



January 24, 2020

Senator Donovan Dela Cruz
Senate Committee on Ways and Means

Aloha Senator Dela Cruz,

Please find attached an amended cover page for Hawai'i Public Health Institute's Grant-In-Aid application for operating funds to continue and expand the Rat Lungworm Disease Prevention Through Education project.

The amended cover page contains corrected figures reflecting the total amount of state grants received in the past five fiscal years, and the amount of unrestricted assets held. The original cover page had mistakenly listed only three years' worth of state grants received, and an incorrect amount of unrestricted assets.

Thank you very much for your kind attention. Please contact Hawai'i Farm to School Hui Coordinator, Lydi Bernal, with any questions at lydi@hiphi.org or (808) 295-3375.

Sincerely,

A handwritten signature in blue ink that reads 'Jessica Yamauchi'.

Jessica Yamauchi
Executive Director

A handwritten signature in blue ink that reads 'Lydi Bernal'.

Lydi Bernal
Hawai'i Farm to School Hui Coordinator

cc: Senator Gilbert Keith-Agaran

**THE THIRTIETH LEGISLATURE
APPLICATION FOR GRANTS
CHAPTER 42F, HAWAII REVISED STATUTES**

Type of Grant Request:

Operating Capital

Legal Name of Requesting Organization or Individual: Db: The Coalition For a Tobacco-Free Hawaii/
Hawaii Public Health Institute Healthy Communities Hawaii

Amount of State Funds Requested: \$ 250,000

Brief Description of Request (Please attach word document to back of page if extra space is needed):
This proposal supports expansion of the Rat Lungworm Disease Prevention Through Education project, which aims to prevent and mitigate further cases of rat lungworm disease among Hawaii's residents by empowering youth and adults as family and community educators and actors across the state through the delivery of a series of community workshops and professional development education courses, partnership building, and the creation and dissemination of a software application for statewide citizen science data collection on the distribution and control of rat lungworm host species.

Other Farm to School [F2S] funds available for the RLWD project)

Amount of Other Funds Available:

State: \$ 7,310

Federal: \$ 0

County: \$ 0

Private/Other: \$ 2,000

Total amount of State Grants Received in the Past 5 Fiscal Years: \$ 4,647,522 (HIPHI); \$153,590 (F2S only)

Unrestricted Assets: \$ 600,000 (HIPHI); \$10,000 (F2S only)

New Service (Presently Does Not Exist): Existing Service (Presently in Operation):

Type of Business Entity:

501(C)(3) Non Profit Corporation

Other Non Profit

Other

Mailing Address:

850 Richards St. Suite 201

City: State: Zip:

Honolulu HI 96813

Contact Person for Matters Involving this Application	
Name: Lydi Bernal	Title: Hawaii Farm to School Hui Coordinator
Email: lydi@hiphi.org	Phone: 808-295-3375

Federal Tax ID#: XXXXXXXXXX	State Tax ID# XXXXXXXXXX
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Authorized Signature

Jessica Yamauchi, Executive Director

Name and Title

01/24/2020

Date Signed

January 24, 2020

Aloha Senator Dela Cruz,

This letter is written in strong support of the Hawai'i Public Health Institute's grant-in-aid application to continue and expand the Rat Lungworm Disease (RLWD) Prevention Through Education project, a pilot that has been developed by the Hawai'i Farm to School Hui and partners in response to a critical issue for our state. This project serves the essential public purpose of preventing and mitigating further cases of Angiostrongyliasis, or rat lungworm disease (RLWD), which poses a serious threat to our economy, local agriculture, and public health in Hawai'i.

The project will provide a series of workshops and courses to empower youth and adults in communities across the state to play an active and well-informed role in RLWD prevention. Funding for this project will also enable development of a software application for statewide citizen science data collection on the prevalence, distribution, and control of rat lungworm host species, including slugs and snails. Large-scale host control efforts along with data collection are key to enhancing coordinated statewide planning and disease prevention efforts.

This information is vital to the health of our community as Rat Lungworm Disease is a serious disease that can cause long-term health problems, including death and permanent disability. As an employee of the Department of Health (DOH) on Maui and Epidemiology Specialist for 10 years, I investigated a majority of the RLWD cases in Maui County. The disease can be horrific and long-lasting. This disease can affect not only the physical health of the patient, but the mental emotional health and financial health of the entire family. Each case of RLWD creates fear in the community. Each case of RLWD affects our community's food stability and the farmers' ability to continue to grow and sell local produce.

Without continued education, RLWD will continue to be an issue in Hawaii. The rats and slugs that carry the parasite are not going away and continue to spread across the islands. We need to be constantly vigilant about RLWD in order to prevent our families and our visitors from contracting this disease.

Yet RLWD is very preventable through education on reducing the vectors (rats and slugs) that carry the parasite, reducing presence of slugs and rats in our gardens, and ultimately learning ways to wash and prepare food that reduce the risk of contracting RLWD.

But without continued education on RLWD we will continue to put our residents, our kids, and our touring visitors at risk.

Please contact me with any questions at kristin.mills@doh.hawaii.gov or (808) 984-8216.

Sincerely,

Kristin Mills, M.S., M.A.
Public Health Educator and former Epidemiology Specialist
Hawaii State Department of Health, Maui District Health Office

**THE THIRTIETH LEGISLATURE
APPLICATION FOR GRANTS
CHAPTER 42F, HAWAII REVISED STATUTES**

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Amount of State Funds Requested: \$ 250,000

Brief Description of Request (Please attach word document to back of page if extra space is needed):
Please see the attached document.

Other Farm to School [F2S] funds available for the RLWD project)

Amount of Other Funds Available:	Total amount of State Grants Received in the Past 5 Fiscal Years:
State: \$ <u>7,310</u>	\$ <u>3,457,930 (HIPHI); \$153,590 (F2S only)</u>
Federal: \$ <u>0</u>	
County: \$ <u>0</u>	Unrestricted Assets:
Private/Other: \$ <u>2,000</u>	\$ <u>200,000 (HIPHI); \$10,000 (F2S only)</u>

New Service (Presently Does Not Exist): Existing Service (Presently in Operation):

Type of Business Entity:

501(C)(3) Non Profit Corporation
 Other Non Profit
 Other

Mailing Address:

850 Richards St. Suite 201
City: State: Zip:
Honolulu HI 96813

Contact Person for Matters Involving this Application	
Name: Lydi Bernal	Title: Hawaii Farm to School Hui Coordinator
Email: lydi@hiphi.org	Phone: 808-295-3375

Federal Tax ID#: [REDACTED]	State Tax ID#: [REDACTED]
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Jessica Yamauchi
Authorized Signature Jessica Yamauchi, Executive Director
received Name and Title
1/17/2020 3:01pm

01/17/2020
Date Signed

10/1/11

10/1/11

10/1/11

Application Submittal Checklist

The following items are required for submittal of the grant application. Please verify and check off that the items have been included in the application packet.

