

## 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) Hawaii Compliance Express Certificate (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

*Carol Takahashi*

AUTHORIZED SIGNATURE

CAROLL TAKAHASHI, President

PRINT NAME AND TITLE

JANUARY 19, 2024

DATE

**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:

Oceanit Research Foundation

Amount of State Funds Requested: \$ 350,000

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

This grant-in-aid would fund the COMBATTING INVASIVE SPECIES pilot program that focuses on identifying and understanding invasive species that threaten Hawaii's unique environment, their habitat, and proactive measures to control, contain, and reduce invasive species from our fragile ecosystem. The program will provide students with a dynamic on the ground, hands-on learning experience to help them develop the skills that are necessary to navigate climate change related issues as the stewards of tomorrow. See attached for more information.

Amount of Other Funds Available:

State:                      \$ \_\_\_\_\_

Federal:                      \$ \_\_\_\_\_

County:                      \$ \_\_\_\_\_

Private/Other: \$ \_\_\_\_\_

Total amount of State Grants Received in the Past 5 Fiscal Years:

\$ 649,725

Unrestricted Assets:

\$ \_\_\_\_\_

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:

828 Fort Street Mall, Suite 600

City:    State:    Zip:

Honolulu    HI    96813

Contact Person for Matters Involving this Application

Name:  
Caroll Takahashi

Title:  
President

Email:  
ctakahashi306@gmail.com

Phone:  
(808) 383-1783

Federal Tax ID#:

██████████

State Tax ID#

██████████

*Carroll Takahashi*

Authorized Signature

Caroll Takahashi, President

Name and Title

Jan 19, 2024

Date Signed



## COMBATTING INVASIVE SPECIES PILOT PROJECT

### REQUEST

Oceanit Research Foundation (ORF) is requesting a grant-in-aid to conduct a pilot program designed to equip students with knowledge and tools to combat invasive species that threaten Hawaii's unique environment.

ORF is dedicated to equipping Hawaii's keiki to become local climate ambassadors. As future stewards of our community, they need to be empowered with an understanding of the science of climate change, its impacts on Hawaii's unique environment, and methods and technologies our local communities can take to mitigate climate-induced disasters which include wildfire fires, water scarcity, costal erosion, food insecurity, among others.

This grant-in-aid would fund a pilot program that focuses on identifying and understanding invasive species that threaten Hawaii's unique environment, their habitat, and proactive measures to control, contain, and reduce invasive species from our fragile ecosystem. The program will provide students with a dynamic on the ground, hands-on learning experience to help them develop skills that are necessary to navigate climate change related issues as the stewards of tomorrow. The program will culminate in the development of a publicly accessible website that the State can use to drive real time awareness of invasive species identification, leverages geotagging, artificial intelligence image classification models, and community participation.

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### BACKGROUND

Climate change mitigation and adaptation suffers from the "tragedy of the commons" paradigm. There are numerous local examples including the 2023 Lahaina fires, the coastal erosion of homes on the North Shore of O'ahu, the controversial Ala Wai flood mitigation plans with the U.S. Army Core of Engineers, and more. Over time the quantity, severity, and frequency of these issues will only increase with climate change.



We believe that meaningful action to adapt to climate change will be driven by community-based initiatives wherein Hawaii's stakeholders will need to come together to make difficult compromises for the greater community. We believe that the empowerment and inclusion of our young people in such community conversations is a critical ingredient to bringing our community together to make these difficult long-term decisions. Our keiki are the key, as they are unburdened by the-way-things-have-always-been-done approach. They bring a "beginners' mindset" that can adapt to a rapidly changing world that incorporates new technology and evolving scientific knowledge, and they will be the ones inherit our environment and climate problems.

