) for \$750,000 for Remediation Improvements; and Wailuku Water Reservoir 6, Maui (MA-0150) for \$500,000 for Dam Removal Study, and Authorize the Chairperson to declare a project covered by this request exempt from the preparation of an Environmental Assessment (EA) or to approve an EA and issue a finding of no significant impact (FONSI)

Summary

The DLNR Engineering Division (“Division”), administrator of the Hawaii Dam and Reservoir Safety Program (HRS chapter 179D) under Dam and Appurtenance Improvement or Removal Grant Program (HRS § 179D-31) (“Grant Program”), requests the Board of Land and Natural Resources (“Board”) approve awards of state special-funded program grants to the private dam owners of two (2) dams – KA-0010 Waiakalua Reservoir (Kauai) and MA-0150 Wailuku Water Reservoir 6 (Maui). The funds awarded to the two dams total \$1,250,000. The total funding appropriated for the Grant Program is \$5,000,000.

The projects selected are in accordance with the guidelines and standards stated in Act 134, Session Laws Hawaii (SLH) 2023 (“Act 134”) and codified in Hawaii Revised Statutes (HRS) §179D-31, which established the Grant Program. See Exhibit 1. Act 232, SLH 2024 established a Special Fund for which these grant funds are to be dispersed. Act 134 establishes and provides moneys to private owners for the improvement or removal of deficient dams and appurtenances, with a focus on dams owned by homeowner associations. Accordingly, the proposed applicants were selected primarily on their status as dams owned by a resident homeowner or a homeowners’ association. The dams are also high hazard dams, which failures would likely result in loss of life. Each of the proposed dams have multiple deficiencies. Dam owners would use the grant funding to address these deficiencies by completing studies, designs, and construction necessary to remediate or remove the dam.

Background

Pursuant to Act 134, the Division solicited eligible dam owners statewide to submit applications for the Grant Program. A total of \$5,000,000 of grant funding was appropriated for the grant program and is currently retained in a special fund for use by the Grant Program. Act 134 appropriated moneys for dam and appurtenance improvement or removal by funding the dam owner’s studies, plans, designs, construction, and equipment used to improve or remove the deficient dam or appurtenance. The Act narrative specifically identifies the need to assist homeowners or homeowners’ associations, after the construction and sale of subdivisions, becoming responsible for dam structures, who typically require assistance with conducting studies, repairs or removals.

Accordingly, the Division established the following award criteria to prioritize eligible applicants:

- Dams owned by homeowners or homeowners’ associations who reside directly adjacent to the dam structure.
- Dams with a relatively higher risk, where risk is defined as both the likelihood of failure occurring and the severity of adverse consequences on the downstream community (population at risk).
- Dams or appurtenances regulated under HRS chapter 179D, rated as having a high or significant hazard potential classification, based on dam failure hazard assessments.
- Dams rated to be in poor or unsatisfactory overall condition, based on the latest phase I investigation of the facility.

Discussion

The Division received and evaluated 17 grant program applications. After prioritizing the applications by the award criteria, the top homeowner applicants were selected as listed table below. Each of the proposed dams are rated as high hazard dams.

No.	State ID	Island / Town	Dam Name	Owner	Project Type	Grant Funding
1	MA-0150	Maui / Waikapu	Wailuku Water Reservoir 6	Waikapu Gardens Homeowners Association	Planning	\$500,000
2	KA-0010	Kauai / Kilauea	Waiakalua Reservoir	Waiakalua Wildlife Preserve Association	Remediation	\$750,000
					TOTAL	\$1,250,000

Additional projects may be considered in subsequent application cycles once the program is able to fill the much-needed support staff for this grant program, and address eligibility questions about dams jointly owned by private and public entities.

Award 1 – Wailuku Water Reservoir 6 – Decommissioning / Removal Study

The Wailuku Water Reservoir 6 owners propose a planning and scoping study to remove the dam/reservoir, (shown in Exhibit 3). The dam is classified as a small, high hazard dam, which is no longer used for water supply and irrigation, although it currently receives storm drainage inflows. The dam's spillway is believed to be undersized and outlet works condition is unknown. The proposed work involves completing a study to examine the scope and cost for design and construction activities to decommission and remove the dam. The project to remove the dam, if completed, would benefit more than 4,500 people who live downstream of the dam by reducing the risk of loss of life in the event of a dam failure. The preliminary estimate of probable construction costs to remove this dam is between \$5,000,000 to \$10,000,000. The proposed decommissioning study will help the owners' engineer to qualify the scope and estimate. The owners initially requested grant funding of \$107,454 in their application for this planning study, however later revised this estimate to \$485,000. The Division is proposing grant funding up to but not exceeding \$500,000.

Award 2 - Waiakalua Reservoir – Remediation Improvements

The Waiakalua Reservoir owners propose to make improvements to the dam to address multiple dam safety deficiencies, (shown in Exhibit 4). Specifically, the owners plan to increase the capacity of the spillway, rehabilitate the embankment slopes for stability, install a toe drain system, inspect the outlet works piping and tunnel, install armoring on the downstream conveyance and toe, and remove trees and rootballs on the embankment. The downstream community will benefit from the dam being made safer, the dam continuing to serve as a sediment basin, improved water quality in adjoining streams and coastal areas, and enhancements to visual and recreational resources, which also improve conditions for local wildlife. The total rehabilitation costs for this project are estimated to be \$2,090,000 for the planning, design, construction and auxiliary equipment. The owners request \$750,000 in grant funding.

The total funding requested by these grant applicants amounts to \$1,250,000, which is below the \$5 million of funding appropriated to the Grant Program. The remaining unallocated portion could be used to supplement one or more of these projects or to fund other projects in the future.

These grant awards are for funding in part or whole, the planning, design and / or construction improvements as stipulated by Act 134. The recipients of these grant awards will be required to apply for and obtain from the Board written approval of plans and specifications on the construction of any new dam or reservoir or the enlargement, alteration or removal of any dam or reservoir prior to commencement of any work. Proposed construction projects shall comply with HRS Chapter 343 environmental assessment review, State Historic Preservation and Ka Paakai Analysis as part of the dam safety permit approval before the Board.

Recommendation

1. Subject to the requirements of HRS § 179D-31, the Board of Land and Natural Resources authorize the Chairperson to negotiate, draft, and award grant funding agreements and support agreements in accordance with the above, subject to approval by the State Attorney General's Office, for the Dam and Appurtenance Improvement or Removal Grant Program Grants to the owners of the following facilities for amounts up to the stipulated grant amounts:

State ID	Dam Name / Project	Grant Amount
MA-0150	Wailuku Water Reservoir 6 Decommissioning / Removal Study	\$500,000
KA-0010	Waiakalua Reservoir Remediation Improvements Construction Project	\$750,000

2. The Board of Land and Natural Resources authorize the Chairperson to amend, manage, enforce or revoke grant awards for the Dam and Appurtenance Improvement or Removal Grant Program from grant recipients for failure to meet requirements of the grant agreements or other federal, state, or county regulations (including *Ka Pa'akai* analysis) that may adversely be impacted or impact the outcome of the proposed grant award projects.
3. The Board delegate authority to the Chairperson to declare a project covered by this request exempt from the preparation of an Environmental Assessment (EA) or to approve an EA and issue a finding of no significant impact (FONSI), if appropriate, and authorize the Chairperson to sign the necessary documents pertaining to the individual projects to make such declaration.

Respectfully submitted,



DINA U. LAU
Acting Chief Engineer

APPROVED FOR SUBMITTAL:



Dawn N.S. Chang, Chairperson
Board of Land and Natural Resources

- Exhibit 1 – Act 134, SLH 2023
- Exhibit 2 – Act 232, SLH 2024
- Exhibit 3 - Wailuku Water Reservoir 6 Grant Application
- Exhibit 4 – Waiakalua Reservoir Grant Application

EXHIBIT 1

ACT 134

S.B. NO. 1064

A Bill for an Act Relating to Dam and Appurtenance Safety.

Be It Enacted by the Legislature of the State of Hawaii:

SECTION 1. In accordance with section 9 of article VII of the Hawaii State Constitution and sections 37-91 and 37-93, Hawaii Revised Statutes, the

ACT 134

legislature has determined that the appropriations contained in H.B. No. 300, H.D. 1, S.D. 1, C.D. 1,¹ and this Act will cause the state general fund expenditure ceiling for fiscal year 2023-2024 to be exceeded by \$1,073,987,367 or 11.0 per cent. This current declaration takes into account general fund appropriations authorized for fiscal year 2023-2024 in H.B. No. 300, H.D. 1, S.D. 1, C.D. 1,¹ and this Act only. The reasons for exceeding the general fund expenditure ceiling are that:

- (1) The appropriation made in this Act is necessary to serve the public interest; and
- (2) The appropriation made in this Act meets the needs addressed by this Act.

SECTION 2. The legislature finds that some plantation-era reservoirs across the State, including locations in Maui county, are on lands sold by plantation landowners to developers. Following the sale, developers constructed subdivisions, often including dams and appurtenances, including reservoirs and spillways, within deeds to the homeowners or a homeowners' association.

However, many dams and appurtenances located on subdivisions are not properly maintained. During periods of extreme weather, the surrounding neighborhoods face significant risks from flooding. Despite potential hazards posed by the dams and appurtenances, the department of land and natural resources considers these dams and appurtenances to be privately owned and the responsibility of homeowners or homeowners' associations to maintain proper safety standards. Costly permits are required to conduct repairs or removal, which results in dams and appurtenances remaining in an unsafe state.