- 1) Certificate of Good Standing (If the Applicant is an Organization)
- 2) Declaration Statement
- 3) Verify that grant shall be used for a public purpose
- 4) Background and Summary
- 5) Service Summary and Outcomes
- 6) Budget
 - a) Budget request by source of funds ([Link](#))
 - b) Personnel salaries and wages ([Link](#))
 - c) Equipment and motor vehicles ([Link](#))
 - d) Capital project details ([Link](#))
 - e) Government contracts, grants, and grants in aid ([Link](#))
- 7) Experience and Capability
- 8) Personnel: Project Organization and Staffing

 Jessica Yamauchi, Executive Dir. 01/17/2020
AUTHORIZED SIGNATURE PRINT NAME AND TITLE DATE

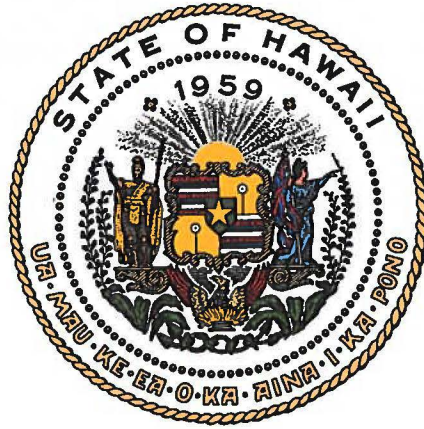
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Applicant: Hawai'i Public Health Institute

Brief Description of Request

This proposal supports the continuation and expansion of the Rat Lungworm Disease Prevention Through Education project, launched in 2017 by the Hawai'i Farm to School Hui (a program of Hawai'i Public Health Institute) in collaboration with the Dr. Susan Jarvi Lab at the University of Hawai'i at Hilo Daniel K. Inouye College of Pharmacy. This project aims to prevent and mitigate further cases of Angiostrongyliasis, or rat lungworm disease (RLWD), among Hawaii's residents by empowering community members, food producers and handlers, teachers, and students as family and community educators and actors through the delivery of a series of community workshops and professional development education courses, partnership building, and the creation and dissemination of a software application with digital species identification for statewide citizen science data collection on the prevalence, distribution, and control of rat lungworm host species.





Department of Commerce and Consumer Affairs

CERTIFICATE OF GOOD STANDING

I, the undersigned Director of Commerce and Consumer Affairs of the State of Hawaii, do hereby certify that

HAWAII PUBLIC HEALTH INSTITUTE

was incorporated under the laws of Hawaii on 10/09/2006 ; that it is an existing nonprofit corporation; and that, as far as the records of this Department reveal, has complied with all of the provisions of the Hawaii Nonprofit Corporations Act, regulating domestic nonprofit corporations.



IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Department of Commerce and Consumer Affairs, at Honolulu, Hawaii.

Dated: January 16, 2020

Catherine P. Owa

Director of Commerce and Consumer Affairs



**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.

- 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.

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.

Hawaii Public Health Institute dba The Coalition For a Tobacco-Free Hawaii/Health Communities Hawaii
(Typed Name of Individual or Organization)



(Signature)

01/17/2020

(Date)

Jessica Yamauchi
(Typed Name)

Executive Director
(Title)



Application for Grants

If any item is not applicable to the request, the applicant should enter "not applicable".

I. Certification – Please attach immediately after cover page

1. Certificate of Good Standing (If the Applicant is an Organization)

If the applicant is an organization, the applicant shall submit one (1) copy of a certificate of good standing from the Director of Commerce and Consumer Affairs that is dated no earlier than December 1, 2019. *See attached.*

2. Declaration Statement

The applicant shall submit a declaration statement affirming its compliance with Section 42F-103, Hawaii Revised Statutes. ([Link](#)) *See attached.*

3. Public Purpose

The applicant shall specify whether the grant will be used for a public purpose pursuant to Section 42F-102, Hawaii Revised Statutes. ([Link](#))

This grant will be used for the public purpose of preventing and mitigating further cases of Angiostrongyliasis, or rat lungworm disease (RLWD), which poses a serious threat to the economy and public health in Hawai'i and across the globe.

II. Background and Summary

This section shall clearly and concisely summarize and highlight the contents of the request in such a way as to provide the State Legislature with a broad understanding of the request. Please include the following:

1. A brief description of the applicant's background;

Hawai'i Public Health Institute (HIPHI) is a non-profit organization whose mission is to advance the health and wellness of the people and islands of Hawai'i. HIPHI began in 1996, then known as the Coalition for a Tobacco-Free Hawai'i, spearheading the campaign to make all workplaces, restaurants, and bars smoke-free. In 2012, the organization moved from a singular focus on tobacco issues to a broader public health mission that includes oral health, food and agriculture, transportation and public safety, and environmental health, and became the Hawai'i Public Health Institute.

The Hawai'i Farm to School Hui is a program of HIPHI and will oversee implementation of the Rat Lungworm Disease Prevention Through Education project. The Hawai'i Farm to School Hui is a statewide network comprised of five island-level networks, community organizations, schools, food producers, and state agency representatives

from the Hawai'i departments of agriculture, education, health, and the University of Hawai'i. The Hawai'i Farm to School Hui formed in 2010 with a mission is to strengthen Hawaii's statewide farm to school movement by supporting our Island Networks in the areas of capacity building, resource development and sharing, professional development, and policy development and advocacy. Farm to school programs involve school gardens, education, and school food improvements to enhance the total well-being of students, families, schools, community food systems, and the 'āina, the lands and waters that feed and sustain us all.

2. The goals and objectives related to the request;

The goals of the Rat Lungworm Disease Prevention Through Education project are to prevent and mitigate further cases of RLWD among Hawaii's residents by empowering community members, food producers and handlers, teachers, and preschool through post-secondary (P-20) students as family and community educators and actors while increasing student engagement, improving academic achievement, and introducing students to career opportunities in public health, science, and other relevant fields.

The objectives of this project are to:

1. Conduct 14 community workshops on 6 islands and 4 professional development education (PDE3) courses for teachers on 4 islands for the prevention of RLWD during the 2020-2021 school year (SY2021), reaching at least 500 adults and 4,000 P-20 students;
2. Develop and disseminate a software application (app) for statewide citizen science data collection on the prevalence, distribution, and control of RLW host species (e.g., slugs and snails), engaging 5,000 users in SY2021; and
3. Strengthen partnerships among public and private agencies and organizations for RLWD prevention, such as the Hawai'i Department of Education (HIDOE), Hawai'i Department of Health (HDOH), Hawai'i Department of Agriculture (HDOA), University of Hawai'i (UH) system, Hawai'i Invasive Species Council and island-level committees, Governor David Ige's Joint Task Force on RLWD, farmer organizations, and other pertinent entities.

3. The public purpose and need to be served;

RLWD is a real life, serious economic and public health issue for Hawai'i; it has claimed lives, livelihoods, and lifestyles. However, while the disease presents many problems for Hawai'i it also provides a surprising number of unique and rewarding opportunities for P-20 STEAM (science, technology, engineering, art/agriculture, math) education, along with strategies for lowering infection rates in host animals and reducing the potential for cases of RLWD. Importantly, involving children in educational efforts through STEM learning about Angiostrongyliasis was identified during the 2011 International Rat Lungworm Workshop held in Honolulu as one of the top priority actions for public education toward preventing and mitigating RLWD infections.

