Testimony Presented Before the
Senate Committee on Agriculture and Environment,
Senate Committee on Education
and
Senate Committee on Hawaiian Affairs
Tuesday, February 3, 2026 at 1:00 p.m.
By
Parwinder Grewal, Ph.D.
Dean
College of Tropical Agriculture and Human Resilience
and
Vassilis Syrmos, PhD
Interim Provost
University of Hawaiʻi at Mānoa

SB 2178 – RELATING TO INDUSTRIAL HEMP

Chairs Gabbard, Kim, and Richards, Vice Chairs Kidani and Lamosao, and Members of the Committees:

Thank for the opportunity to submit testimony with comments on SB 2178. This measure establishes an Industrial Hemp Program in the Department of Agriculture and Biosecurity (DAB) that includes comprehensive licensing, education, and support for non-cannabinoid industrial hemp cultivation and use. Establishes the Industrial Hemp Program Advisory Board to develop a strategic plan to establish and expand the processing infrastructure and commercialization of industrial hemp. Requires the University of Hawaiʻi College of Tropical Agriculture and Human Resilience (CTAHR) to support research and development focused on local adaptation, sustainability and economic development goals. Requires DAB to promote partnerships with Native Hawaiian practitioners, cooperatives, and ʻaīna-based programs. Adopts state building codes for hemp-based materials, including hempcrete. Appropriates funds.

CTAHR has the expertise to conduct hemp research and development as called for in this bill. CTAHR faculty have on-going research on industrial hemp at the Center for Applied Research and Extension Services (CARES) at Waimānalo. The objectives of the on-going research are to identify the optimal industrial hempseed varieties for producing and manufacturing hemp hurds for construction materials; to evaluate the phytoremediation potential of these varieties; to ensure the safety of the resulting biomass and by products; and to assess the potenial of the varieties for producing sustainable avialtion fuel. The appropriation in SB 2178 will support statewide community assets.

Thank you for the opportunity to submit testimony.

TESTIMONY OF
THE DEPARTMENT OF THE ATTORNEY GENERAL
KA ʻOIHANA O KA LOIO KUHINA
THIRTY-THIRD LEGISLATURE, 2026

ON THE FOLLOWING MEASURE:
S.B. NO. 2178, RELATING TO INDUSTRIAL HEMP.

BEFORE THE:
SENATE COMMITTEES ON AGRICULTURE AND ENVIRONMENT AND ON EDUCATION AND ON HAWAIIAN AFFAIRS

DATE: Tuesday, February 3, 2026 **TIME:** 1:00 p.m.

LOCATION: State Capitol, Room 224

TESTIFIER(S): Anne E. Lopez, Attorney General, or
Travis T. Moon or Christopher J.I. Leong, Deputy Attorneys General

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Chairs Gabbard, Kim, Richards, and Members of the Committees:

The Department of the Attorney General provides the following comments.

The purpose of this bill is to establish an Industrial Hemp Program within the Department of Agriculture and Biosecurity to regulate industrial hemp production in the State. The program would include requirements for licensing, inspections, and reporting. The bill also establishes an Industrial Hemp Program Advisory Board and provides a licensing fee exemption for Native Hawaiian agricultural cooperatives or organizations.

We have two suggestions to improve the bill.

Section 141-J of the new part proposed to be added to the Hawaii Revised Statutes (HRS), by section 3 of this bill, beginning on page 13, line 6, establishes the Industrial Hemp Program Advisory Board. The bill, however, does not place the Advisory Board within a principal department. Article V, section 6, of the Hawaii Constitution requires that all boards and commissions be placed within a principal department of the State. To address this issue, we recommend replacing line 8 on page 13 with the following: "program advisory board placed within the department of agriculture and biosecurity for administrative purposes to be appointed by the governor under . . . ."

Section 10(b) of the bill, beginning on page 19, line 19, states that the Department of Agriculture and Biosecurity may adopt rules to provide "exemptions for Native Hawaiian agricultural cooperatives or organizations from licensing fees under the industrial hemp program established under section 141-B, HRS, in recognition of their cultural, environmental, and community contributions." The purpose of the section of the bill is to promote agricultural cooperatives or organizations that utilize traditional and customary practices protected by article XII, section 7 of the Hawaii Constitution. For clarity and consistency with the Hawaii Constitution, we recommend that "Native Hawaiian agricultural cooperatives or organizations" be replaced with the phrase "agricultural cooperatives or organizations that utilize traditional and customary practices protected by article XII, section 7 of the Hawaii Constitution."