Therefore, the purpose of this Act is to:

- (1) Establish and appropriate moneys for a dam and appurtenance improvement or removal grant program to provide the owners of private dams and appurtenances with funds for plans, design, construction, and equipment that are used to improve or remove deficient dams and appurtenances, as determined by the department of land and natural resources; and
- (2) Appropriate moneys for certain operating expenses and the establishment of positions in the department of land and natural resources.

SECTION 3. Chapter 179D, Hawaii Revised Statutes, is amended by adding a new section to part II to be appropriately designated and to read as follows:

“§179D- Dam and appurtenance improvement or removal grant program. (a) There is established a dam and appurtenance improvement or removal grant program, to be developed and administered by the department for the improvement or removal of deficient dams in the State.

(b) The dam and appurtenance improvement or removal grant program shall provide funding to owners of private dams for plans, design, construction, and equipment to improve or remove deficient dams and appurtenances, as determined by the department.

(c) Each award shall be approved by the board before disbursement and shall be subject to conditions imposed by the board.

(d) The department may award grants based on criteria that shall be developed by the department. Each applicant shall meet the following requirements:

- (1) The applicant shall be an owner of a high hazard or significant hazard dam or appurtenance that is regulated under this chapter;

- (2) The applicant shall be the owner of a regulated dam or appurtenance that has been determined to have one or more deficiencies; provided that priority shall be given to dams or appurtenances rated to be in poor or unsatisfactory condition;
- (3) The applicant shall indicate on the application that the proposed plans, design, construction, and equipment shall be intended for remediation or removal of the dam or appurtenance;
- (4) If the applicant is an entity other than an individual, the applicant shall:
 - (A) Be licensed to conduct business in the State; and
 - (B) Have bylaws or policies that describe the manner in which business is conducted, prohibit nepotism, and provide for the management of potential conflicts of interest;
- (5) The applicant shall agree to comply with all applicable federal and state laws prohibiting discrimination against any person on the basis of race, color, national origin, religion, creed, sex, age, sexual orientation, disability, or any other characteristic protected under applicable federal or state law;
- (6) The applicant shall agree that grant moneys are not to be used for purposes of entertainment or perquisites;
- (7) The applicant shall agree that all activities and improvements undertaken with funds received shall comply with applicable federal, state, and county laws, including statutes, ordinances, applicable building codes, and rules;
- (8) The applicant shall agree to make available to the department all records that the applicant may have relating to the grant and allow state agencies to monitor the applicant's compliance with the purpose of this chapter;
- (9) The applicant shall establish, to the satisfaction of the department, that sufficient funds are available for the completion of plans, design, and construction, or equipment needed for the purpose for which the grant is awarded; provided that the grant amount shall be included among the calculation of sufficient funds; and
- (10) The applicant shall comply with other requirements or conditions as the department or board may prescribe."

SECTION 4. There is appropriated out of the general revenues of the State of Hawaii the sum of \$10,000,000 or so much thereof as may be necessary for fiscal year 2023-2024 as one-time seed funding for the purposes of the dam and appurtenance improvement or removal grant program.

SECTION 5. There is appropriated out of the general revenues of the State of Hawaii the sum of \$220,000 or so much thereof as may be necessary for fiscal year 2023-2024 and the same sum or so much thereof as may be necessary for fiscal year 2024-2025 to be expended under program ID Department of Land and Natural Resources – Prevention of Natural Disasters (LNR810), for operating expenses and the establishment of the following two full-time equivalent (2.0 FTE) permanent positions in the department of land and natural resources:

- (1) One planner position; and
- (2) One accountant position.

The sums appropriated in section 4 and this section of this Act shall be expended by the department of land and natural resources for the purposes of this Act.

ACT 134

SECTION 6. New statutory material is underscored.²

SECTION 7. This Act shall take effect on July 1, 2023.
(Approved June 29, 2023.)

Notes

1. Act 164.
2. Edited pursuant to HRS §23G-16.5.

EXHIBIT 2



GOV. MSG. NO. 1337

EXECUTIVE CHAMBERS
KE KE'ENA O KE KIA'ĀINA

JOSH GREEN, M.D.
GOVERNOR
KE KIA'ĀINA

July 9, 2024

The Honorable Ronald D. Kouchi
President of the Senate,
and Members of the Senate
Thirty-Second State Legislature
State Capitol, Room 409
Honolulu, Hawai'i 96813

The Honorable Scott K. Saiki
Speaker, and Members of the
House of Representatives
Thirty-Second State Legislature
State Capitol, Room 431
Honolulu, Hawai'i 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

This is to inform you that on July 9, 2024, the following bill was signed into law:

SB3153 SD2 HD1 CD1

RELATING TO THE DAM AND
APPURTENANCE IMPROVEMENT OR
REMOVAL GRANT PROGRAM.
ACT 232

Sincerely,

Josh Green, M.D.
Governor, State of Hawai'i

on JUL 9 2024

THE SENATE
THIRTY-SECOND LEGISLATURE, 2024
STATE OF HAWAII

S.B. NO. 3153
S.D. 2
H.D. 1
C.D. 1

A BILL FOR AN ACT

RELATING TO THE DAM AND APPURTENANCE IMPROVEMENT OR REMOVAL
GRANT PROGRAM.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that many private dam
2 owners do not have the resources to conduct the necessary
3 repairs or removal of their dams, resulting in dams remaining
4 unsafe and continuing to pose a risk to the downstream public in
5 the event of a dam failure. The legislature further finds that
6 although the total cost to bring all private dams into
7 compliance will be in the hundreds of millions of dollars, dams
8 in Hawaii provide many public benefits, such as potable water,
9 water for agriculture and livestock, fire protection, ground
10 water recharge, flood control, energy generation, sediment
11 control, and recreation. Therefore, it is in the public's best
12 interest for the legislature to provide financial assistance to
13 these private dam owners.

14 Act 134, Session Laws of Hawaii 2023 (Act 134), established
15 and appropriated moneys for a dam and appurtenance improvement
16 or removal grant program to financially assist owners of private
17 dams and appurtenances to keep them properly maintained.



1 Although Act 134 did appropriate \$10,000,000 out of general
2 revenues as one-time seeding for the grant program, it did not
3 establish a special fund dedicated to receive grant program
4 funding. A special fund is a critical receptacle for grant
5 funds to be deposited into and remain available for the purposes
6 of Act 134. This is especially important during the department
7 of land and natural resources' (department) inaugural creation
8 of the grant program, where administrative rulemaking to develop
9 procedures and criteria to determine eligibility and priority of
10 awarding grants would be established. The department
11 anticipates that the \$10,000,000 in seed funding appropriated
12 for the grant program in Act 134 will lapse before the
13 department can complete its rulemaking and establish its grant
14 application criteria and processes. Thereafter, without the
15 creation of the special fund, unused funds for the grant program
16 will lapse and be returned to the general fund at the close of
17 each fiscal year.

18 The purpose of this Act is to establish a special fund to
19 receive funds for the dam and appurtenance improvement or
20 removal grant program and to reappropriate funds for the dam and
21 appurtenance improvement or removal grant program.



1 SECTION 2. Section 179D-31, Hawaii Revised Statutes, is
2 amended to read as follows:

3 "~~§~~179D-31~~§~~ Dam and appurtenance improvement or
4 removal grant program~~[-]~~; special fund; established. (a) There
5 is established a dam and appurtenance improvement or removal
6 grant program, to be developed and administered by the
7 department for the improvement or removal of deficient dams in
8 the State.

9 (b) The dam and appurtenance improvement or removal grant
10 program shall provide funding to owners of private dams for
11 plans, design, construction, and equipment to improve or remove
12 deficient dams and appurtenances, as determined by the
13 department.

14 (c) Each award shall be approved by the board before
15 disbursement and shall be subject to conditions imposed by the
16 board.

17 (d) The department may award grants based on criteria that
18 shall be developed by the department. Each applicant shall meet
19 the following requirements:



- 1 (1) The applicant shall be an owner of a high hazard or
2 significant hazard dam or appurtenance that is
3 regulated under this chapter;
- 4 (2) The applicant shall be the owner of a regulated dam or
5 appurtenance that has been determined to have one or
6 more deficiencies; provided that priority shall be
7 given to dams or appurtenances rated to be in poor or
8 unsatisfactory condition;
- 9 (3) The applicant shall indicate on the application that
10 the proposed plans, design, construction, and
11 equipment shall be intended for remediation or removal
12 of the dam or appurtenance;
- 13 (4) If the applicant is an entity other than an
14 individual, the applicant shall:
- 15 (A) Be licensed to conduct business in the State; and
16 (B) Have bylaws or policies that describe the manner
17 in which business is conducted, prohibit
18 nepotism, and provide for the management of
19 potential conflicts of interest;
- 20 (5) The applicant shall agree to comply with all
21 applicable federal and state laws prohibiting



1 discrimination against any person on the basis of
2 race, color, national origin, religion, creed, sex,
3 age, sexual orientation, disability, or any other
4 characteristic protected under applicable federal or
5 state law;

6 (6) The applicant shall agree that grant moneys are not to
7 be used for purposes of entertainment or perquisites;

8 (7) The applicant shall agree that all activities and
9 improvements undertaken with funds received shall
10 comply with applicable federal, state, and county
11 laws, including statutes, ordinances, applicable
12 building codes, and rules;

13 (8) The applicant shall agree to make available to the
14 department all records that the applicant may have
15 relating to the grant and allow state agencies to
16 monitor the applicant's compliance with the purpose of
17 this chapter;

18 (9) The applicant shall establish, to the satisfaction of
19 the department, that sufficient funds are available
20 for the completion of plans, design, and construction,
21 or equipment needed for the purpose for which the



1 grant is awarded; provided that the grant amount shall
2 be included among the calculation of sufficient funds;
3 and

4 (10) The applicant shall comply with other requirements or
5 conditions as the department or board may prescribe.