Cases of RLWD in Hawai'i caused by the *Angiostrongylus cantonensis* nematode parasite continue to be reported by the Centers for Disease Control and Prevention (CDC) and HDOH. Recent research provides evidence that the parasite is ubiquitous statewide and that certain areas maintain high parasite infection rates in host animals [rats (73% - 93%), gastropods including slugs and snails (68% – 78%), and paratenic species (frogs and centipedes)]. While monies applied to research produce important and necessary advancements for understanding the parasite and disease, continued public education and a well-orchestrated host control campaign are also necessary to reduce and eliminate human and animal infections.

Whereas important outreach efforts toward the prevention of RLWD have been made by HDOH and the UH College of Tropical Agriculture and Human Resources (CTAHR), it is only through the targeted and ongoing education of students, teachers, food producers and handlers, and community members via the delivery of community workshops and PDE3 courses that true widespread understanding of the disease and action toward its prevention can and will be achieved. The Hawai'i Farm to School Hui has partnered with HDOH and the Dr. Susan Jarvi Lab at the UH Hilo Daniel K. Inouye College of Pharmacy (UHH-DKICP) during the past two years to pilot the offering of regional workshops and courses for RLWD prevention through education. This project expands upon these efforts to empower youth and adults in every community to serve as family and community educators and actors for the prevention of RLWD.

In addition to a focus on education for RLWD prevention, a concerted statewide effort to significantly reduce host infection rates and increase the control of rats, slugs, and snails is critical, yet is not currently taking place. This project empowers communities with the research-backed tools to proactively control RLW host populations, while collecting data through use of the RWLD app to help researchers understand the effectiveness of control efforts and how populations change over time and in response to control. Collection of data is crucial, and the creation, dissemination, and use of the RLWD app through this project will make possible the development of a large database to significantly enhance coordinated and well-informed statewide planning and disease prevention efforts.

This project has proven its potential for improving statewide monitoring of host species population expansion (particularly of the semi slug or *Parmarion martensi*, which is known to be an especially effective carrier of RLW), as reported by the Big Island Invasive Species Committee (BIISC) and [Big Island Video News](#) in February 2019:

The presence of the slug [in the Kohala region] was confirmed through the efforts of students at Kohala Middle School, who are participating in a citizen science effort led by teacher Cristy Athan. Athan enrolled in a professional development class offered by UHH-DKICP and the Big Island Invasive Species Committee to learn more about rat lungworm and invasive rats and slugs. Teachers are taught safe handling protocols for the collection and disposal of snails and slugs, and are guided to develop an Integrated Pest Management Strategy to reduce slug and snail populations in school gardens. The students embraced the project and have enthusiastically committed to their roles as

ambassadors for rat lungworm prevention. "They're so into it," says Athan. "Every single day, they're telling me a new slug or snail story!"

As such, this project has remarkable potential to increase student engagement, improve academic achievement, and introduce students to career opportunities in public health, science, and other relevant fields.

4. Describe the target population to be served; and

The target population to be served by this project includes all preschool through post-secondary (P-20) students in Hawaii's public, public charter, and independent schools, early care and education (ECE) settings, and institutes of higher education, as well as teachers, food producers (especially produce farmers, along with home and community gardeners), food handlers, and the general public.

5. Describe the geographic coverage.

The geographic coverage of this project includes the entire state of Hawai'i, with a focus on delivering community-based services on the islands of Kaua'i, O'ahu, Molokai, Maui, Lāna'i, and Hawai'i.

III. Service Summary and Outcomes

The Service Summary shall include a detailed discussion of the applicant's approach to the request. The applicant shall clearly and concisely specify the results, outcomes, and measures of effectiveness from this request. The applicant shall:

1. Describe the scope of work, tasks and responsibilities;

Management and Coordination

- The Hawai'i Farm to School Hui Coordinator shall serve as the Project Manager in order to provide overall management of the Rat Lungworm Disease Prevention Through Education project, including financial administration, personnel supervision, and reporting.
- The Project Coordinator shall provide coordination of logistics and communications for all aspects of the project, including but not limited to:
 - Organizing planning meetings;
 - Cultivating new and existing partnerships for improved collaboration;
 - Planning and supporting the community workshops and PDE3 courses in collaboration with project partners;
 - Liaising with the software app developer; and
 - Supporting the reporting, documentation, and evaluation of the project.

Community Workshops

- Fourteen community workshops shall be conducted during SY2021 on the islands of Kaua'i (2), O'ahu (4), Molokai (1), Maui (2), Lāna'i (1), and Hawai'i (4).

- The projected attendance for each workshop shall be 30 participants, with the goal of reaching a total of 400 workshop participants, including 100 total educators. Participating educators shall commit to disseminating the workshop information to at least 20 students each (at all levels, P-20), resulting in dissemination to 2,000 P-20 students.
- The workshops shall each be conducted by two facilitators contracted by HIPHI from community-based entities such as the Hawai'i Farm to School Hui Island Networks and island-level invasive species committees, ensuring that the workshops are place-based and pertinent to each island's unique context. Contractors shall assist with venue selection, provision of refreshments, participant recruitment, and event marketing. The Project Coordinator shall manage event registrations and other logistical details.
- The specific target audiences for these workshops include formal and informal educators, food producers (especially produce farmers, along with home and community gardeners), and food handlers. Any and all interested community members (youth and adults) will be welcome to attend.
- Workshop venues may include but not be limited to school learning gardens, farms, and community centers.
- The workshops shall run for a timespan of two hours each and shall cover the following topics (condensed from the RLWD curriculum, see below):
 - RLW lifecycle;
 - Global distribution of RLW;
 - Host species identification and citizen science data collection using the software app (see below);
 - Disease symptoms;
 - Best practices for RLWD prevention including Integrated Pest Management (IPM), rainwater catchment management, and food safety;
 - Other relevant research findings; and
 - Online and community-based resources.
- In December 2020, the workshop agenda will be reviewed and based on the formative evaluations of the project, modifications will be made if necessary.

PDE3 Courses

- Four professional development education (PDE3) courses shall be conducted during SY2021 for teachers on the islands of Kaua'i, O'ahu, Maui, and Hawai'i. The PDE3 course (*SC 184011: Engaging students in citizen science through the prevention of rat lungworm disease*) and its associated research-based STEAM (science, technology, engineering, art/agriculture, math) curriculum on RLWD were developed by the UHH-DKICP and approved by the HIDOE Office of Curriculum and Instructional Design (OCID) in partnership with the STEM Educational Specialist and course sponsor (Aaron Sickel). The course introduces public health into the STEAM field and trains teachers in the use of citizen science, online education, ArcGIS online story-mapping, and entering/analyzing data in Google sheets. The course and curriculum were piloted by 15 teachers on Hawai'i Island during the 2018-2019 school year.
- The projected attendance for each course shall be 25 participants, with the goal of reaching a total of 100 course participants. Participating teachers shall commit

- to disseminating the course information to at least 20 students each (at all levels, P-20), resulting in dissemination to 2,000 P-20 students.
- The courses shall each be conducted by two instructors, including RLWD expert, curriculum developer, and Lead Instructor Kay Howe, along with one on-island instructor in order to build capacity and deepen the local knowledge and expertise.
 - In accordance with HIDOE requirements for PDE3, each course will require 24 total contact hours with participants, adequate time for application of knowledge gained into the classroom, reflection by participants on learning/application, and development of a Learning Results Portfolio by each participant.
 - In December 2020, the course syllabus will be reviewed and based on the formative evaluations of the project, modifications will be made if necessary.