Thank you for the opportunity to provide these comments.

JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor

SHARON HURD
Chairperson
Board of Agriculture & Biosecurity

DEAN M. MATSUKAWA
Deputy to the Chairperson

State of Hawai'i
DEPARTMENT OF AGRICULTURE & BIOSECURITY
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TESTIMONY OF SHARON HURD
CHAIRPERSON, BOARD OF AGRICULTURE AND BIOSECURITY

BEFORE THE SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT, COMMITTEE ON EDUCATION AND COMMITTEE ON HAWAIIAN AFFAIRS

TUESDAY, FEBRUARY 3, 2026
1:00 PM
CONFERENCE ROOM 224 & VIDEOCONFERENCE

SENATE BILL NO. 2178
RELATING TO INDUSTRIAL HEMP

Chairs Gabbard, Kim and Richards, Vice Chairs Richards, Kidani and Lamosao, and Members of the Committees:

Thank you for the opportunity to testify on Senate Bill No. 2178. This bill establishes an Industrial Hemp Program in the Department of Agriculture and Biosecurity that includes comprehensive licensing, education, and support for non-cannabinoid industrial hemp cultivation and use. Establishes the Industrial Hemp Program Advisory Board to develop a strategic plan to establish and expand the processing infrastructure and commercialization of industrial hemp. Requires the University of Hawaii College of Tropical Agriculture and Human Resilience to support research and development focused on local adaptation, sustainability, and economic development goals. Requires DAB to promote partnerships with Native Hawaiian practitioners, cooperatives, and aina-based programs. Adopts state building codes for hemp-based materials, including hempcrete. Appropriates funds.

The Department of Agriculture and Biosecurity (DAB) supports the intent of this measure and offers the following comments to clarify the department's role and ongoing commitment to Hawai'i's industrial hemp industry.

Under Act 228 (2016), DAB was authorized to establish and administer the Industrial Hemp Pilot Program to allow the cultivation of hemp for research purposes and the distribution of hemp seeds within the State. In 2020, Act 14 ended the pilot program and legalized commercial hemp production, placing hemp growers under the licensing authority of the USDA Domestic Hemp Production Program. That law also

tasked DAB with enforcing hemp cultivation buffer zones and overseeing the transport of raw hemp materials.

Senate Bill 2178 proposes to assign DAB responsibilities that largely mirror those currently administered by the USDA, including licensing, inspection, sampling, testing, and support for the cultivation of industrial hemp. These functions would duplicate existing federal oversight. Additionally, the measure authorizes DAB to assess licensing fees and penalties for non-compliance, whereas the USDA does not charge fees and enforces compliance primarily through license revocation.

The department notes that hemp growers have previously expressed concern regarding duplicative state regulation and additional fees, which could create unnecessary burdens and adversely impact the economic viability of Hawai‘i’s industrial hemp industry.

Should this measure be enacted, DAB would require additional staffing and resources to effectively carry out the proposed responsibilities.

Thank you for the opportunity to provide testimony on this measure.

HO`OMANA PONO, LLC

Mamua Kānaka

ATTENTION:

COMMITTEE ON AGRICULTURE AND ENVIRONMENT

Senator Mike Gabbard, Chair

Senator Herbert M. "Tim" Richards, III, Vice Chair

COMMITTEE ON EDUCATION

Senator Donna Mercado Kim, Chair

Senator Michelle N. Kidani, Vice Chair

COMMITTEE ON HAWAIIAN AFFAIRS

Senator Herbert M. "Tim" Richards, III, Chair

Senator Rachele Lamosao, Vice Chair

January 31, 2026

Re: **SB2178 RELATING TO INDUSTRIAL HEMP**

Aloha Chairs, Vice Chairs and Members of the Committees on Agriculture & Environment; Education; & Hawaiian Affairs!

We **STRONGLY SUPPORT** this, Bill.

For native Hawaiians, this Bill has the potential for us to finally realize the promise that the Hawaii Legislature made in 1990, when this August Body introduced the “Purpose Bill” under **SB3236**. This bill became **Act 349** and is now enshrined as **§101** of the Hawaiian Homes Commissions Act.

In **§101 you said:**

“(a) The Congress of the United States and the State of Hawaii ***declare that the policy of this Act is to enable native Hawaiians to return to their lands in order to fully support self-sufficiency for native Hawaiians and the self-determination of native Hawaiians*** in the administration of this Act, and the preservation of the values, traditions, and culture of native Hawaiians.”