6 (e) Notwithstanding any provision to the contrary, there
7 is established in the department a special fund to be designated
8 as the dam and appurtenance improvement or removal grant program
9 special fund. The fund shall be administered by the department.
10 The following shall be deposited into the dam and appurtenance
11 improvement or removal grant program special fund:

- 12 (1) Appropriations by the legislature;
- 13 (2) Moneys derived from public or private sources to
14 benefit dam and appurtenance improvement or removal;
- 15 (3) Any other moneys collected pursuant to this section or
16 any rules adopted pursuant to this section; and
- 17 (4) Moneys derived from interest, dividends, or other
18 income from other sources.

19 (f) The department may expend moneys from the dam and
20 appurtenance improvement or removal grant program special fund
21 in accordance with this section and other purposes for the



1 administration of the dam and appurtenance improvement or
2 removal grant program under this section or any rule adopted
3 pursuant to this section, including but not limited to funding
4 for permanent or temporary positions.d'

5 SECTION 3. Act 134, Session Laws of Hawaii 2023, is
6 amended by amending section 4 to read as follows:

7 "SECTION 4. [~~There is appropriated out of the general~~
8 ~~revenues of the State of Hawaii the sum of \$10,000,000 or so~~
9 ~~much thereof as may be necessary for fiscal year 2023-2024 as~~
10 ~~one-time seed funding for the purposes of the dam and~~
11 ~~appurtenance improvement or removal grant program.d~~ Repealed."

12 SECTION 4. There is appropriated out of the general 92
13 revenues of the State of Hawaii the sum of ~~\$10,000,000~~ **\$5,000,000** or so
14 much thereof as may be necessary for fiscal year 2024-2025 to be
15 deposited into the dam and appurtenance improvement or removal
16 grant program special fund as seed funding for the purposes of
17 the dam and appurtenance improvement or removal grant program
18 established by section 179D-31, Hawaii Revised Statutes.

19 SECTION 5. There is appropriated out of the dam and
20 appurtenance improvement or removal grant program special fund
21 the sum of ~~\$10,000,000~~ **\$5,000,000** or so much thereof as may be necessary

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1 for fiscal year 2024-2025 for the dam and appurtenance
2 improvement or removal grant program established by section
3 179D-31, Hawaii Revised Statutes.

4 The sum appropriated shall be expended by the department of
5 land and natural resources for the purposes of this Act.

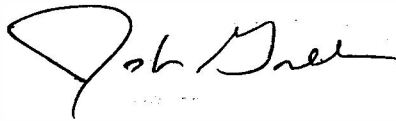
6 SECTION 6. Statutory material to be repealed is bracketed
7 and stricken. New statutory material is underscored.

8 SECTION 7. This Act shall take effect on July 1, 2024.



S.B. NO. 3153
S.D. 2
H.D. 1
C.D. 1

APPROVED this **9th** day of **July**, 2024

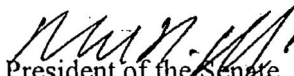
A handwritten signature in black ink, appearing to read "Josh Green". The signature is fluid and cursive, with a large initial "J" and "G".

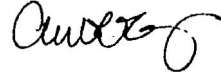
GOVERNOR OF THE STATE OF HAWAII

THE SENATE OF THE STATE OF HAWAII

Date: May 1, 2024
Honolulu, Hawai'i 96813

We hereby certify that the foregoing Bill this day passed Final Reading in the Senate of the Thirty-Second Legislature of the State of Hawai'i, Regular Session of 2024.


President of the Senate


Clerk of the Senate

SB No. 3153, SD 2, HD 1, CD 1

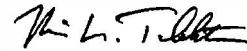
THE HOUSE OF REPRESENTATIVES OF THE STATE OF HAWAII

Date: May 1, 2024
Honolulu, Hawaii

We hereby certify that the above-referenced Bill on this day passed Final Reading in the House of Representatives of the Thirty-Second Legislature of the State of Hawaii, Regular Session of 2024.



Scott K. Saiki
Speaker
House of Representatives



Brian L. Takeshita
Chief Clerk
House of Representatives

EXHIBIT 3

Wailuku Water Reservoir 6, Island of Maui

Dam and Appurtenance Improvement or Removal Grant Application



February 2025

Submitted to:



Submitted by:

Waikapu Gardens Homeowners Association, Inc.

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I. APPLICANT AND PROJECT SUMMARY

A. Applicant information

i. Dam Owner

Waikapu Gardens Homeowners Association, Inc.

ii. Dam Name

Wailuku Water Reservoir 6

iii. Dam ID or State ID number

National Inventory of Dams ID: HI-00150; State ID: MA-0150

iv. Dam Owner residence information (e.g., does the owner reside at or directly adjacent to the TMK in which the dam is located)

Waikapu Gardens Homeowners Association, Inc. (Waikapu Gardens HOA) is located immediately adjacent to the TMK in which Wailuku Water Reservoir 6 is located [(2) 3-5-028:062].

B. Project Summary

i. Project type (improvement or removal, plans, design, equipment)

The project type is a dam/reservoir decommissioning. Wailuku Water Reservoir 6 is surrounded by an approximately 33-foot-tall, 1,150-foot-long earthen embankment dam. The dam is classified as a small, high hazard dam subject to regulation by the Department of Land and Natural Resources (DLNR). The reservoir is no longer utilized for water supply / irrigation, although it currently receives storm drainage inflows.

ii. Clear and succinct description of the goals of the project and the most important project details for which grant funds are to be used

The goal of the project is to reduce the risk of loss of life from the potential failure of the dam. The current dam failure inundation study from 2014 ranks Wailuku Water Reservoir 6 as the 3rd highest risk dam for the potential for loss of life in the State of Hawai'i.

The project will be completed in two phases. The first phase, which is the focus of this grant application, will consist of planning through preliminary design. A detailed hydrology and hydraulics (H&H) study will be completed to determine existing inflows to the reservoir site, including inflows from the storm drainage network. Some of these inflow pipes are currently unknown, with no documentation available. This H&H study will also consider decommissioning alternatives, in particular adding earthen fill to the reservoir to bring the volume down below the jurisdictional size. An alternative that accommodates the existing storm drainage system inflows to the reservoir will need to be considered. As part of this first phase, preliminary (15% level) design plans will be developed.

A future phase, which is not included in this grant application, will consist of detailed design, permitting, and construction.

iii. Steps applicant has taken or will be taking to implement the project

The Waikapu Gardens HOA has obtained a proposal for the detailed H&H study and preliminary design services from River Focus, Inc.

iv. Project alternatives considered

A Phase I Visual Inspection Report was completed by Kleinschmidt Associates in November 2022. This report suggested several dam improvements, such as spillway modification to pass the inflow design flood and meet freeboard requirements, a geotechnical study, and other tasks to bring the dam into compliance with the DLNR regulations. However, because the Waikapu Gardens HOA and local community do not intend to keep Wailuku Water Reservoir 6 as a jurisdictional dam/reservoir, this alternative was discarded.

v. Describe the target population to be served by the grant (i.e., population and infrastructure at risk)

A significant number of people who live makai of the dam are at risk were the dam to fail. The evacuation map based on a sunny day piping failure indicates that floodwaters would flow to the northeast, passing through Kahului to the ocean and even reaching the western edge of the Kahului Airport. 1,014 property parcels, 2 government facilities, 3 schools, and 16 miles of road would be impacted due to a breach. The estimated population at risk in 2016 was 4,563 people.

C. Certifications

i. Please submit a completed Declaration Statement of Applicants for Grants (see enclosed PDF file)

Please see Appendix A.

ii. If applicant is an entity other than an individual, § 179D-31(d)(4), HRS, requires submission of both:

- a) Articles of Incorporation and bylaws; and*
- b) DCCA Certificate of Good Standing (if applicant is an entity other than an individual).*

Please see Appendix A for the Waikapu Gardens Homeowners Association's Articles of Incorporation and Bylaws. The DCCA Certificate of Good Standing is provided below.