Software App Development and Dissemination

- Natural Resources Data Solutions (NRDS) led by Sam Aruch shall be contracted to develop and disseminate a software app in order to facilitate statewide citizen science data collection on the prevalence, distribution, and control of invasive RLW host species (slugs, snails, and flatworms) in school gardens, home gardens, community gardens, farms, and other localities across the state.
- NRDS shall also develop an artificial intelligence model for the digital identification of RLW host species, as part of the app development.
- The data gathered via the app shall be housed in a central online database managed by HIPHI and made available for ongoing research and policymaking for the prevention of RLWD.
- A live webinar shall be offered and the recording published on the Hawai'i Farm to School Hui website (www.farmtoschoolhui.org) for the purposes of providing instruction on the use of the app.
- The app shall be piloted as part of the PDE3 courses and any necessary modifications based on user feedback will be made in December 2020.

Partnership Building

- The Project Coordinator shall convene regular online planning meetings involving project partners from all islands (HIPHI employees, contractors, and other relevant stakeholders) for the purposes of planning upcoming activities and to provide progress updates including successes, challenges, and best practices.

Evaluation

- HIPHI shall contract an external evaluator to assess the activities, outcomes, and effectiveness of the project.

2. Provide a projected annual timeline for accomplishing the results or outcomes of the service;

Table 1. Project Timeline

July-August 2020	Project kick-off: Partners finalize management & action plan Begin app development Finalize agenda and schedule for community workshops and PDE3 courses Submit new sections of PDE3 course to HODOE Finalize project evaluation plan Recruit workshop and course participants
September 2020	Community based workshops (2) Evaluation begins Complete app beta
October 2020	PDE3 course #1 Community based workshops (2) Trial app Evaluation continues
November 2020	PDE3 course #2 Trial app Community based workshops (2) Evaluation continues
December 2020	Mid-year formative evaluation and reporting Modify app Modify workshops and courses as needed
January 2021	PDE3 course #3 Produce and host app webinar Distribute app Community based workshops (2) Evaluation continues
February 2021	PDE3 course #4 Distribute app Community based workshops (2) Evaluation continues
March 2021	Community based workshops (2) Distribute app Evaluation continues

April 2021	Community based workshops (2) Distribute app Evaluation continues
May 2021	Summative evaluation
June 2021	Project wrap-up and final reporting

3. Describe its quality assurance and evaluation plans for the request. Specify how the applicant plans to monitor, evaluate, and improve their results; and

HIPHI will work with Dr. Koh Ming Wei, a project evaluator with expertise in the field of environmental and social education. Dr. Koh will lead the development of evaluation tools with direct feedback from all the partners involved.

There are three objectives to evaluate:

1. The impact of the community workshops and PDE3 courses on RLWD prevention and mitigation;
2. The integration of digital technology such as the RLWD app into public awareness and RLWD prevention and mitigation; and
3. The strengthening of networks and partnerships as agencies and organizations coalesce on a health-threatening topic.

For #1 and #2, there are two main foci for assessment and evaluation. The first is the impact of the PDE3 course on teachers' efficacy with the prevention and mitigation of RLWD, including their understanding and application of citizen science as a science learning and teaching method, and the use of digital technology such as the RLWD app to collect and understand big data. The second focus is the application of what was learned via the courses into classroom lessons, activities, and citizen science opportunities, including the use of the RLWD app. Tracking of the quantity and location of app downloads will also be included in the assessment. The evaluation tools created will gauge the confidence of the teachers to adapt and implement what was learned and whether the resources provided supported the development and implementation of citizen science opportunities. There will also be a shorter pre-post survey developed to gauge the learning and understanding of community members on RLWD prevention and mitigation via the community workshops.

To gauge impact of the PDE3 course, Dr. Koh will lead the development of three tools to collect data on the following four research questions:

- Question 1: Will teachers' overall attitudes toward using citizen science for RLWD prevention and mitigation improve after participating in the PDE3 course?
- Question 2: Will teachers' attitudes related to the importance of using citizen science for RLWD prevention and mitigation improve after participating in the PDE3 course?

- Question 3: Will teachers' attitudes related to their productivity within RLWD prevention and mitigation improve after participating in the PDE3 course?
- Question 4: Will teachers' attitudes related to their comfort with using citizen science and digital technology (RLWD app) for RLWD prevention and mitigation improve after participating in the PDE3 course?

The first tool to be employed will be a pre-post survey of "*Teachers' Attitudes Related to RLWD Prevention Education Experiences*", which will consist of a 7-step semantic differential with 15 adjective pairs covering three sub-profiles: 1) an importance sub-profile; 2) a productivity sub-profile; and 3) a comfort sub-profile. The second tool will be a systematic observation guide. The teacher participants will use this guide during their classroom or school-based citizen science opportunities to collect data on how they perceive student engagement, learning, and behavior in STEAM outdoor experiences, and whether the resources provided were sufficient to support the design, development, and implementation of lessons, activities, and citizen science opportunities. The third and final tool will be a guided self-reflection writing task, where teacher participants will be asked to provide written answers to prompts based on the overall immersive experience. This final tool will be utilized at least three times over the course of the training to track changes in attitude from being exposed to the various components of the proposed teacher training workshop program.

A one-way analysis of variance will be performed on the pre- and post-data collected through the "*Teachers' Attitudes Related to RLWD Prevention Education Experiences*" survey. The written reflections will be analyzed using the same metrics as the survey, including overall attitudes, importance, productivity, and comfort.

A shorter and simpler pre-post survey will be developed of the community workshops to gauge the participants':

- Awareness of RLWD;
- Empowerment to prevent RLWD; and
- Understanding of strategies to prevent RLWD.

Lastly, Dr. Koh will conduct two focus group discussions among the project partners to highlight how they worked together around this issue, creating an exemplary pathway for others wishing to prevent and mitigate other such diseases.

Information and data from the summative assessments will be used to improve the workshops and courses during a review in December 2020, mid-way through the project.