You also said:

"(b) ***The principal purposes*** of this Act include but are not limited to:

(1) ***Establishing a permanent land base for the benefit and use of native Hawaiians, upon which they may live, farm, ranch, and otherwise engage in commercial or industrial or any other activities as authorized in this Act***;

(2) ***Placing native Hawaiians on the lands set aside under this Act in a prompt and efficient manner*** and assuring long-term tenancy to beneficiaries of this Act and their successors.

It is those words "***In a Prompt and Efficient Manner***…" that has been taken the State of Hawaii, DHHL and HHC **36 YEARS** to fulfill, and to virtually **NO AVAIL**.

In 1990, when you created **§101** there was just over 4,000 applicants on the Hawaiian Homes Wait List. Today, there are nearly 30,000! Many of those who were on the wait list have long since passed, like my mother: Catherine Emmalika Manaole Conner, a.k.a. "Geronimo", who passed in 1995, after being on the wait list for 30 years! ***YOUR PROMISE TO HER CAME 5 YEARS TOO LATE***!

Today, I have a Pilot Program on four acres of Hawaiian Home Lands. This bill would allow me to become self-sufficient and to practice self-determination.

With DHHL and the HHC coming to this Legislature every year, begging for the funds to build infrastructure and Homes. Yet, there always seems to be one excuse after another as to why those budget requests are rejected.

Well, then pass this bill. Let us grow our own wealth. With the passing of this Bill, we will have the capacity to build our own homes, as well as create a viable industry that will finally allow us to become self-sufficient and to determine the direction of our future for ourselves.

You can prove those words that were promised to native Hawaiian Trust Beneficiaries **36 YEARS AGO** to now be a true statement by passing this historical bill.

I will NOT be the second generation to die on the wait list, as I completed the one-year promise that I made to prove this pilot project a success, I will obtain my 99-year lease. With industrial Hemp, I will be able to bring back my `Ohana from the continent to a home built from Hemp and be a small part of a massive industry that will enable native Hawaiian Trust Beneficiaries to thrive.

It has been the Democratic Party that has constantly told native Hawaiians to "Stand down Hawaiians for the greater good of everybody!" Now it is time for everybody

to “Stand Down” and support this HISTORICAL BILL for the greater good of native Hawaiian Trust Beneficiaries!

Please pass this bill and live up to your PROMISE to native Hawaiian Trust Beneficiaries! We waited long enough. Mahalo.

De Mont Kalai Manaole

De MONT Kalai Manaole, Co-Manager
Ho`omana Pono, LLC
86-044 Hoaha St.
Wai`anae, HI 96792
Phone: (808) 726-5753
Email: hoomanaponollc96792@gmail.com

Aloha Chair and Members of the Committee,

My name is Marcus Serrano, and I am submitting testimony in strong support of SB 2178, which establishes an Industrial Hemp Program for Hawai‘i.

SB 2178 takes an important step toward creating a clear, practical, and accessible pathway for industrial hemp production in Hawai‘i—particularly for non-cannabinoid uses such as fiber, hurd, grain, construction materials, and environmental applications. By recognizing industrial hemp as an agricultural and materials-based industry, the bill appropriately distinguishes it from cannabinoid-focused cultivation and aligns with federal intent under the U.S. Domestic Hemp Production Program.

SB 2178 provides Hawai‘i with the flexibility to design an industrial hemp program tailored to local agricultural conditions, island logistics, and community values, while establishing the foundational structure needed to responsibly implement a new industry. The bill also supports research, workforce training, and education pathways that build local capacity, promote land stewardship, and deliver long-term economic and cultural benefits statewide.

I support the bill’s use of committees and advisory bodies to guide program implementation. I respectfully recommend that SB 2178 establish high-level statutory parameters while delegating specific requirements—such as licensing, inspections, fees, transportation, and enforcement—to administrative rules developed in consultation with the Industrial Hemp Advisory Board. This approach allows the program to remain aligned with USDA requirements, adapt to industry developments, and respond efficiently to federal changes without requiring frequent statutory amendments.

SB 2178 lays a strong foundation for agricultural innovation, local materials production, workforce development, and climate-resilient building solutions. I respectfully urge the Committee to pass SB 2178.

Mahalo for the opportunity to submit testimony.