WAIKAPU GARDENS HOMEOWNERS ASSOCIATION, INC.
(215025D2)

[View complete BREG record](#)
[Purchase certificate of good standing](#)
[Sign up for reminders](#)

In good standing

Filing Year	Report due date	Date Received	Status	Action and next steps
2025	03/31/2025	01/10/2025	Processed	

• To learn more about the status of your report(s), please contact BREG 808-586-2727 breg@dcca.hawaii.gov

II. PROJECT NEEDS AND OUTCOMES

A. Project Needs Narrative

i. Describe the dam's current deficiencies and/or vulnerabilities that exist and how the proposed project is expected to specifically address the deficiency(s) or vulnerability(s) and bring the dam into compliance with current state dam safety regulations

Several dam deficiencies were identified in 2022 as part of the Kleinschmidt Associates Phase I Visual Inspection Report. These include the following:

- The current spillway cannot pass the design flood event, and the dam would overtop during the 24-hour probable maximum flood. Please note that this is based on an outdated analysis from 2014, which does not include the updated probable maximum precipitation determined by the Hawaii statewide study completed in 2023. The 2014 H&H analysis also did not account for all of the storm drainage inflows that flow into the reservoir.
- Freeboard requirements are not met.
- The spillway is not located in natural ground.
- Inspections are needed for items such as the outlet works and spillway conduits.
- The outlet works are pressurized through the embankment due to outlet control, which could lead to internal erosion of the embankment if leaking occurred.
- The capacity of the outlet works is unknown.
- It is unknown if the unused outlet works have been properly abandoned.
- A geotechnical study, including a stability analysis of the embankment, has not been conducted.
- There is no staff gage.

- The locations of utilities, storm drains and irrigation lines that run across the dam crest and downstream slope are unknown or not documented.
- Embankment slopes are steeper than 2.5H:1V.
- Maintenance of records such as the EAP, plans, O&M, etc. could be improved.

The proposed project will address these deficiencies by decommissioning the dam/reservoir.

B. Project Outcomes Narrative

i. List key project deliverables, and tasks necessary to furnish the deliverable

Key project deliverables will include a detailed hydrology and hydraulics study and preliminary (15% design level) plans. Necessary tasks for the study are included in the proposal attached in Appendix B.

ii. If the project is for plans or designs, please describe how the planning/design outcome will either

- a) Develop a capital improvement plan with an emphasis on ensuring structural stability and promoting dam longevity; or*
- b) Conduct feasibility studies, site assessments/investigations and preliminary designs related to dam rehabilitation or removal.*

The project will consist of conducting detailed background data collection; site assessment; hydrology and hydraulics study, including an evaluation of dam/reservoir decommissioning alternatives; and the preparation of preliminary design plans for the dam/reservoir decommissioning.

iii. If the project is for an improvement or removal construction, please describe how the construction outcome will either

- a) Reconstruct/rehabilitate the dam or appurtenance to comply with current state dam safety regulations and improving the Condition Assessment; or*
- b) Remove or modify the dam or appurtenance to reduce or eliminate risk and eliminate the Condition Assessment.*

Although construction is not included in this grant application, the ultimate goal of the project is to decommission the dam/reservoir to reduce or eliminate risk and eliminate the Condition Assessment. The construction related to the dam/reservoir decommissioning will be part of a future phase.

iv. Describe how the project will benefit nearby communities

The project will benefit the estimated over 4,500 people who live makai of the dam by developing a dam/reservoir decommissioning plan that will reduce the risk of loss of life should the dam fail.

- C. Describe the scope of work, tasks and responsibilities and how these will comply with all requirements of Dam Safety Standards in Ch. 179D, HRS and Ch. 13-190.1, HAR.

The scope of work, tasks, and responsibilities are provided in Appendix B. They were developed to comply with the requirements of Dam Safety Standards in Ch. 179D, HRS and Ch. 13-190.1, HAR.

- D. List the measure(s) of effectiveness that will be reported to the Department. The measure(s) will provide a standard and objective way for the State to assess the program's achievement or accomplishment.

The measures of effectiveness that will be reported to the DLNR for the Wailuku Water Reservoir 6 decommissioning and hydrologic and hydraulic analysis are:

1. **Reduction in Risk:** The assessment will determine the reduction in risks to areas makai of the current dam, specifically focusing on the potential for catastrophic flooding or other hazards.
2. **Inundation Extent:** The extent of flooding inundation makai of the dam will be evaluated before and after the implementation of preferred decommissioning alternative, with a focus on reducing the area affected by floodwaters.
3. **Loss of Life Reduction:** The analysis will measure the reduction in potential loss of life resulting from decommissioning alternatives, with a focus on mitigating the risk to human life in the event of dam failure or flooding.

These measures will provide an objective and quantifiable standard for evaluating the program's success in reducing the associated risks, potential flood damage, and loss of life in the areas affected by the dam.

III. BUDGET

A. Total Project Budget

- i. Enter total grant request and the total amount of other contributions (e.g., matching funds, federal funds requested, county funds requested, etc.)*

Total grant request: \$107,475

Other funds: None at this time

- ii. Include subtotals for each of the four broad categories for grant fund uses: (plans, design, construction, and equipment)*

Planning: \$92,099

Design: \$15,376

Construction: \$0

Equipment: \$0

B. Budget by Deliverable & Tasks

- i. *Provide a breakdown of grant funds requested for each proposed task within a deliverable*
 - a) *Estimated costs for labor, equipment, materials, supplies, overhead and contractors' and consultants' profit margins with supporting background and summary sheets as may be requested by the Department to substantiate the estimate of unit costs.*

Appendix B provides a breakdown of tasks and grant funds.

- ii. *Provide a subtotal of each deliverable*

The scope of work in Appendix B provides a breakdown of each deliverable.

C. Proof of Funds Requirement

- i. *Please provide a brief narrative describing the reason why the applicant cannot complete the project without grant funds?*

The Wailuku Gardens HOA has limited reserves (see Reserve Study in Appendix A) and does not have the financial ability to complete this project without grant funds.

- ii. *Pursuant to 179D-31(d)(9), HRS, the applicant shall establish, to the satisfaction of the Department, that sufficient funds are available for the completion of plans, design, and construction, or equipment needed for the purpose for which the grant is awarded; provided that the grant amount shall be included among the calculation of sufficient funds*

The Wailuku Gardens HOA will have the funds to complete the proposed H&H study and conceptual design plans when the grant amount is taken into account.

IV. PROJECT TEAM AND WORK PLAN

A. Project Team

- i. *If known, please list key project team members, including team members from partner organizations, engineering consultant(s) and subcontractor(s) that will be paid for by the grant, and identify their affiliation, role in the project, and relevant expertise and qualifications.*
 - a) *List only those project team members that will be involved in carrying out project tasks and will receive a portion of the grant funds requested.*

Waikapu Gardens Homeowners Association

Key project team members will include the Waikapu Gardens HOA Board members. Current board members are listed below:

- Matthew Sturm, President
- Ginger Lucy, Vice President
- Marina Dunn, Secretary/Treasurer

- Glenn Adolpho, Board Member
- Wendall DeVera, Board Member

In addition, Jason Seidman, P.E., a professional engineer and Waikapu Gardens resident, will act as a non-paid/voluntary liaison between the HOA and the engineering consultant team.

River Focus, Inc.

The Waikapu Gardens HOA previously requested that River Focus, Inc., prepare a cost proposal to perform the hydrology and hydraulics study. River Focus is a small business firm specializing in water resources engineering that has studied over 120 streams, rivers, gulches, and channels in Maui County, and many more throughout the state.

For DLNR, River Focus performed a comprehensive hydrologic, hydraulic, and geomorphic study of Īao Stream and Kīnihāpai Stream as part of the Īao Valley State Monument, as part of the Wilson Okamoto Corporation team.

The River Focus team includes highly qualified and experienced engineers and hydrologists who have studied countless Hawaiian watersheds, and have worked on multiple dam decommissioning, dam breach, and hydrologic and hydraulic analyses related to design inflow and spillway adequacy. River Focus is currently performing a hydrology and hydraulics study for the Hawai'i Commercial and Sugar Company (HC&S) Reservoir 20 dam decommissioning project on the island of Maui.

The River Focus team will include:

A. Jake Gusman, P.E., BC.WRE

River Focus PM / Senior Hydraulic Engineer

Jake Gusman is Professional Civil Engineer and Board-Certified Water Resources Engineer with over 26 years of water resources engineering experience. He specializes in 1-D and 2-D hydraulic modeling, hydrology, floodplain studies, bridge scour analysis and countermeasures, FEMA map revisions, streambank protection, fluvial geomorphology, and fish passage. Jake has worked on projects in Hawai'i for over 20 years, and is currently leading the hydrology, hydraulics, and scour evaluations for 110 State and County-owned bridges on the islands of Maui and Moloka'i. He is also serving as Project Manager for the HC&S Reservoir 20 dam decommissioning project.

Darren Bertrand, CFM

Senior Hydraulic Modeler

Darren Bertrand is a Certified Floodplain Manager and senior hydraulic modeler with over 20 years of experience in hydrologic modeling, hydraulic modeling, 2-D floodplain studies, FEMA map revisions, streambank protection, and dam breach modeling. For the US Army Corps of Engineers, Darren performed dam breach modeling and inundation mapping for the Mojave River Dam as well as rainfall-runoff modeling to route the Probable Maximum Flood (PMF) through a series of

dams/reservoirs to determine the maximum pool elevation and minimum freeboard at each location. On the island of Kaua'i, Mr. Bertrand performed post-processing of HEC-RAS output data for Aepo Dam/Reservoir and created flood inundation maps and flood wave timing for numerous dam break scenarios. He recently oversaw the hydrology and hydraulic modeling for the HC&S Reservoir 20 on the island of Maui.

Evie Croft, EIT
Water Resources Engineer

Evie Croft is a water resources engineer with over 9 years of experience in stormwater design, including 1-D and 2-D hydraulic modeling, hydrologic analysis, and 1-D floodplain studies. She has worked with clients on a wide range of projects including commercial and residential developments in rural and urban settings, floodplain mapping, FEMA map revisions, grading, landfill design, groundwater availability analysis, water quality analysis, and environmental assessment and monitoring. Evie recently worked on a drainage analysis and storm drain modeling for a development project in Lahaina.