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### PROPOSED APPROACH

Based on an internship model that has been successful in previous and current projects, the three pillars of the proposed Combatting Invasive Species Pilot Program are:

- educational curriculum on understanding climate change induced environmental change specifically affecting Hawaii (wildfires, coastal erosion, water scarcity, invasive species, etc.);
  - on the ground community engagement through local-based collaboration and coordination; and
  - empowerment of students by guiding them to lead the development and implementation of technology-based solutions.
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### OVERVIEW

- Network with organization(s) dedicated to helping students thrive in our physical, cultural and social environments.
  - Facilitate conversations with organization(s) that will help to stir interest in pilot program, garner participation, and provide a framework for meeting goals and objectives.
  - Engage people with expertise on climate change, invasive species, and ways to combat invasive species.
  - Coordinate a pilot project that would be participant-guided to achieve goals and objectives.
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### DELIVERABLES

- Report on pilot project.
  - Produce and make available video and / or written experience.
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## PROJECT TIME FRAME – 9 MONTHS

- Months 1 and 2: Partner and coordinate with organization(s) and other resources, facilitate contact with organizational network and set up mentor -intern teams
- Months 3 through 7: Develop and implement work plans; incorporate technological tools (website, video, AI cameras, etc.); coordinate team activities.
- Months 8 and 9: Finalize teamwork products, produce videos and finalize website, prepare final report.

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## ORF SERVICES

- Partner with organization(s) to collaborate with and establish teams and programs.
- Develop the scientific framework that is accessible to students and community, scalable across the state, with the ability to organically add to the domain knowledge of combatting invasive species.
- Provide informational resources on climate change and invasive species, develop tools and strategies to combat invasive species, and explore ways to document participants' stories.
- Introduce and empower participants with rapidly developing technological tools (Artificial intelligence, Machine learning, Data gathering, etc.,)
- Provide technical support, including AI cameras, drones, website development, etc.
- Facilitate and coordinate team activities, and provide overall administrative services, including updates and final report.

**COMBATTING INVASIVE SPECIES  
PILOT PROJECT**

**I.  
CERTIFICATION**



STATE OF HAWAII  
STATE PROCUREMENT OFFICE

**CERTIFICATE OF VENDOR COMPLIANCE**

This document presents the compliance status of the vendor identified below on the issue date with respect to certificates required from the Hawaii Department of Taxation (DOTAX), the Internal Revenue Service, the Hawaii Department of Labor and Industrial Relations (DLIR), and the Hawaii Department of Commerce and Consumer Affairs (DCCA).

**Vendor Name:** OCEANIT RESEARCH FOUNDATION

**Issue Date:** 01/19/2024

**Status:** **Compliant**

Hawaii Tax#:

New Hawaii Tax#:

FEIN/SSN#: XX-XXX9776

UI#: No record

DCCA FILE#: 99350

Status of Compliance for this Vendor on issue date:

Form	Department(s)	Status
A-6	Hawaii Department of Taxation	Compliant
8821	Internal Revenue Service	Compliant
COGS	Hawaii Department of Commerce & Consumer Affairs	Exempt
LIR27	Hawaii Department of Labor & Industrial Relations	Compliant

**Status Legend:**

Status	Description
Exempt	The entity is exempt from this requirement
Compliant	The entity is compliant with this requirement or the entity is in agreement with agency and actively working towards compliance
Pending	A status determination has not yet been made
Submitted	The entity has applied for the certificate but it is awaiting approval
Not Compliant	The entity is not in compliance with the requirement and should contact the issuing agency for more information



## Declaration Statement of Oceanit Research Foundation Pursuant to Chapter 42F, Hawai'i Revised 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, Hawai'i 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, Hawai'i 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, Hawai'i 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, Hawai'i 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.

Oceanit Research Foundation

(Typed Name of Individual or Organization)

Caroll Takahashi  
(Signature)

January 19, 2024

(Date)

Caroll Takahashi  
(Typed Name)

President  
(Title)

## Public Purpose

The Oceanit Research Foundation (ORF) mission is to transform lives through education, and positive environmental and social change. The proposed pilot project is one of the efforts to realize the Foundation's mission.

The pilot project is a significant step in empowering students of all ages with the scientific knowledge and experiential activities that help them understand climate change and its impacts on Hawai'i's coastal communities. With the help of this grant, ORF will design, develop, and implement a pilot program and refine the process to scale successfully across the state of Hawai'i. Participants would be empowered with scientific knowledge and hands-on skills to understand and develop strategies to deal with climate change especially along Hawai'i's coastal communities. Further, the pilot program will be designed to instill confidence and leadership skills that will enable participants to creatively navigate options and solutions to adapt to climate change.