Respectfully submitted,

Marcus Serrano

Articles included are:

1) Letter of support from Senator Gabbard.
2) Letter of support from Sharon Hurd.
3) Maui County Green Grants (FY26) – Hemp for the Aina: Restoring Contaminated Lands Application.
4) Maui County Green Grants (FY26) – Foundations of Change: Hemp as a Catalyst for regenerative Construction in Maui Application.

SENATOR MIKE GABBARD

21ST DISTRICT

KAPOLEI, MAKAKILO,
KALAELOA, AND PORTIONS OF
FERNANDEZ VILLAGE AND EWA

The Senate
Ka ʻAha Kenekoa

STATE CAPITOL
HONOLULU, HAWAIʻI 96813

CHAIRMAN
AGRICULTURE & ENVIRONMENT

MEMBER
JUDICIARY

MEMBER
GOVERNMENT OPERATIONS

August 13, 2025

Marcus Serrano
Hawaiʻi Industrial Hemp
84-740 Kili Dr, Apt 1430
Waiʻanae, HI 96792

Aloha e Marcus,

I am pleased to extend my full support for Hawaiʻi Industrial Hemp and your groundbreaking projects, *Hemp for the ʻĀina: Restoring Contaminated Lands* and *Foundations of Change: Hemp as a Catalyst for Regenerative Construction in Maui*.

Your efforts to introduce industrial hemp into Hawaiʻi's housing industry and to remediate contaminated soil reflect exactly the kind of sustainable innovation and regenerative development our state needs. By combining environmental protection, green building practices, and community resilience, your vision addresses critical challenges facing our islands — from affordable housing shortages to soil health restoration.

I also commend your commitment to fostering partnerships with Native Hawaiian practitioners, cooperatives, and ʻāina-based programs, and your work with key stakeholders such as the Building Industry Association of Hawaiʻi and UH CTAHR. This collaboration will help build a strong foundation for a thriving local industrial hemp economy that is distinct from hemp grown for cannabinoids.

The proposed **Hawaiʻi Industrial Hemp Infrastructure and Innovation Act** offers a smart, forward-thinking framework that can advance research, support climate-smart agriculture, and create green jobs while keeping benefits in our local communities. This is a vision I believe Hawaiʻi should pursue with urgency and determination.

Please know you have my continued encouragement as you move these projects forward. I look forward to seeing how your work will contribute to a healthier, more sustainable, and economically resilient Hawaiʻi.

Me ke aloha pumehana,

Mike Gabbard
State Senator, District 21

415 S. BERETANIA STREET, ROOM 201 | HONOLULU, HAWAIʻI 96813
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August 26, 2025

Marcus Serrano
Hawai'i Industrial Hemp
84-740 Ki Dr, Apt 1430
Waianae, HI 96792

Dear Mr. Serrano,

I strongly support your leadership in advancing regenerative development and a sustainable industrial hemp economy in Hawai'i, which directly contributes to our state's vision of a resilient, diversified, and innovative future.

Through initiatives such as *Hemp for the 'Āina: Restoring Contaminated Lands and Foundations of Change: Hemp as a Catalyst for Regenerative Construction in Maui*, you are showcasing the powerful role industrial hemp can play in healing our lands, strengthening communities, and creating new pathways for resilience and innovation.

Your work to empower small farmers, expand educational opportunities, and pioneer applications of hemp in soil restoration and construction is laying a strong foundation for a sustainable future. These efforts exemplify leadership not only for Hawai'i, but also for other island regions and rural communities.

I commend your vision and commitment, and I look forward to the positive impacts your industrial hemp projects will bring to our agricultural sector and to the people of Hawai'i.

Sincerely,

Sharon Hurd

Sharon Hurd
Chairperson, Board of Agriculture & Biosecurity

LamqGVAx

Foundations of Change: Hemp as a Catalyst for Regenerative Construction in Maui

Application details

Organization details

Select which Sustainability Grants Category you are applying for:	Green Building & Resilient Housing Grant
Total amount of funding requested	$100,000.00
Organization name	Hawaii Industrial Hemp
Type of organization	For-profit
Organization phone number	+18082083237