Sebastian Ferraro, EIT
Hydraulic Engineer

Sebastian Ferraro is a hydraulic engineer with over 5 years of experience in hydrologic modeling, hydraulic modeling, 2-D floodplain studies, and dam safety related H&H studies. He has worked on over 10 H&H modeling projects and 5 dam decommissioning design projects in Hawai'i. Sebastian worked on the Kaupakalua Dam Decommissioning Design Project, developing H&H models to simulate the pre- and post-dam removal flood conditions to inform the dam decommissioning design. For HC&S Reservoir 20, Sebastian developed H&H models, which were used to quantify the impacts of dam decommissioning. Sebastian also worked for various private dam owners during his 4 years as a hydropower consultant, performing dam breach modeling and inundation mapping, rainfall-runoff modeling, PMF determination, dam hazard classification, dam decommissioning design, and hydraulic design of spillways, penstocks, and fish bypass structures.

ii. *If known, please include the licensed contractor/engineer/architect:*

- a) *Hawaii license number; and*
- b) *Bonding/insurance information or certification that project-specific bonding will be obtained.*

a) Jake Gusman, P.E.: HI #10801-C (Professional Civil Engineer)

b) Insurance information for River Focus is provided in Appendix C.

iii. *Please provide a brief description of the facilities and equipment on-hand or necessary to complete the work*

For the current project phase, facilities and equipment are not required.

- iv. If the applicant is an entity other than an individual, please provide an organization chart*

A list of the Waikapu Gardens HOA board members and contact information is provided in Appendix A.

B. Work Plan

- i. Please provide a project schedule with estimated timeframes for completion.*
- a) Please sequentially organize key project deliverables;*
 - b) All tasks should be listed as separate and distinct items as such: Task #, Title, Description, Timeframe.*

A project schedule is provided in Appendix D.

- ii. As it may apply, please include a schedule for:*
- a) Quarterly project status reports and a final project report;*
 - b) Project meetings (kick-off, mid-level, and wrap-up meetings with key stakeholders and a representative from DLNR);*
 - c) Obtaining necessary permits; and*
 - d) Attending trainings or qualifications necessary to prosecute the work.*

The Waikapu Gardens HOA, along with River Focus, will be available for meetings as needed with the DLNR. Suggested meetings are provided in the project schedule in Appendix D and accompany the submittal of key deliverables.

V. OTHER

A. Litigation

- i. The applicant shall disclose any pending litigation to which they are a party, including the disclosure of any outstanding judgment. If applicable, please explain.*

A litigation disclosure letter for Waikapu Gardens HOA is provided in Appendix A.

APPENDIX A

Waikapu Gardens Homeowners Association Documentation

Signed Declaration Statement

**DECLARATION STATEMENT OF
APPLICANTS FOR GRANTS PURSUANT TO
CHAPTER 42F, HAWAII REVISIED STATUTES**


The undersigned authorized representative of the applicant certifies the following:

- 1) The applicant meets and will comply with all of the following standards for the award of grants pursuant to Section 42F-103, Hawaii Revised Statutes:
 - a) Is licensed or accredited, in accordance with federal, state, or county statutes, rules, or ordinances, to conduct the activities or provide the services for which a grant is awarded;
 - b) Complies with all applicable federal and state laws prohibiting discrimination against any person on the basis of race, color, national origin, religion, creed, sex, age, sexual orientation, or disability;
 - c) Agrees not to use state funds for entertainment or lobbying activities; and
 - d) Allows the state agency to which funds for the grant were appropriated for expenditure, legislative committees and their staff, and the auditor full access to their records, reports, files, and other related documents and information for purposes of monitoring, measuring the effectiveness, and ensuring the proper expenditure of the grant.
- 2) If the applicant is an organization, the applicant meets the following requirements pursuant to Section 42F-103, Hawaii Revised Statutes:
 - a) Is incorporated under the laws of the State; and
 - b) Has bylaws or policies that describe the manner in which the activities or services for which a grant is awarded shall be conducted or provided; and
- 3) If the applicant is a non-profit organization, it meets the following requirements pursuant to Section 42F-103, Hawaii Revised Statutes:
 - a) Is determined and designated to be a non-profit organization by the Internal Revenue Service; and
 - b) Has a governing board whose members have no material conflict of interest and serve without compensation.
- 4) The use of grant-in-aid funding complies with all provisions of the Constitution of the State of Hawaii (for example, pursuant to Article X, section 1, of the Constitution, the State cannot provide "... public funds ... for the support or benefit of any sectarian or nonsectarian private educational institution...").

Pursuant to Section 42F-103, Hawaii Revised Statutes, for grants used for the acquisition of land, when the organization discontinues the activities or services on the land acquired for which the grant was awarded and disposes of the land in fee simple or by lease, the organization shall negotiate with the expending agency for a lump sum or installment repayment to the State of the amount of the grant used for the acquisition of the land.

Further, the undersigned authorized representative certifies that this statement is true and correct to the best of the applicant's knowledge.

Waikapu Gardens HOA
(Typed Name of Individual or Organization)


(Signature)

2-26-2025
(Date)

Matthew Cameron Sturm President
(Typed Name) (Title)

Wailuku Water Reservoir 6 – Grant Application

Proposed Project Schedule

The following schedule is proposed.

Scheduled Item	Task Duration (Weeks)	Project Week
Grant award announced	--	--
River Focus receives Notice to Proceed	--	1
Project Kickoff Meeting	--	2
Data collection complete	3	5
Hydrologic and existing hydraulic modeling complete	7	12
Check-in Meeting #1 Discuss hydrologic and existing hydraulic modeling results Begin discussion on decommissioning alternatives	--	13
Hydraulic modeling of proposed decommissioning alternatives complete	5	18
Check-in Meeting #2 Discuss decommissioning alternatives	--	19
Conceptual Plans presented to HOA and DLNR	4	23
Draft Study Report presented to HOA and DLNR	4	27
Check-in Meeting #3 Discuss Study Report Select preferred alternative	--	29
Final Study Report presented to HOA and DLNR	3	32

Note: Additional check-in meetings will be scheduled, as needed.

Project Name: Wailuku Reservoir No. 6 Dam Decommissioning: from 54 acre-ft to 15 acre-ft
Location: Waikapu, Maui, Hawaii

**Estimate of Preliminary
Study Costs = \$500,000
(\$15,000 contingency)**

SPEC SECTION	MATERIAL NO.	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	AMOUNT	Revised 4/30/2025 (email from Jake Gusman)	
		Recon Level Survey for Historical Preservation	Lump Sum		1	\$ 10,000	Value suggested by DLNR.	
		Surveying and Site Investigations	Lump Sum		1	\$ 100,000		
		Geotechnical Investigation	Lump Sum		1	\$ 150,000	If borehole rig is needed.	
		Hydrologic and Hydraulic Study; Alternatives Analysis; Drainage Design	Lump Sum		1	\$ 225,000	RF initial H&H cost estimate plus additional analysis during detailed design phase.	
		Planning Services Contingency	Lump Sum		1	\$ 15,000	Contingency discussed in verbally	
		Detailed Design Services	Lump Sum		1	\$ 700,000		
A&E DESIGN SERVICES SUBTOTAL							\$ 1,200,000	
201	(D)	Clearing	Acre	\$ 12,500	6.3	\$ 78,750	Unit price provided from Goodfellow Bros. Could be removed or reduced if basin material does not need to be fully removed.	
201	(E)	Grubbing	Acre	\$ 3,500	0.9	\$ 3,150	Assumed that grubbing will take place on inside slope of embankments.	
203	(A)	Excavation for Embankment - Outlet embankment (reuse material)	Lump Sum	\$ -	0	\$ 20,000	Minimal excavation and material can be reused.	
655		Capping/Removal of old inlet structures	Lump Sum			\$ 60,000		
617		Select Fill Import and Placement 1.7 TON/CY	TON	\$ 34	106,964	\$ 3,636,776	Unit price provided from Goodfellow Bros.	
699	(A)	Planting Soil - Imported Topsoil and Placement 1.7 TON/CY	TON	\$ 56	5,760	\$ 322,560	Unit price provided from Goodfellow Bros.	
209		Hydro-mulch Seeding	Acre	\$ 15,000	6.3	\$ 94,500	Unit price provided from Goodfellow Bros.	
209		Temporary Water Pollution, Dust, and Erosion Control - Silt fence	LF	\$ 15	2,400	\$ 36,000	Unit price provided from Goodfellow Bros. Assumed around the full LOD perimeter.	
699	(A)	Temporary Water Pollution, Dust, and Erosion Control - Dust fence	LF	\$ 110	1,200	\$ 132,000	Unit price provided from Goodfellow Bros. Assumed only where homes are in close proximity.	
		Mobilization (& Demobilization)	Lump Sum			\$ 200,000	*HI DOT suggests 10% of the construction cost. Current value is below 10%.	
		Construction Surveying	Lump Sum			\$ 100,000	Accounts for survey services needed at pre-construction, at key design milestones, and for close out.	
		Construction Oversight/Inspector	Lump Sum			\$ 150,000	Assumed a construction length of 5 months at \$30,000 per month for all staff members involved in oversight.	
		Geotechnical Engineering Services	Lump Sum			\$ 80,000	This value is for construction services and nuclear density gauge/electric gauge testing.	
		As-Builts	Lump Sum			\$ 20,000		
CONSTRUCTION SUBTOTAL							\$ 4,933,736	
		Environmental Impact Assessment or SEPA	Lump Sum		1	\$ 150,000	Value suggested by DLNR.	
		Section 404- NWP #3 or #27	Lump Sum		1	\$ 50,000	If no modifications are completed at the spillway and channel is not deemed	
		County Grading permit	Lump Sum			\$ 30,000	*This value can likely be reduced. The County of Maui said they do not typically have multiple revisions on these permits.	
		Dam Safety Permit	Lump Sum			\$ 98,675	Suggested at 2% of construction cost.	
PERMITTING SUBTOTAL:							\$ 328,675	
						PROJECT SUBTOTAL:	\$ 6,462,411	
						CONTINGENCY @ 25%:	\$ 1,615,603	
						PROJECT TOTAL:	\$ 8,078,013	