Table 2. Evaluation of Project Outcomes

Task	Responsibility	Timeframe	Deliverables	Limitations
Tool adaptation & development	Dr. Koh & partners	Onset of program	PDE3 course: three tools Community workshops: one tool Partners: focus group prompts	None
Focus group discussion #1	Dr. Koh	During planning phase	One-page report on the relationships and shared vision of the group	Time - leaders are always busy and in-demand
Community workshops pre-post survey	Workshop facilitators	Before and after the workshops	Community awareness, empowerment & understanding	Each island is unique, so will need to generalize the experience across islands
Formative assessment – PDE3 Pre Attitude survey Writing task #1	PDE3 instructors	Pre-survey: before the PDE3 course. Writing: during PDE3 the course.	Direct experience report	None
Formative assessment – PDE3 Writing task #2	PDE3 instructors	After PDE3 course, and before participants' implementation of curriculum with students.	Report on teachers' experiences with developing curriculum and citizen science opportunities	None

Implementation of activities and citizen science observational tool	Dr. Koh	During and after implementation of curriculum with students.	Evidence of student learning (e.g., citizen science outputs)	Time – it gets hectic during the school year
Summative assessment – Post Attitude survey Writing task #3 Focus group discussion #2	Dr. Koh	At project end	Summative Report	Chasing down teachers and leaders for final evaluations as they get busy and start disappearing for summer vacation

4. List the measure(s) of effectiveness that will be reported to the State agency through which grant funds are appropriated (the expending agency). The measure(s) will provide a standard and objective way for the State to assess the program's achievement or accomplishment. Please note that if the level of appropriation differs from the amount included in this application that the measure(s) of effectiveness will need to be updated and transmitted to the expending agency.

The measures of effectiveness for the project that will be reported to the expending agency are as follows:

1. 14 RLWD community workshops offered;
2. 4 RLWD professional development courses offered;
3. 400 participants in RLWD workshops;
4. 100 participants in RLWD professional development courses;
5. Development of RLWD app;
6. 5,000 RLWD app users; and
7. Production and hosting of training webinar.

IV. Financial

Budget

1. The applicant shall submit a budget utilizing the enclosed budget forms as applicable, to detail the cost of the request.
 - a. Budget request by source of funds ([Link](#)) *See attached.*
 - b. Personnel salaries and wages ([Link](#)) *See attached.*
 - c. Equipment and motor vehicles ([Link](#)) *See attached (not applicable).*

- d. Capital project details ([Link](#)) *See attached (not applicable).*
- e. Government contracts, grants, and grants in aid ([Link](#)) *See attached.*

2. The applicant shall provide its anticipated quarterly funding requests for the fiscal year 2021.

Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total Grant
\$62,500	\$62,500	\$62,500	\$62,500	\$250,000

3. The applicant shall provide a listing of all other sources of funding that they are seeking for fiscal year 2021.

The Hawai'i Farm to School Hui will be applying for funding from private foundations (estimated \$60,000) and federal funding sources (e.g., USDA Farm to School Grant, estimated \$40,000) during summer and fall 2020 in order to continue and expand its work and to ensure continuation of its full-time paid Coordinator position. The Hawai'i Farm to School Hui will apply for continued funding from HDOH SNAP-Ed and any other state entities as available.

4. The applicant shall provide a listing of all state and federal tax credits it has been granted within the prior three years. Additionally, the applicant shall provide a listing of all state and federal tax credits they have applied for or anticipate applying for pertaining to any capital project, if applicable.

HIPHI has neither applied for nor has been granted any state and federal tax credits within the prior three years.

5. The applicant shall provide a listing of all federal, state, and county government contracts, grants, and grants in aid it has been granted within the prior three years and will be receiving for fiscal year 2021 for program funding.

Please see the attached "Government Contracts, Grants, and/or Grants in Aid" sheet.

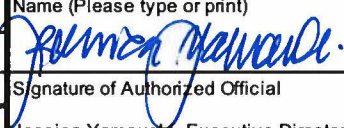
6. The applicant shall provide the balance of its unrestricted current assets as of December 31, 2019.

The balance of the Hawai'i Farm to School Hui's unrestricted current assets as of December 31, 2019 is \$10,000. The balance of HIPHI's unrestricted current assets as of December 31, 2019 is \$200,000.

BUDGET REQUEST BY SOURCE OF FUNDS

Period: July 1, 2020 to June 30, 2021

Applicant: Hawaii Public Health Institute

BUDGET CATEGORIES	Total State Funds Requested (a)	Total Federal Funds Requested (b)	Total County Funds Requested (c)	Total Private/Other Funds Requested (d)
A. PERSONNEL COST				
1. Salaries	22,900			33,588
2. Payroll Taxes & Assessments				
3. Fringe Benefits	7,100			10,412
TOTAL PERSONNEL COST	30,000			44,000
B. OTHER CURRENT EXPENSES				
1. Airfare, Inter-Island	1,600	3,200		1,600
2. Insurance				
3. Lease/Rental of Equipment				
4. Lease/Rental of Space				
5. Staff Training				
6. Supplies	5,400			1,000
7. Telecommunication				
8. Utilities				
9. Contractual Services - Instruction	96,800	15,000		
10. Contractual Services - App & AI	70,000			
11. Contractual Services - Evaluation	10,000			
12. Contractual Services - Curriculum Dev		15,000		
12. Other Travel	800			800
13. Printing	5,400	1,000		2,000
14. Videography & Media Support		1,000		3,400
15. HIPHI Administrative Fee (12%)	30,000	4,800		7,200
17				
18				
19				
20				
TOTAL OTHER CURRENT EXPENSES	220,000	40,000		16,000
C. EQUIPMENT PURCHASES				
D. MOTOR VEHICLE PURCHASES				
E. CAPITAL				
TOTAL (A+B+C+D+E)	250,000	40,000		60,000
SOURCES OF FUNDING		Budget Prepared By:		
(a) Total State Funds Requested	250,000	Lydi Bernal	808-295-3375	
(b) Total Federal Funds Requested	40,000	Name (Please type or print)		Phone
(c) Total County Funds Requested	0			01/17/2020
(d) Total Private/Other Funds Requested	60,000	Signature of Authorized Official		Date
TOTAL BUDGET	350,000	Jessica Yamauchi, Executive Director		
		Name and Title (Please type or print)		



BUDGET JUSTIFICATION - PERSONNEL SALARIES AND WAGES

Period: July 1, 2020 to June 30, 2021

Applicant: Hawaii Public Health Institute

POSITION TITLE	FULL TIME EQUIVALENT	ANNUAL SALARY A	% OF TIME ALLOCATED TO GRANT REQUEST B	TOTAL STATE FUNDS REQUESTED (A x B)
Hawaii Farm to School Hui Coordinator (Project Manager)	1	\$68,000.00	10.75%	\$ 7,310.00
Rat Lungworm Disease (RLWD) Prevention Through Education Project Coordinator	0.3	\$15,590.00	100.00%	\$ 15,590.00
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
TOTAL:				22,900.00

JUSTIFICATION/COMMENTS: The Project Manager shall supervise project personnel, manage the project budget, and ensure completion of project deliverables and reporting. The Project Coordinator shall provide coordination of logistics and communications for all aspects of the project (planning meetings, partnership building, community workshops and course planning, app dissemination, and support for project documentation, reporting, and evaluation).