Services that would be supported by the grant include the following:

- Partner with organization(s) to collaborate with and establish teams and programs.
- Develop the scientific framework that is accessible to students and community, scalable across the state, with the ability to organically add to the domain knowledge of combatting invasive species.
- Provide informational resources on climate change and invasive species, develop tools and strategies to combat invasive species, and explore ways to document participants' stories.
- Introduce and empower participants with rapidly developing technological tools (Artificial intelligence, Machine learning, Data gathering, etc.)
- Provide technical support, including AI cameras, drones, website development, etc.
- Facilitate and coordinate team activities, and provide overall administrative services, including updates and final report.

**COMBATTING INVASIVE SPECIES  
PILOT PROJECT**

**II.**

**BACKGROUND AND SUMMARY**



## 1. Description of Oceanit Research Foundation Background

ORF is a 501(c)(3) organization focused on positively impacting our community—and all of humanity—through lifelong learning, innovative curriculum development, community outreach, and STEM missions that benefit all learners, young and old. The core initiatives of ORF are built upon innovating new ways to impact learners with future-proof critical thinking, creative, and STEM skills such as Computer Science, Coding, Artificial Intelligence, and more. Fundamental to these skills is a framework of team building and collaboration.

## 2. Goals and Objectives Related to This Request

**Goal 1:** To empower students of all ages with scientific knowledge and experiential activities that will help them understand the problems related to climate change and invasive species that threaten Hawaii's biota.

### Objectives

- 1.1 Provide scientific information on climate change and its wide-ranging effects on our islands and coastal communities with a focus on invasive species.
- 1.2 Provide students opportunities for learning about climate change using a hands-on approach involving technological tools such as Artificial Intelligence (AI) cameras, drones etc.

**Goal 2:** To instill confidence and leadership skills that will enable participants to creatively navigate options and solutions to combat invasive species.

### Objectives

- 2.1 Identify tools and strategies that are current or may be available in the future to help communities identify invasive species, and develop proactive measures to control, contain and reduce invasive species in our fragile ecosystems.
- 2.2 Guide participants in selecting tools and strategies to explore, design, apply solutions as a team.
- 2.3 In team projects, guide and encourage participants to be innovative, creative and inclusive in designing their projects and telling their stories about their experiences.

## 3. Public Purpose and Need to be Served

This grant-in-aid would fund a pilot program that focuses on identifying and understanding invasive species that threaten Hawaii's unique environment, their habitat, and how proactive measures can control, contain, and reduce invasive species in our fragile ecosystem. The program will provide students with a dynamic on the ground, hands-on learning experience to help them develop the skills that are necessary to navigate climate change related issues as the environmental stewards of tomorrow. Further, the pilot program will be designed to instill confidence and encourage thinking skills that will enable participants to creatively navigate options and solutions to combat invasive species.

The program will culminate in the development of a publicly accessible website that the State can use to drive real time awareness of invasive species identification, leverages geotagging, artificial intelligence image classification models, and community participation.

#### **4. Target Population to be Served**

The immediate target population comprises a partner organization and its network of student participants in this pilot project. As they share their knowledge and tell their story, the target population will expand to encompass their friends, 'ohana, neighborhoods and communities – everyone who is concerned about the impacts of climate change along our shores.

#### **5. Geographic Coverage**

Possible geographic coverage include mauka and coastal areas in Windward O'ahu that may be highly vulnerable to invasive species. Geographic locations should afford easy and convenient access and parking for interns, mentors and resource experts.