EXHIBIT 4

Dam and Appurtenance Improvement or Removal Grant Application

Please see responses below in Times New Roman (Bold)

I. Applicant and Project Summary

a. Applicant information

- i. Dam Owner: **Waiakalua Wildlife Preserve Association (WWPA)**
- ii. Dam Name: **Waiakalua**
- iii. Dam ID or State ID number: **KA-0010**
- iv. Dam Owner residence information (e.g., does the owner reside at or directly adjacent to the TMK in which the dam is located): **Yes, the majority of the dam owners reside at or are directly adjacent to the TMKs being affected by the Dam and Appurtenance improvements.**

b. Project Summary

- i. Project type (improvement or removal, plans, design, equipment): **Dam and Appurtenances Improvement Project**
- ii. Clear and succinct description of the goals of the project and the most important project details for which grant funds are to be used: **The goals of the Waiakalua Dam Improvements Project are to address all DLNR identified deficiencies, the most important of which will be following design plans for rehabilitation of the existing spillway to meet current PMF conditions per H&H report, reshaping embankment slopes to 2.5:1 for suitable scour and erosion control, installing toe drain at seepage area, with proper filter material and seepage flow measuring device, inspection of outlet and extension of existing tunnel wall, if necessary, removal of all trees on embankment and backfill of root ball void according to geotechnical report, and the modification and armoring of existing downstream conveyance and toe.**
- iii. Steps applicant has taken or will be taking to implement the project: **The following steps have been taken to implement the project:**
 - A. **Hired ENV Consulting / Planning & Permitting Manager (e.g. 5Ks ENV – Island Resource Solutions LLC [Karl Bromwell] to Manage and Coordinate Process from beginning to end and work with DLNR, subconsultants and selected construction contractor and manage dam improvements**
 - B. **Civil Engineer studies (H&H report, and alternative design plans with new topographic data)**
 - C. **Geotechnical Engineering studies (Slope stability and seepage analysis, additional borings, and geotechnical report summary with recommendations**

- D. **New (2024) topographic study was provided to assist with current conditions and provide additional design plan and PMF accuracy**
 - E. **Draft Civil and Geotechnical Plans have been submitted to DLNR for review and comment**
 - F. **Visual Monitoring of the Seepage Area has been on-going**
 - G. **Vegetation has been cleared and maintained on a quarterly basis**
 - H. **A working draft O&M Plan has been prepared and the EAP updated, both of which will be revised as conditions change.**
 - I. **Milestone Nos. 1 and 2 have been met per DLNR Item L-1 Schedule, December 8, 2023.**
 - J. **Bids for Construction Contractor are being solicited and reviewed for Milestone 3 Dam Safety Permit Submission on July 1, 2025, or earlier.**
- iv. **Project alternatives considered: The Waiakalua Owners were provided four (4) alternatives for review: Option 1 (285-foot max water surface elevation) provided an improvement design scenario of the existing spillway (only location a spillway could be configured to meet the PMF at 285-foot max water level), and dam structure to have the highest water level allowed, and remain a permitted dam, Option 2 and 3 provided alternative designs for the spillway in new locations that would be a reduction in dam size (unpermitted options) to below 50 ac feet (276.7 foot max water surface elevation at Primary Embankment), and lastly Option 4, a Dam Removal scenario was provided. Costs were provided for all, and the owners were directed to vote on the preferred design. Option 1, to remain a regulated dam was selected, 5 votes to 3.**
- v. **Describe the target population to be served by the grant (i.e., population and infrastructure at risk): The grant will serve the tax payers of the Kilauea District, an unincorporated CDP with a population of over 3,000, by providing an enhanced level of dam safety with more conservative PMF contingencies to further protect downstream State, County of Kauai (CoK), infrastructure (State DOT Kuhio Hwy and bridge,) and private resources. Additionally, the grants matching money's will provide improved 21st century structural materials with more conservative safety measures. The dam will continue to act discharges for the benefit of State nearshore marine waters, enhancing visual/scenic resources and recreational resources, while improving environmental conditions to freshwater stream and marine flora and fauna species, including benthic coral communities.**
- c. **Certifications**

- i. Please submit a completed Declaration Statement of Applicants for Grants (see enclosed PDF file). **See No. ii**
- ii. If applicant is an entity other than an individual, § 179D-31(d)(4), HRS, requires submission of both: **Both A. and B. below have been provided as Attachment A.**
 - A. Articles of Incorporation and bylaws; and
 - B. DCCA Certificate of Good Standing (if applicant is an entity other than an individual).

II. Project Needs and Outcomes

- a. Project Needs Narrative
 - i. Describe the dam's current deficiencies and/or vulnerabilities that exist and how the proposed project is expected to specifically address the deficiency(s) or vulnerability(s) and bring the dam into compliance with current state dam safety regulations: **The following priority safety issues and major deficiencies (based on last inspection) will be addressed by matching grant funds for the dam improvements project bringing the dam into compliance in the following manner:**
 - **Seepage at Toe – currently the seepage area at the toe is being visually monitored and reported. The project will address the steep embankment slopes in this area (and others) relaxing to a 2.5:1 sloping and install a toe dam with proper filter material and installation of a robust seepage measuring device meeting DLNR approved specifications.**
 - **Spillway Improvements – Assessments have been performed with the H&H, and the grant will assist with badly needed repair of the existing spillway, toe and stream discharge armoring in that area, as needed.**
 - **All Embankment Slopes will all be graded to 2.5:1, for improved scour and erosion protection.**
 - **Outlet works and tunnel condition will be fully assessed and extended per final plans and DLNR approval, along with staff gage surveying to key elevation features.**
 - **Tree removal and root ball void backfilling per geotechnical recommendations.**
 - **Project Management and Inspections of Licensed Construction Contractor following design plans by Professional Engineers and Permitting & Planning Professionals, per HAR 13-190.1-31.**
- b. Project Outcomes Narrative
 - i. List key project deliverables, and tasks necessary to furnish the deliverable: **At this stage of the Waiakalua Project our Project Deliverables include meeting DLNR L-1 Scheduled Deliverables, which will**

address DLNR's draft response to comments on the geotechnical and H&H reports, finalizing these documents for approval for construction contractor bidding, DLNR DS Permit Submission (Milestone 3), and COK grading permit application (Milestone 4), and construction contractor management, deliverable plans and inspections (Milestone 5).

- ii. If the project is for plans or designs, please describe how the planning/design outcome will either: **See iii A below.**
 - A. Develop a capital improvement plan with an emphasis on ensuring structural stability and promoting dam longevity; or
 - B. Conduct feasibility studies, site assessments/investigations and preliminary designs related to dam rehabilitation or removal.

With regards to ii. A. The project plans and designs have already met components of the Waiakalua Dam Improvements Program or Capital Improvements Project (CIP) (or similar plan), being prepared by 5Ks ENV, in identifying alternatives, evaluating the feasibility and impact, and prioritizing projects based on priority safety and major deficiency issues and from a community needs and fund allocation standpoint. The CIP or similar plan will also summarize and describe

- **Estimated overall cost and timeline of the dam improvements project determining that phasing will NOT be necessary**
 - **Estimated O&M cost for the long-term**
 - **Total revenues, if any, from establishment of the WWPA**
 - **Funding sources, and support for higher management, operations, consulting engineers and strategic stakeholders, and developing and fostering a collaborative environment amongst dam owners for discussing long-term goals and priorities.**
 - **Development of a Quality Assurance Project Plan (QAPP) within the Construction Management Plan (CMP) identifying multiple milestone engineering inspections for quality control and attention to design specifications, ensuring the use of quality materials and workmanship for enduring structural stability with ease of facility maintenance per Har 13-190.1-30(2).**
- iii. If the project is for an improvement or removal construction, please describe how the construction outcome will either:
 - A. Reconstruct/rehabilitate the dam or appurtenance to comply with current state dam safety regulations and improving the Condition Assessment; or
 - B. Remove or modify the dam or appurtenance to reduce or eliminate risk and eliminate the Condition Assessment.

With regards to iii A. Reconstruct/Rehabilitate the Waiakalua Dam, the project has completed civil and geotechnical studies and provided plans that address safety and deficiency issues identified

that will comply with current State of Hawaii dam safety regulations, HRS Chapter 179D, and HAR Chapter 190.1.