BUDGET JUSTIFICATION - EQUIPMENT AND MOTOR VEHICLES

Period: July 1, 2020 to June 30, 2021

Applicant: Hawaii Public Health Institute

DESCRIPTION EQUIPMENT	NO. OF ITEMS	COST PER ITEM	TOTAL COST	TOTAL BUDGETED
N/A			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
TOTAL: 0				

JUSTIFICATION/COMMENTS:

DESCRIPTION OF MOTOR VEHICLE	NO. OF VEHICLES	COST PER VEHICLE	TOTAL COST	TOTAL BUDGETED
N/A			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
TOTAL: 0				

JUSTIFICATION/COMMENTS:



BUDGET JUSTIFICATION - CAPITAL PROJECT DETAILS

Period: July 1, 2020 to June 30, 2021

Applicant: Hawaii Public Health Institute

FUNDING AMOUNT REQUESTED						
TOTAL PROJECT COST	ALL SOURCES OF FUNDS RECEIVED IN PRIOR YEARS		STATE FUNDS REQUESTED	OTHER SOURCES OF FUNDS REQUESTED	FUNDING REQUIRED IN SUCCEEDING YEARS	
	FY: 2018-2019	FY: 2019-2020	FY:2020-2021	FY:2020-2021	FY:2021-2022	FY:2022-2023
PLANS						
LAND ACQUISITION						
DESIGN						
CONSTRUCTION						
EQUIPMENT						
TOTAL: 0						
JUSTIFICATION/COMMENTS: N/A						

GOVERNMENT CONTRACTS, GRANTS, AND / OR GRANTS IN AID

Applicant: Hawaii Public Health Institute

Contracts Total: 3,903,930

	CONTRACT DESCRIPTION	EFFECTIVE DATES	AGENCY	GOVERNMENT ENTITY (U.S. / State / Haw / Hon / Kau / Mau)	CONTRACT VALUE
1	Promote healthy eating and active living in Hawaii through one state and three county Nutrition and Physical Activity Coalitions	1/1/17 - 12/31/17	Department of Health	Hawaii State	250,000
2	Assist with securing logistics and facilities for ECCS Impact Grant training and workshops	2/21/17 - 7/30/17	Department of Health	Hawaii State	4,920
3	Tobacco Prevention and Education Program	3/29/17 - 3/28/18	Department of Health	Hawaii State	200,000
4	Develop the Hawaiian Islands Oral Health Task Force	6/1/17 - 12/31/17	Department of Health	Hawaii State	14,995
5	Enhance efforts to prevent obesity, diabetes, heart disease, and stroke among adults in Hawaii	4/30/17 - 9/29/18	Department of Health	Hawaii State	375,000
6	Oral health coalition building services	11/1/17 - 8/31/18	Department of Health	Hawaii State	49,000
7	Enhance efforts to prevent obesity, diabetes, heart disease, and stroke among adults in Hawaii	9/30/17 - 9/29/18	Department of Health	Hawaii State	586,300
8	Promote healthy eating and active living in Hawaii through one state and three county Nutrition and Physical Activity Coalitions	1/1/18 - 12/31/18	Department of Health	Hawaii State	250,000
9	Provide coordination services for the Hawai'i Farm to School Hui Island Networks for farm to school training and technical assistance to schools	2/1/18 - 9/30/18	Department of Health	Hawaii State	41,300
10	Tobacco Prevention and Education Program	3/29/18 - 3/28/19	Department of Health	Hawaii State	200,000
11	Provide support services to conduct an assessment on Hawaii Public Health Coalition	4/1/18 - 9/30/18	Department of Health	Hawaii State	5,000
12	For services related to conducting a training on health communications and social marketing for Injury Prevention Advisory Committee Members	4/20/18 - 4/20/18	Department of Health	Hawaii State	519
13	To assist with meeting coordination for the Maui County Partners Impact monthly meetings	4/30/18 - 7/31/18	Department of Health	Hawaii State	4,800
14	Assess the current workforce capacity and infrastructure of community health workers in Hawaii	5/4/18 - 8/1/18	Department of Health	Hawaii State	7,000

15	Hawaii Farm to School Hui to coordinate the development of the Hawaii Garden to Cafeteria Plan	6/4/18 - 6/12/18	Department of Health	Hawaii State	7,300
16	Provide four in-person professional development workshops for the members of the Hawaii Farm to School Hui	6/15/18 - 6/14/19	Department of Health	Hawaii State	15,000
17	Coordinate event logistics for up to nine statewide events. Serve as point of contact and liaison for Child Abuse and Neglect Prevention Program staff and attendees.	7/1/18 - 9/30/18	Department of Health	Hawaii State	14,375
18	Facilitate the Maui Coalition for Drug-Free Youth, an underage drinking prevention coalition	7/1/18 - 6/30/19	Department of Housing and Human Concerns	Maui County	25,000
19	Develop and administer at least six Hawaii-based trainings for the health workforce professional groups	7/1/18 - 6/30/19	Department of Health Resources and Services Administration	U.S.	73,000
20	Continuation of services to conduct an assessment on Hawaii Public Health Coalition	8/30/18 - 12/30/18	Department of Health	Hawaii State	14,500
21	Provide follow-up on the statewide oral health meeting by communicating relevant and actionable next steps via electronic mechanisms (listserv, website, social media) amongst Hawaii's oral health partners and stakeholders	8/21/18 - 8/31/18	Department of Health	Hawaii State	14,995
22	Prevention of youth substance use via Maui Coalition for Drug-Free Youth	9/30/18 - 9/29/19	Department of Health and Human Services	U.S.	125,000
23	Promote healthy eating and active living in Hawaii through one state and three county Nutrition and Physical Activity Coalitions	1/1/19 - 12/31/19	Department of Health	Hawaii State	250,000
24	To provide technical assistance, coordination, and training to community health workers, patient navigators, care coordinators, and other community health workers in the provision of high blood pressure, high blood cholesterol and type 2 diabetes prevention and management.	2/1/19 - 6/29/19	Department of Health	Hawaii State	49,968
25	Build capacity and develop infrastructure for community-based food systems across Maui County	2/13/19 - 9/30/19	Department of Health	Hawaii State	48,950
26	Tobacco Prevention and Education Program	3/29/19 - 3/28/20	Department of Health	Hawaii State	200,000

27	Provide logistical support for meetings of the Early Childhood Comprehensive Systems Impact grant advisory and community-based teams on Maui and Oahu.	4/2/19 - 7/31/19	Department of Health	Hawaii State	3,600
28	Facilitate the development of Statewide Oral Health Coalition foundational and infrastructural items	4/15/19 - 6/30/19	Department of Health	Hawaii State	14,995
29	Plan, convene, and facilitate at least three meetings with diverse school health services stakeholders in order to improve collaboration and coordination of the delivery of health services in Hawaii Department of Education schools statewide	6/14/19 - 6/15/20	Department of Education	Hawaii State	14,500
30	Develop and administer at least six Hawaii-based trainings for the health workforce professional groups	7/1/19 - 6/30/20	Department of Health Resources and Services Administration	U.S.	73,000
31	Facilitate the Maui Coalition for Drug-Free Youth, an underage drinking prevention coalition	7/1/19 - 6/30/20	Department of Housing and Human Concerns	Maui County	25,000
32	Prevention of youth substance use via Maui Coalition for Drug-Free Youth	9/30/19 - 9/29/20	Department of Health and Human Services	U.S.	125,000
33	Increase the capacity of community coalitions to mobilize to address underage drinking and related issues for the Puna, Hilo and Hamakua communities	9/30/19 - 9/29/20	Department of Health	Hawaii State	110,000
34	Increase the capacity of community coalitions to mobilize to address underage drinking and related issues in the County of Maui	9/30/19 - 9/29/20	Department of Health	Hawaii State	110,000
35	Increase the capacity of community coalitions to mobilize to address underage drinking and related issues for a statewide geographic community	9/30/19 - 9/29/20	Department of Health	Hawaii State	110,000
36	Coordination of the Hawaii Farm to School Hui	10/15/19 - 9/30/20	Department of Health	Hawaii State	40,000
37	Provide four in-person quarterly meetings of the Hawaii Farm to School Hui	11/1/19 - 9/30/20	Department of Health	Hawaii State	49,990
38	To provide technical assistance, coordination, and training to community health workers, patient navigators, care coordinators, and other community health workers in the provision of high blood pressure, high blood cholesterol and type 2 diabetes prevention and management.	10/14/19 - 6/29/20	Department of Health	Hawaii State	49,375