**COMBATTING INVASIVE SPECIES  
PILOT PROJECT**

**III.**

**SERVICE SUMMARY AND  
OUTCOMES**



## 1. Scope of Work, Tasks and Responsibilities

The scope of work that would be funded by this grant-in-aid include the following tasks:

1. Partner with an organization and work within its framework to conduct a pilot program dedicated to helping students thrive in our physical, cultural, and social environments.
2. Develop the scientific framework that is accessible to the students and community, scalable across the state, with the ability to organically add to the domain knowledge of combatting climate change.
3. Provide scientific informational resources, including specialized speakers, climate change information, tools and options to adapt to climate change along coastal communities, and ways to document participants' stories.
4. Introduce and empower participants with rapidly developing technological tools (Artificial intelligence, Machine learning, Data gathering, etc.) along with the ability to convene conversations and collaborate across all stakeholders.
5. Facilitate and coordinate team activities.
6. Guide and motivate participants to collaborate, maintain an innovation mindset, and develop an ability to access, understand, and reframe the problem.
7. Provide technical support, including AI cameras, drones, website development, video and photographic storytelling, etc.
8. Develop effective ways to tell "The Story" of the overall pilot program.
9. Administer the project per funding requirements, including work plans, documentation, progress and final reports.

## 2. Projected Timeline – 9 Months

### Months 1 and 2

- Partner and coordinate with organization(s)
- Solicit interested participants
- Set up mentorship program, including intern – mentor teams

### Months 3 through 7

- Develop and implement work programs.
- Conduct interactive information sessions that present science-based information on invasive species and explores proactive measures to control, contain, and reduce invasive species in our fragile ecosystem. protect, contain and redclimate change adaptation strategies.
- Incorporate technological tools, e.g. website, video, AI cameras, etc.
- Guide, monitor, and mentor interns and team projects.

### Months 8 and 9

- Assist teams in documenting and telling their stories.
- Finalize videos and website.
- Prepare final report.

## 3. Quality Assurance and Evaluation Plan

The quality assurance and evaluation plan includes specific outcomes and metrics to be evaluated as follows:

- Effectiveness of science and technological tools in obtaining and recording data
  - Quantitative assessment– Do the technological and online tools achieve their purposes of providing a means to observe, record and document? What adjustments to technological and online tools need to be made to improve effectiveness?
  - Qualitative assessment– Are tools easy to use by the mentors and interns? What percentages of interns and mentors are able to use the tools? What additional training and adjustments need to be made to facilitate use?
- Level of organizational and team participation over time
  - Identify criteria to assess the level of interest and engagement over time.
  - Monitor intern products and progress to gauge increased knowledge about the subject matter.

#### **4. Measures of Effectiveness to be Reported to State Agency**

ORF will submit the following to measure the project's effectiveness.

- Work plans to the expending agency for review and input.
- Progress reports based on work plan and quality assurance and evaluation plan. Effectiveness criteria to include:
  - Status of tasks and participation levels
  - Percent completion
  - Adjustments needed to complete project
  - Documentation of meetings and significant communications
- Final report identifying participants, summarizing activities and evaluating effectiveness of project in meeting goals and objectives.

**COMBATTING INVASIVE SPECIES  
PILOT PROJECT**

**IV.  
FINANCIAL**



## BUDGET REQUEST BY SOURCE OF FUNDS

Period: July 1, 2024 to June 30, 2025

Applicant: Oceanit Research Foundation

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				
2. Payroll Taxes & Assessments				
3. Fringe Benefits				
TOTAL OVERHEAD COSTS	<b>\$38,000.00</b>			
B. OTHER CURRENT EXPENSES				
1. Contractual	\$312,000.00			
2. Insurance				
3. Lease/Rental of Equipment				
4. Lease/Rental of Space				
5. Staff Training				
6. Supplies				
7. Telecommunication				
8. Utilities				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
TOTAL OTHER CURRENT EXPENSES	<b>312,000</b>			
C. EQUIPMENT PURCHASES				
D. MOTOR VEHICLE PURCHASES				
E. CAPITAL				
<b>TOTAL (A+B+C+D+E)</b>	<b>350,000</b>			
<b>SOURCES OF FUNDING</b>		Budget Prepared By:		
(a) Total State Funds Requested		Caroll Takahashi	(808) 383-1783	
(b) Total Federal Funds Requested		Name (Please type or print)	Phone	
(c) Total County Funds Requested		<i>Caroll Takahashi</i>	1/19/2024	
(d) Total Private/Other Funds Requested		Signature of Authorized Official	Date	
<b>TOTAL BUDGET</b>		Caroll Takahashi, President		
		Name and Title (Please type or print)		