The project will meet these criteria, as discussed under II. Project Needs and Outcomes, a. i., by following approved planning and design documents by providing: Spillway Improvements, along with downstream toe and receiving water armoring; Grading all embankment slopes to a 2.5:1, Toe Dam installation with filter material and seepage measuring device; Outlet works and tunnel condition will be fully assessed, along with staff gage surveying to key elevation features; and Embankment Tree Removal will continue with root ball backfilling per geotechnical recommendations.

Inspections of Licensed Construction Contractor by Professional Engineers and Permitting & Planning Professionals, per HAR Section 13-190.1-(30)-(32) showing adherence to design plans specifications will be performed per QAPP, which will be imbedded within the Construction Management Plan per HAR 13-190.1-31(A)-(L)

- iv. Describe how the project will benefit nearby communities: The project will provide a level of dam safety with revised probable maximum flood (PMF) condition contingencies to protect the dam infrastructure, and the downstream state and private resources. Additionally, the project will be designed with improved 21st century structural materials and more conservative safety measures. The dam will also, continue to act as a sediment basin, providing improve water quality to receiving waters, including freshwater stream and marine coastal waters, that will not only benefit communities with enhance visual and recreational resources, but improve conditions for local wildlife.**
- c. Describe the scope of work, tasks and responsibilities and how these will comply with all requirements of Dam Safety Standards in Ch. 179D, HRS and Ch. 13-190.1, HAR.**

Table 1 identifies the relationship between the Scope of Work (SOW) for this Waiakalua Dam Improvements Project, the Associated Tasks and Responsibilities that identify how they meet the respective requirements of Dam Safety Standards. The SOW addresses all identified safety and deficiency issues at the Dam, of which may include, but are not limited to, those identified in Table 1 below.

Table 1: Scope of Work and Tasks and Responsibilities and Applicable Statutes and Rules

SOW	Tasks	Responsibilities	Compliance
Dam Safety Permit Application	Prepare DS Permit Application	5Ks ENV with Engineering Support	HAR 13-190.1-23
Dam Safety In general address all safety and deficiency Issues Identified during Dam Repair	Design Construction Operation Maintenance Inspection of Dams Repair Appurtenant works	Engineering Consultants Construction Contractor Owners Owners Owners / DLNR Owners Owners	1790-D-6(b)(1) established by rules adopted under Chapter 91 governs the protection of life and property from structural failure of dams and reservoirs
Regular Maintenance so DLNR can Inspect	Vegetation Outlet Works Establish Rules Investigations Maintain Access	Owners Owners DLNR DLNR Owner	179-D-6 Powers of BLNR (1)-(23) 179D-30(4)
Structural Stability of the Dam	H&H Report Geotechnical Report Slope Stability/Seepage Analysis Cert. Approval to Impound Water	Owners	HRS 179D-21, -27 HAR 13-190.1-(11)-(16)
Address General Req. and Responsibilities	O&M Plan EAP Cooperate with DLNR Furnish Plans, O&M Data,	Owner (Consultant) Owner (Consultant) Owner Owner (Consultant)	179D-30(1)-(5), HAR 13-190.1-40, 40.1 (O&M Plan), 41.1 (EAP)
Construction - Repair to Remain DLNR Permitted Structure	Design Plans Supervise Repair General Construction Supervision and Inspection Construction QAP submitted 30 days prior to	Design Engineers Design Engineers Construction Engineer Construction Contractor and 5Ks ENV	HRS 179D-28(a)(b) HAR 13-190.1-20 HAR 13-190.1-22 HAR 13-190.1-(30)-(32) HAR 13-190.1-30(2)
Construction Certification	Construction Dam Repair Completion Completion Documents Dam Filling Report Acceptance of Construction	Design Engineer Design Engineer, Appointed Consultant Consultant / Engineer DLNR	HAR 13-190.1-31(1) HAR 13-190.1-31(2)(A)-(L) HAR 13-190.1-31(4) HAR 13-190.1-31(3)

- d. List the measure(s) of effectiveness that will be reported to the Department. The measure(s) will provide a standard and objective way for the State to assess the program's achievement or accomplishment. **The following measures of effectiveness will be reported to DLNR Dam Safety to provide a standard and objective way to assess that the Waiakalua Dam Improvements Project was a success:**

The owners will not only revise and update the O&M Plan and EAP on a regular basis and/or as conditions change, but will develop their own Safety Program, so each owner is intimately aware of the natural and technical hazards that threaten their dam and understand how human interaction can impact the dam and lead to structural failure. Elements of these planning documents, which also include measures of effectiveness include:

- **Inspections and Guidelines/Checklist to follow**
- **Instrument Monitoring (level gage, seepage, etc.) and Guidelines**
- **Maintenance Activities and Guidelines**
- **Operation Guidelines**
- **Emergency Action Plan Guidelines**

5Ks ENV and other engineering consultants, as necessary, will provide and update these documents and provide a Power Point Training at the end of the project and periodically during inspection to stress the importance that all the owners need to have a collective knowledge of their dam, how it works, and that on-site representation is important at all times, even with automated monitoring devices.

III. **Budget**¹

- a. Total Project Budget
- i. Enter total grant request and the total amount of other contributions (e.g., matching funds, federal funds requested, county funds requested, etc.): **The Waiakalua Dam Owners respectfully request \$750,000 dollars in grant funding that will be matched by the WWPA board members, and other residents, until the newly formed association can build their improvements reserve by collecting monthly dues, and show these available funds before 2026 construction start date.**
 - ii. Include subtotals for each of the four broad categories for grant fund uses: (plans, design, construction, and equipment). **The estimated subtotals for the**

¹ Note that if any part of this section of the application cannot be quantified at this time, the Department shall require the applicant to notify the Department in advance of application submission and describe why it cannot be completed at this time as well as how this section will be completed upon award and in what timeframe it will be completed. If the Department deems the reason(s) why this section cannot be completed to be valid, the applicant shall complete this section upon an award and the Board will incorporate such information into any grant award agreement prior to the disbursement of funds.

general categories are as follows: Plans (\$400K), Design (\$150K), Construction (\$1.14MD), and Equipment (\$400K)

b. Budget by Deliverable & Tasks

i. Provide a breakdown of grant funds requested for each proposed task within a deliverable. **NOTE: The Waiakalua Owners are only requesting grant funding to support the project construction. The planning and design portion of the project are 95% complete and the project will be “shovel-ready” as dictated by DLNR’s milestone schedule.**

A. Estimated costs for labor, equipment, materials, supplies, overhead and contractors' and consultants' profit margins with supporting background and summary sheets as may be requested by the Department to substantiate the estimate of unit costs. **The estimated breakdown for the construction project alone is as follows:**

- **Labor (450,000)**
- **Equipment (400,000)**
- **Materials (250,000)**
- **Supplies (200,000)**
- **Overhead (10%) or ~120,000**
- **Profit Margin (10%) ~120,000**

Supporting spreadsheets provided upon request, construction contractor has finalized his cost.

ii. Provide a subtotal of each deliverable. **To Be Provided After Construction Contractor Selection, on or about March 21, 2025.**

c. Proof of Funds Requirement I.

i. Please provide a brief narrative describing the reason why the applicant cannot complete the project without grant funds? **The Waiakalua Owner have had some difficulty agreeing with the path forward in the past, but have recently established a more united front, and established an HOAO with a majority of the owners. Every owner, but one is a senior citizen with Medicare benefits. Ms. Harter, who just transferred ownership of the reserve to the six members of the HOAO is 87 years old, widowed and still working. There is a discrepancy of “wealth” and available funds with several of the owners. The project is a financial hardship to all involved, but we are fully committed to restring the reservoir as per DLNR Requirements. A matching grant of \$750,000 will go a long way in uniting this community and fostering a collaborative foundation for the Waiakalua Dam Owners toward managing their facility in a knowledgeable and safe way for generations to come.**

ii. Pursuant to 179D-31(d)(9), HRS, the applicant shall establish, to the satisfaction of the Department, that sufficient funds are available for the completion of plans, design, and construction, or equipment needed for the purpose for which the grant is awarded; provided that the grant amount shall be included among the

calculation of sufficient funds. **Please see Attachment B for screen shots of four (4) Association members account information, totaling \$800,000 matching funds. The matching funds will be utilized for construction associated activities only, benefitting all dam owners. After accelerated dues collection, that all owners can handle without financial hardship, the dam funds will eventually be shown in three (3) separate HOAO Accounts for: (1) Dam Improvements Reserve, (2) Dam O&M Reserve, and (3) DLNR Annual Fee Reserve.**

IV. Project Team and Work Plan¹

a. Project Team

i. If known, please list key project team members, including team members from partner organizations, engineering consultant(s) and subcontractor(s) that will be paid for by the grant, and identify their affiliation, role in the project, and relevant expertise and qualifications.

A. List only those project team members that will be involved in carrying out project tasks and will receive a portion of the grant funds requested.