39	Build capacity and develop infrastructure for community-based food systems across Maui County	10/14/19 - 9/30/20	Department of Health	Hawaii State	48,948
40	To coordinate trainings and engagement between Hawaii's Rural Health Clinics	12/9/19 - 6/30/2020	Department of Health	Hawaii State	49,000
41	To provide logistical support meeting of the Early Childhood Comprehensive System Impact grant advisory and community-based teams on Maui and Oahu.	12/19/19 - 7/31/20	Department of Health	Hawaii State	3,600
42	Promote healthy eating and active living in Hawaii through one state and three county Nutrition and Physical Activity Coalitions	1/1/20 - 12/31/20	Department of Health	Hawaii State	250,000

V. Experience and Capability

1. Necessary Skills and Experience

The applicant shall demonstrate that it has the necessary skills, abilities, knowledge of, and experience relating to the request. State your experience and appropriateness for providing the service proposed in this application. The applicant shall also provide a listing of verifiable experience of related projects or contracts for the most recent three years that are pertinent to the request.

The Hawai'i Farm to School Hui established the Rat Lungworm Disease Prevention Through Education project in 2017 in collaboration with the Dr. Susan Jarvi Lab at UHH-DKICP and with discrete funding awards from HDOH. The Hawai'i Farm to School Hui has performed the following key project activities to date:

- Organized a day-long RLWD workshop on O'ahu in July 2018, introducing educators to the new RLWD curriculum developed by UHH-DKICP. Worked with a filmmaker to record the presentation and activities; videos are available on the Hawai'i Farm to School Hui YouTube channel.
- Helped secure HDOH funding (\$49,959) and coordinated with Lead Instructor Kay Howe and BIISC to: 1) conduct the first RLWD PDE3 course on Hawai'i Island during SY1819, and 2) provide RLWD community workshops on all islands in collaboration with the Hawai'i Farm to School Hui Island Networks for the prevention of RLWD and to promote use of the UHH-DKICP RLWD curriculum.
 - A one-day community workshop was held on Hawai'i Island in fall 2018, and day-long community workshops were held during June 2019 on the islands of Kaua'i, O'ahu, Molokai, and Maui. Content was based on the RLWD curriculum.
 - Sixty seven participants attended the four workshops in June 2019 from Hawai'i public and independent K-12 schools, non-profit and community-based organizations, state agencies including HIDOE, HDOH, DLNR, and UH CTAHR, the O'ahu, Maui, and Kaua'i Invasive Species Committees, the Hawai'i Farmers Union United/Hana Chapter, several farms and ranches, and a commercial pest control company.

The Hawai'i Farm to School Hui hosts a number of useful resources on its website, www.farmtoschoolhui.org. Materials related to RLWD prevention and food safety include:

- RLWD Activity Book (UHH)
- RLWD Curriculum (UHH)
- Public service announcement for RLWD prevention (HDOH)
- Webinar recording on curricular resources for RLWD prevention through education (Hawai'i Farm to School Hui)
- School garden safety manual and poster (Hawai'i Farm to School Hui)
- School garden safety video (Waikiki School)
- Hawai'i Garden to Cafeteria Plan, online application, and webinar recording (Hawai'i Farm to School Hui and HIDOE School Food Services Branch)

Since 2010, the Hawai'i Farm to School Hui has served as the foremost advocate, convener, and driver of Hawaii's farm to school movement. The Hawai'i Farm to School Hui and its five Island Networks serve as the essential bridge between communities, government, and other statewide and national entities. The Island Networks and their lead organizations include:

- Kaua'i Farm to School Hui and Kaua'i School Garden Network: Mālama Kaua'i;
- O'ahu Farm to School Network: 'Iolani School and Kōkua Hawai'i Foundation;
- Molokai Farm to School Network: Sustainable Molokai;
- Maui Farm to School Network (includes Lāna'i): Grow Some Good; and
- Hawai'i Island School Garden Network: Māla'ai Culinary Garden of Waimea Middle School.

The Island Networks will be integral to delivery of the RLWD community workshops and PDE3 courses, and to the dissemination and use of the RLWD app. For over a decade, the Hawai'i Farm to School Hui and Island Networks have build partnerships, developed curricula and other resources, and conducted many community-based workshops, courses, and statewide conferences, a selection of which includes:

- 2008 - 2014: Annual statewide School Garden Conferences for educators;
- 2012 - Present: Annual Kū 'Āina Pā PDE3 course hosted by Hawai'i Island School Garden Network, O'ahu Farm to School Network, and partners for standards-based, garden-based learning supported by the Hawai'i School Garden Curriculum Map;
- 2014: Statewide Hawai'i Farm to School Conference
- 2014 - Present: Annual 'ĀINA In Schools PDE3 course hosted by Kōkua Hawai'i Foundation, based on the 'ĀINA In Schools curriculum for gardening, composting, and nutrition;
- 2015 - Present: Co-convening with UH CTAHR of the P-20 Agriculture Education Working Group with annual reports to the legislature;
- 2016 - 2018: Development of a School Garden Safety Manual and Poster, and provision of school garden safety workshops statewide;
- 2018 - Present: Development and piloting of the Hawai'i Garden to Cafeteria Plan in partnership with HIDOE School Food Services Branch and Slow Food USA;
- 2018 - Present: Development and piloting of an 'Ulu Education Toolkit in collaboration with Hawai'i 'Ulu Cooperative and UH College of Education STEMS² program; and
- Other community- and school-based workshops and webinars on the topics of Peace Gardens, Farm to ECE (e.g., Farm to Keiki), garden-based STEM learning, and local food procurement for Hawaii's schools.

Much of the Hawai'i Farm to School Hui's work is guided and carried out by an all-volunteer Steering Committee and the following active working groups of the Hawai'i Farm to School Hui:

- Communication and Outreach
- Curriculum and Professional Development
- Farm to Early Care and Education (ECE)
- Garden to Cafeteria

- Legislation and Policy
- Peace Gardens
- Rat Lungworm Disease Prevention Through Education
- School Food Systems
- 'Ulu Education

2. Facilities

The applicant shall provide a description of its facilities and demonstrate its adequacy in relation to the request. If facilities are not presently available, describe plans to secure facilities.