**BUDGET JUSTIFICATION - PERSONNEL SALARIES AND WAGES**  
 Period: July 1, 2023 to June 30, 2024

Applicant: **Oceanit Research Foundaton**

POSITION TITLE	FULL TIME EQUIVALENT	ANNUAL SALARY A	% OF TIME ALLOCATED TO GRANT REQUEST B	TOTAL STATE FUNDS REQUESTED (A x B)
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
JUSTIFICATION/COMMENTS:				

**BUDGET JUSTIFICATION - EQUIPMENT AND MOTOR VEHICLES**  
 Period: July 1, 2023 to June 30, 2024

Applicant: \_\_\_\_\_

DESCRIPTION EQUIPMENT	NO. OF ITEMS	COST PER ITEM	TOTAL COST	TOTAL BUDGETED
			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
TOTAL:				
JUSTIFICATION/COMMENTS:				

DESCRIPTION OF MOTOR VEHICLE	NO. OF VEHICLES	COST PER VEHICLE	TOTAL COST	TOTAL BUDGETED
			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
TOTAL:				
JUSTIFICATION/COMMENTS:				

**BUDGET JUSTIFICATION - CAPITAL PROJECT DETAILS**

Period: July 1, 2023 to June 30, 2024

Applicant: \_\_\_\_\_

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: 2021-2022	FY: 2022-2023	FY:2023-2024	FY:2023-2024	FY:2024-2025	FY:2025-2026
PLANS						
LAND ACQUISITION						
DESIGN						
CONSTRUCTION						
EQUIPMENT						
<b>TOTAL:</b>						
<b>JUSTIFICATION/COMMENTS:</b>						

Not applicable

**2. Anticipated Quarterly Funding Request for FY 2024**

Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total Grant
\$150,000	\$100,000	\$100,000	-0-	\$350,000

**3. Other Sources of Funding Being Sought for FY 2024**

The Foundation is not seeking other sources of funding for this project.

**4. Listing of State and Federal Tax Credits Granted in Prior Years, and Possible Future State and Federal Tax Credits for Capital Project**

ORF has no tax credits granted in prior years and no possible future tax credits for Capital Projects.

**5. Listing of All Federal, State and County Government Contracts, Grants and Grants-In Aid in Prior Three Years and for Program Funding in FY 2024**

GOVERNMENT CONTRACTS, GRANTS, AND / OR GRANTS IN AID					
Applicant: Oceanit Research Foundation				Contracts Total: \$649,725.00	
	CONTRACT DESCRIPTION	EFFECTIVE DATES	AGENCY	GOVERNMENT ENTITY (U.S./State/Hawaii/ Honolulu/ Kauai/ Maui County)	CONTRACT VALUE
1	Climate Change Toolkit for Hawai'i's Coastal Communities	Fiscal Year 2023	Hawai'i Technology Development Corporation	State of Hawai'i	\$200,000.00
2	Pathway to Purpose Innovation (PSPI) project for Governor Emergency Relief (GEER) for Grant Work-based Learning Program	Fiscal Year 2021	Department of Education	State of Hawai'i	\$449,725.00

**6. Balance of Unrestricted Current Assets As of December 31, 2023**

There are no unrestricted current assets as of December 31, 2023.



**COMBATTING INVASIVE SPECIES  
PILOT PROJECT**

**V.**

**EXPERIENCE AND CAPABILITY**

## 1. Necessary Skills and Experience

Oceanit Research Foundation is a 501(c)(3) organization focused on positively impacting our community—and all of humanity—through lifelong learning, innovation curriculum development, community outreach, and STEM missions that benefit all learners, young and old. The Foundation’s core initiatives are built upon innovating new ways to impact learners with future-proof critical thinking, creative, and STEM skills like Computer Science, Coding, Artificial Intelligence, and more.