Project Team:

- **Project Manager/Permit & Planning Specialist and Overall Point of Contact for Dam Improvements Construction (5Ks ENV [Karl Bromwell]), 35 Years as an Environmental Consultant in Managing 100's of Projects in Hawaii, including construction and dam restoration projects for DHHL and ADC and KAA on Kauai. Resume provided upon request.**
- **Construction Contractor (TBD) however top of list currently is (Rick Hurst Excavation), Owner, Christopher Byram – Superintendent and Garet Yardley – Forman. Over 30 years working on the north shore of Kauai completing permitting and grading project for state, federal, and NGO's with similar scope, including portions of the Kalihiwai Dam Decommissioning project and Waiakalua Dam head wall, siphons and gate station, showing their capability in reservoir infrastructure projects.**
- **Civil Engineer/Inspections/Consultation (Dempsey Pacific). Licensed Engineer in Hawaii with 25 years' experience. Resume Provided upon request.**
- **Geotechnical Engineer/Inspections/Consultation (Kokua Geotech). License geotechnical engineer in the State of Hawaii, with 25 years' experience. Resume provided upon request.**

ii. If known, please include the licensed contractor/engineer/architect:

A. Hawaii license number; (C-21718) and

- B. Bonding/insurance information or certification that project-specific bonding will be obtained. **I hereby Certify as Project Manager for the Waiakalua Dam Improvements Program, that Bonding/Insurance will be obtained for the work to be performed by the Construction Contractor, most likely Project Rick Hurst Excavation, who is working on this currently.**

Certification

Karl B. Bromwell, MPH,

Digitally signed by Karl B. Bromwell,
MPH,
Date: 2025.02.28 15:59:44 -10'00'

Name: Karl B. Bromwell, President

Company: 5Ks ENV – Island Resource Solutions LLC

Project Position: Project Manager representing Waiakalua Dam Owners

Please provide a brief description of the facilities and equipment on-hand or necessary to complete the work. **Rick Hurst Excavation has a construction yard in Kilauea with the following equipment to be used on the project: a). Case 210 excavator; b). Cat 299 track loader; c). (2) Peterbilt tandems; d). Ford l8000 single axle dump; e). Kenworth t300 single axle dump; f). Peterbilt tractor trailer; g). Cat d5 dozer; and f). Hamm 3410 padfoot roller.**

A staging/storage area will be developed on-site with office and bathroom facilities for construction foreman and management and inspection team. The site will need rock laydown for the trucks as well as a laydown yard (approximately 77 CY). Portable bathrooms will also be present. The Work Plan will describe these facilities and breakdown scope of work as described in b. Work Plan below.

- iii. If the applicant is an entity other than an individual, please provide an organization chart. **Please see Section 6.3 Directors and Officers, Articles of Incorporation attached.**
- b. **Work Plan The Work Plan, including detailed project schedule (prepared in MS Excel or MS Project) for construction work, will be prepared by the Construction Contractor when selection has been made, with support by 5Ks ENV. The following information, including attached MS PPT Schedule has been provided, based on previous projects similar in scope to this Dam Improvements Project, for general project deliverables and timeline purposes.**

- i. Please provide a project schedule with estimated timeframes for completion. **See Attachment C.**
 - A. Please sequentially organize key project deliverables.
 - B. All tasks should be listed as separate and distinct items as such: Task #, Title, Description, Timeframe.
- ii. As it may apply, please include a schedule for:
 - A. Quarterly project status reports and a final project report.
 - B. Project meetings (kick-off, mid-level, and wrap-up meetings with key stakeholders and a representative from DLNR);
 - C. Obtaining necessary permits; and
 - D. Attending trainings or qualifications necessary to prosecute the work.

V. Other

- a. Litigation
 - i. The applicant shall disclose any pending litigation to which they are a party, including the disclosure of any outstanding judgment. If applicable, please explain: **None**

Attachments:

A: HOAO Waiakalua Wildlife Preserve Association (WWPA) Articles of Incorporation and Bylaws; Signed Declaration Statement by President of Association; and DCCA Certificate of Good Standing

B: Proof of Matching Funds

C: Schedule

Attachment A

HOAO Waiakalua Wildlife Preserve Association (WWPA) Articles of Incorporation and Bylaws , Signed Declaration Statement by President of Association and DCCA Certificate of Good Standing

**DECLARATION STATEMENT OF
APPLICANTS FOR GRANTS PURSUANT TO
CHAPTER 179D, HAWAII REVISIED
STATUTES**

The undersigned authorized representative of the applicant certifies the following:

- 1) The applicant meets and will comply with all of the following standards for the award of grants pursuant to Section 179D-31, Hawaii Revised Statutes:
 - a) Owns a high hazard or significant hazard dam or appurtenance that has been determined to have one or more deficiencies and is regulated under Chapter 179D, Hawaii Revised Statutes;
 - b) Complies with all applicable federal and state laws prohibiting discrimination against any person on the basis of race, color, national origin, religion, creed, sex, age, sexual orientation, disability, or any other characteristic protected under applicable federal or state law;
 - c) Agrees that grant moneys are not to be used for purposes of entertainment or perquisites;
 - d) Agrees that all activities and improvements undertaken with funds received shall comply with applicable federal, state, and county laws, including statutes, ordinances, applicable building codes, and rules;
 - e) Allows to make available to the Department of Land and Natural Resources (“Department”) all records that the applicant may have relating to the grant and allow state agencies to monitor the applicant's compliance with the purpose of this chapter; and
 - f) Complies with other requirements or conditions as the Department or Board of Land and Natural Resources (“Board”) may prescribe, including, but not limited to, the General Conditions issued by the Department of the Attorney General of the State of Hawaii, referred to as Form AG-008 103D General Conditions.

- 2) If the applicant is an entity other than an individual, the applicant meets the following requirements pursuant to Section 179D-31, Hawaii Revised Statutes:
 - a) Is licensed to conduct business in the State; and
 - b) Has bylaws or policies that describe the manner in which business is conducted, prohibit nepotism, and provide for the management of potential conflicts of interest.

Further, the undersigned authorized representative certifies that this statement is true and correct to the best of the applicant's knowledge.

The Waiakalua wildlife preserve association

(Typed Name of Individual or Organization)

peggy north

(Signature)

02/20/2025

(Date)

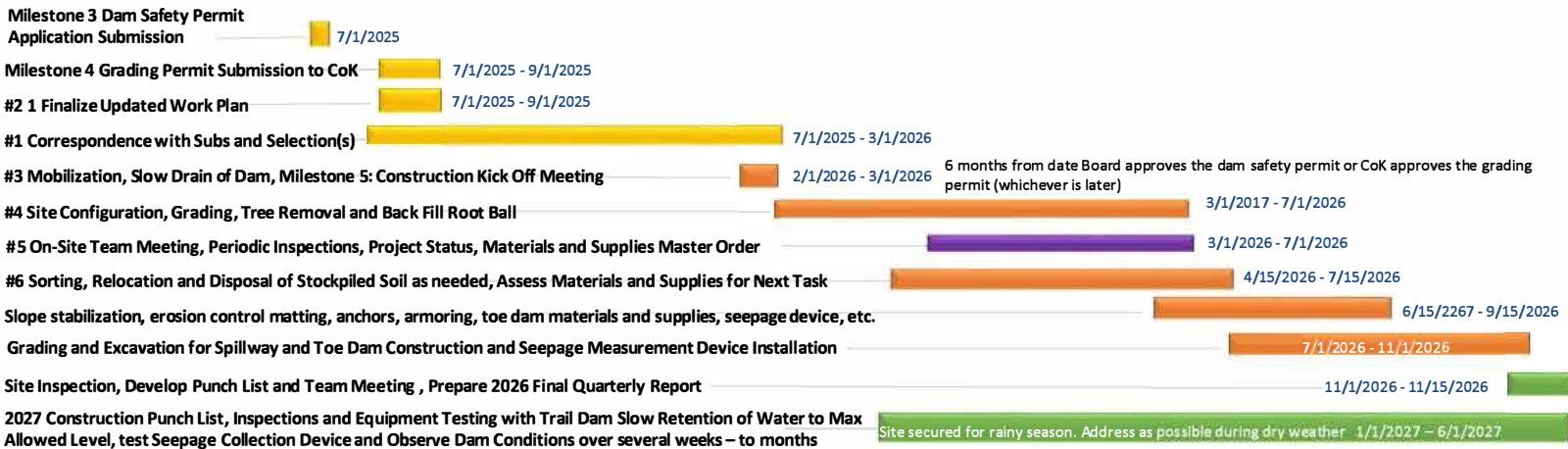
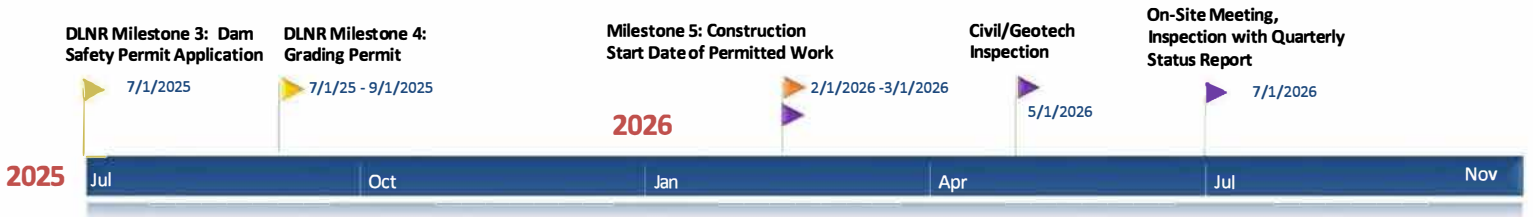
Peggy North

President

(Typed Name)

(Title)

DLNR Draft General Schedule for Waiakalua Dam (KA-0010) Improvements Project



Note: Grant Submission Only, Detailed Construction Schedule to be Prepared by Construction Contractor) Timeline may be significantly impacted by Materials and Supply Delivery