The Hawai'i Farm to School Hui is headquartered at the HIPHI offices in downtown Honolulu, with access to administrative support personnel, office equipment, and supplies. Training venues for the community workshops and PDE3 courses will be secured by the Project Coordinator in collaboration with on-island partners, ensuring access to adequate facilities for delivery of presentations and hands-on activities including outdoor demonstrations for RLW host control and data collection.

VI. Personnel: Project Organization and Staffing

1. Proposed Staffing, Staff Qualifications, Supervision and Training

The applicant shall describe the proposed staffing pattern and proposed service capacity appropriate for the viability of the request. The applicant shall provide the qualifications and experience of personnel for the request and shall describe its ability to supervise, train and provide administrative direction relative to the request.

Lydi Bernal, Project Manager

Lydi has over a decade of experience building school garden programs and growing Hawaii's farm to school movement. In 2014 she became the founding coordinator of the Hawai'i Farm to School Hui. Prior to her role as Hui Coordinator, Lydi served as Garden Education Coordinator with the Kōkua Hawai'i Foundation where she was the lead author of the 'ĀINA In Schools garden and compost curriculum and led trainings for several hundred teachers and volunteers annually. She is a certified O'ahu Master Gardener and graduate of Hawaii's Agricultural Leadership Program. As Coordinator of the Hawai'i Farm to School Hui, Lydi manages the Hui's work with support from an active Steering Committee of 21 committed volunteers from 11 community organizations, state, and county agencies, along with nine active working groups. Lydi's commitment to RLWD prevention was sparked in 2015 when three of her friends contracted RLWD: two by eating under-washed lettuce from a farmers' market and one by accidentally ingesting a slug in a restaurant salad. In her role as Project Manager, Lydi will supervise project personnel, manage the project budget, and ensure completion of project deliverables and reporting.

Kay (Kathleen) Howe, Lead Instructor

Kay has a Master of Science in Tropical Conservation Biology from UHH and is a published author of peer-reviewed papers pertaining to RLWD. She has worked with the Dr. Susan Jarvi Lab at UHH-DKICP since 2012. Her work as a graduate student under Dr. Jarvi was with both research and education outreach on RLWD prevention. She has intimate experience with the RLW parasite and the intermediate and definitive hosts of the parasite. With the lab, she participated in a number of studies including: the effectivity of vegetable wash solutions; a vaccine; and a human prevalence trial using a blood-test diagnosis. As part of her thesis, she explored the potential of disease transmission from drowned slugs in rainwater catchment tanks and has published the results. A former educator trained in place-based learning, as part of her thesis work, she also developed an IPM plan for the control of intermediate hosts for K-12 schools in Hawai'i, and a standards-aligned, research-based curriculum for K-12 students and teachers. During SY1819 she instructed a three-credit PDE3 course for teachers that educated teachers on the use of the IPM plan and curriculum. Through the PDE3 course and community workshops, Kay has engaged K-12 students, their teachers, and community members as citizen scientists who use the IPM plan to control and collect data on invasive gastropod species, and as community educators who share factual information with their communities to prevent RLWD. Kay believes that breaking the life cycle of the RLW and public education are crucial to reducing human case incidence. In her role as Lead Instructor, Kay will work with on-island course instructors and workshop facilitators to offer high quality professional development opportunities for all participants, while building the capacity of regional leads to carry forward and expand upon this project.

Sam Aruch, App Developer

Sam is the founder of Natural Resource Data Solutions Inc. (nrdsdata.com). NRDS is a web and mobile place-based project management system used by farmers and conservation managers to manage over 2 million acres throughout the state of Hawai'i for data collection, reporting, and strategy. Current NRDS Customers include taro farmers, botanical gardens, and some of Hawai'i's largest land owners and managers. Prior to NRDS, Sam worked as a biologist studying avian disease for USGS, and as a land manager for The Nature Conservancy and Pu'u Kukui Watershed Preserve protecting Hawai'i's native species. For the last 10 years, NRDS has worked with hundreds of resource managers to develop software that helps to manage and collect data. The current software is used by farmers and land managers for both daily operations and reporting. Sam has a BS in Biology from SUNY Geneseo and a Master of Geographic Information Systems from Penn State University.

Dr. Koh Ming Wei, Evaluator

Dr. Koh was the project evaluator for the following projects that are pertinent to the RLWD Prevention Through Education project:

- Charter School Farm to School Development funded by the Healy Foundation, 2017 - 2019.
- Teaching Change: Climate change education, funded by the USDA, Hawai'i Community Foundation, and Gear Up, 2015 - 2019.

- Republic of the Marshall Islands Public School System Learning Gardens program, funded by the Department of the Interior and National Science Foundation, 2015 - Present.

Dr. Koh conducted summative and formative assessments both qualitatively and quantitatively, including developing and administering evaluation tools, collating and analyzing the data, and writing reports on the findings.

2. Organization Chart

The applicant shall illustrate the position of each staff and line of responsibility/supervision. If the request is part of a large, multi-purpose organization, include an organization chart that illustrates the placement of this request.

Please see the attached "Hawaii Public Health Institute Organization Chart."

3. Compensation

The applicant shall provide an annual salary range paid by the applicant to the three highest paid officers, directors, or employees of the organization by position title, not employee name.

The annual salary range paid by HIPHI to its three highest paid employees is \$75,000 to \$100,000 for the Policy Director, Programs Director, and Executive Director.

VII. Other

1. Litigation

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

Hawaii Public Health Institute is not part of any pending litigation.

2. Licensure or Accreditation

The applicant shall specify any special qualifications, including but not limited to licensure or accreditation that the applicant possesses relevant to this request.

The Hawai'i Farm to School Hui and HIPHI are uniquely positioned, experienced, and equipped to connect the public, private, and non-profit sectors and Hawaii's communities to actively and successfully address this critical economic and public health issue for our state. This project is poised to serve as an empowering model for communities across the globe who are currently affected or will in the future be impacted by RLWD.

3. Private Educational Institutions

The applicant shall specify whether the grant will be used to support or benefit a sectarian or non-sectarian private educational institution. Please see Article X, Section 1, of the State Constitution for the relevance of this question.

This grant will not be used to support or benefit a sectarian or non-sectarian private educational institution.

4. Future Sustainability Plan

The applicant shall provide a plan for sustaining after fiscal year 2020-21 the activity funded by the grant if the grant of this application is:

- (a) Received by the applicant for fiscal year 2020-21, but
- (b) Not received by the applicant thereafter.

We believe in the power of public-private/non-profit partnerships for the solving of society's most difficult challenges. In order to continue the work of the Rat Lungworm Disease Prevention Through Education project, the Hawai'i Farm to School Hui and HIPHI will continue to seek funding from private foundations and government partners, while working collaboratively with various state agencies to explore a long-term collective commitment to equipping and empowering Hawaii's communities to play an active and ongoing role in RLWD prevention.

Hawaii Public Health Institute Organization Chart