Via Social Utilization of Resource for the Future, or SURF, the Oceanit Research Foundation, hopes to be part of an evolution in our State’s standard school curriculums. We hope to shift learning towards future skills. We do this by creating fundamental system change through teacher and education transformation. The educators who learn from SURF workshops and other events will become advocates for seeding Design Thinking, Computer Science, and Artificial Intelligence superpowers in our students of tomorrow. Through curriculum evolution, we will weave these superpowers into courses and classes that have not truly innovated in decades. Educators will lead the charge to empower students to pursue new disciplines never before taught in Hawai’i schools. These educators and collaborators will create the next generation, who in turn will launch and lead our future economy.

Examples of the Oceanit Research Foundation Projects are as follows:

- **Climate Change Toolkit for Hawai’i’s Coastal Communities** is an ORF current GIA-funded pilot project. The project focuses on the effects of coastal erosion adjacent to the historic Pai’a Mantokuji Soto Zen Mission located in Pai’a, Maui. Through this pilot program, student interns, who are being mentored to be future local ambassadors in climate change, are learning about the severe effects of climate change along this coastline through a hands-on approach involving technological tools, such as Artificial Intelligence (AI) cameras, as well as scientific field data gathering and documentation via photographs, slide shows and other on-line presentation venues. This approach is proving to be a successful template in actively engaging young people in all aspects of the project.
- **Aloha AI** is a collaborative infrastructure/service for students to use as they learn the fundamentals of machine learning, deep learning neural networks, and computer vision. Oceanit developed the Aloha AI Network to put the power of novel AI capabilities into the hands of students and teachers. Designed to be student-friendly yet, but industrial strength, the Aloha AI Network consists of three parts: Toolbox “edge” hardware devices that are setup locally, in depth training and eLearning tools from Oceanit experts, and cloud platform services to process captured data in a shareable, collaborative way. Aloha AI’s edge system allows student users to learn about, develop, and build simple machine learning models for object detection.

Through a collaborative dashboard, students share their learnings and build new custom dashboards or mobile and web applications. For example, students can use Aloha AI’s object detection capabilities to tally the number of people in the school library to answer questions like, how many people use the library on an average daily basis or what is the busiest time of day/week/month.

Aloha AI has other built-in object detection models that allow students to tally the number and types of vehicles used at their school such as cars, trucks, motorcycles, and buses. This counting and identification data can be analyzed by students to estimate the carbon footprint of transportation at their school, or optimize their parking assignments, or even to redesign the school's parking lot and thru-traffic systems. As students progress, they can learn to build their own custom detection models.

Aloha AI is the most recent program of the three core programs. Launched in 2020, Oceanit has recently created the first installation of the Aloha AI at Waipahu High School and will soon launch a second installation at the Kamehameha Schools Kapalama Upper campus.

- **Altino** is a revolutionary coding platform which Oceanit has championed since 2017 to bring creative problem-solving skills and mindsets to all K-12 schools in Hawai'i and beyond. Altino autonomous cars can use a multitude of programming languages—Android, Arduino, Python, and C++—that can be effectively utilized to make code-learning interactive, inspiring, and fun.

Computer science and coding are not only 21st century career skills; they are pathways to improved critical thinking, collaboration and problem-solving skills. For educators and students, Altino is an engaging and fun way to learn in the familiar context of driving a car. Since 2017, Oceanit has trained over 550 teachers from almost 200 schools using Altino. Approved by the Hawaii Department of Education, Altino is a PDE3 approved 3-day, 3-credit course for educators which covers coding as well as lesson plan development to incorporate coding into any subject areas, like history, social studies, English, art, and even PE.

## 2. Facilities

The administrative headquarters for the Oceanit Research Foundation is the Oceanit main office located at 828 Fort Street Mall, Suite 600, Honolulu, Hawai'i. In that the Foundation's actual work is conducted in classrooms and the outdoors, there is no need to secure other facilities.

**COMBATTING INVASIVE SPECIES  
PILOT PROJECT**

**VI.**

**PERSONNEL: PROJECT  
ORGANIZATION AND STAFF**

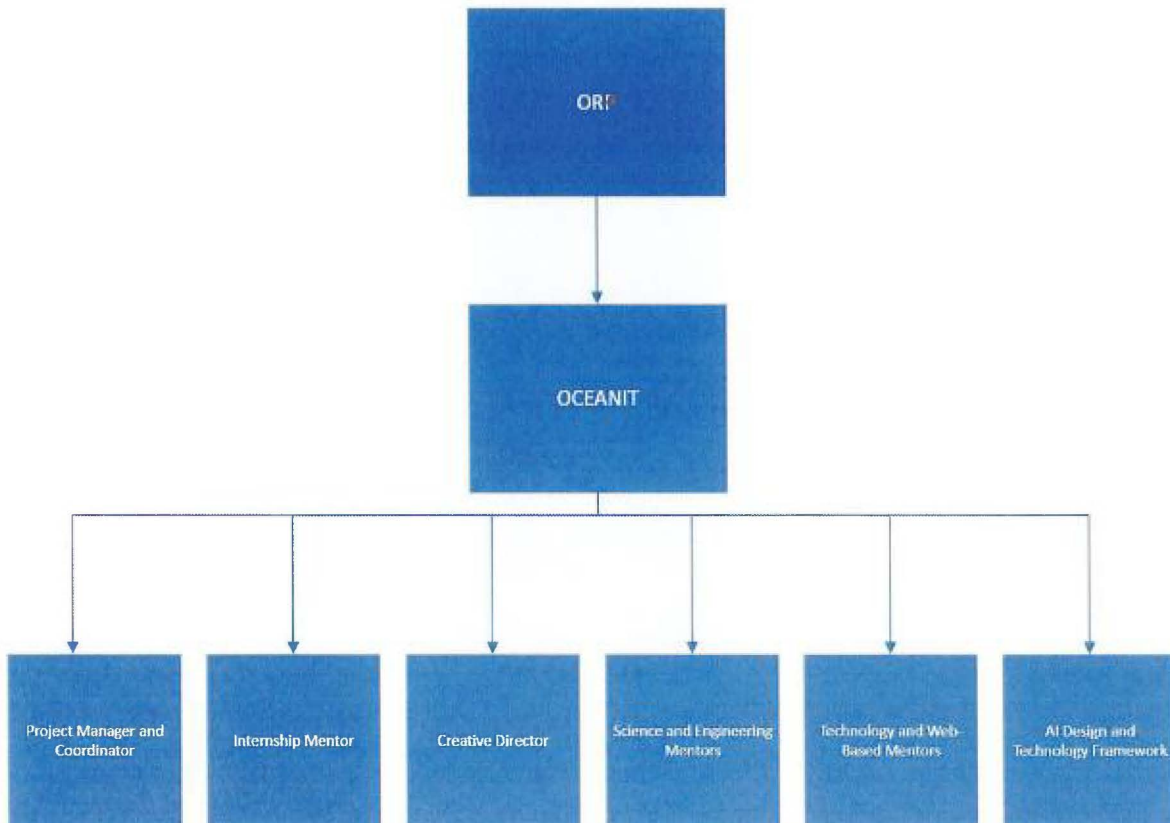


## 1. Proposed Non-ORF Specialists, Their Qualifications, and Project Tasks

ORF has no paid staff and will seek the services of outside specialists. The following lists the consultant specialist and project tasks. Training will be ongoing as needed.

Non-ORF Specialist	Project responsibilities
Oceanit	Project coordination, management, and administration for all aspects of the proposed project
	Science and engineering mentorship
	Technology and web-based mentorship
	Design and implementation of AI and other technology tools
	Individualized guidance and mentorship
	Creative direction

## 2. Organization Chart



## 3. Compensation

ORF has no paid employees or staff and will seek services of non-ORF specialists.

**COMBATTING INVASIVE SPECIES  
PILOT PROJECT  
OTHER**

## **1. Litigation**

ORF has no pending litigation to which we are a party, and has no outstanding judgment.

## **2. Licensure or Accreditation**

ORF has no special qualifications, including but not limited to licensure or accreditation relevant to this request.

## **3. Private Educational Institutions**

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

## **4. Future Sustainability Plan**

ORF plans to seek funding from the US NOAA agencies that address the Endangered Species Act and the State of Hawai'i Department of Land and Natural Resources to expand the program to a statewide level so that young people on all islands have access to information and strategy regarding combatting invasive species in Hawai'i.