Organization mailing address

> 84-740 Kili Dr Apt 1430 Waianae HI, 96792

Organization's website address https://hawaiiindustrialhemp.com

Organization background

> **Hawai'i Industrial Hemp** is a regenerative development organization (LLC) dedicated to establishing a thriving, locally rooted industrial hemp economy in Hawai'i. Our mission is to cultivate sustainable solutions for housing, agriculture, and community resilience by advancing the use of industrial hemp in construction, soil restoration, and circular bio-based manufacturing.
>
> Formed in response to Hawai'i's urgent need for climate-resilient infrastructure and agricultural diversification, our organization brings together farmers, builders, cultural practitioners, researchers, and policy advocates to develop a comprehensive hemp ecosystem — from seed to structure.
>
> We are currently leading efforts to:
>
> - Advocate for the adoption of **Appendix BL of the 2024 International Residential Code** to enable legal use of **hempcrete** in Hawai'i building projects. https://codes.iccsafe.org/content/IRC2024P2/appendix-bl-hemp-lime-hempcrete-construction
> - Build partnerships with the **University of Hawai'i**, regenerative farmers, and Native Hawaiian organizations to research locally adapted hemp cultivars.

- Launch an **industrial hemp cooperative** focused on supply chain development, processing infrastructure, and green workforce training.
- Engage with policymakers to distinguish **industrial hemp (fiber, hurd, grain)** from cannabinoid cultivation, enabling a separate regulatory and development pathway for sustainable construction.
- Partner with **builders and organizations already working with hempcrete in Hawai‘i and across the continental U.S.** to exchange knowledge, accelerate technical training, and co-develop demonstration projects grounded in proven methods.

Application Contact Name	Marcus Serrano
Application contact telephone number	+18082083237
Application contact email	info@hawaiiindustrialhemp.com
Is this organization or affiliate, currently receiving grant monies from any County of Maui office in fiscal year 2025?	✓ No
Is this organization or affiliate, planning to apply or has applied for grant funding from any other County of Maui office in fiscal year 2026?	✓ No
If you have received a grant from the County of Maui in the past have your quarterly reports been submitted on time?	✓ We have not received a County of Maui grant in the past
Do you currently have any existing grants or funding sources that could conflict with or overlap with the activities or objectives of the work proposed in this application?	✓ No
Have you obtained all of the necessary permits to complete the work you are outlining in this application? If not, please explain what types of permits are necessary for the described work in this application in the section below.	✓ No
Will any of the required permits need to be obtained from the County of Maui?	✓ Yes

If "yes" was checked for any of the questions above, provide details below.

We have not yet obtained all necessary permits, as the project is currently focused on research, planning, and stakeholder engagement. As the initiative progresses into implementation, we anticipate securing permits for hemp cultivation, agricultural trials, and eventual processing or demonstration construction activities. We will work closely with the Hawai‘i Department of Agriculture, County of Maui departments (Planning, Public Works, Fire, etc.), and UH partners to ensure full regulatory compliance at each phase.

Here is an estimate of the permits we would need for this project, along with their issuing authority.

Activity	Permit / Approval	Issuing Authority
Demonstration Build (Hempcrete Structure)	Building Permit; adherence to IRC codes; possible materials testing approval	County of Maui Department of Publi Works – Building Permits Division

---

Project management

Project manager	Marcus Serrano
Title	Project Manager
Project manager phone number	+18082083237
Project manager email	marcus.serrano@mogr33n.com

Project sustainability

To ensure this project's long-term sustainability and impact beyond the grant period, Hawai'i Industrial Hemp is actively pursuing the following strategies:

1. Formation of a Hemp Cooperative for Economic Continuity

We are establishing a **member-owned cooperative** to manage ongoing cultivation, processing, and manufacturing efforts. This model empowers local farmers, builders, and entrepreneurs to share in both governance and financial benefits, ensuring collective investment and long-term stewardship.

2. Development of a Permanent Processing Facility

We are actively working toward the development of a **hemp fiber and hurd processing facility on Maui**, which will serve as a cornerstone of the local hemp construction economy. This facility will provide processing capabilities for Maui-grown hemp and allow for direct production of construction-grade materials (e.g., hempcrete aggregate, insulation), reducing reliance on imports and stimulating local job creation.

3. Establishing Self-Initiated Home Projects

To demonstrate proof of concept and generate demand, we plan to **develop our own hemp-based residential home projects**. These homes will serve as replicable models for affordable, climate-resilient construction in Maui and throughout Hawai'i. These builds will also provide case studies, performance data, and opportunities for local training and certification.

4. Strategic Partnerships with Builders, Researchers, and Industry Leaders

We are building lasting relationships with:

- **Local regenerative farmers** and **Native Hawaiian land stewards**
- **Builders and architects** already working with hempcrete in Hawai'i and on the mainland
- **University of Hawai'i** and other institutions for ongoing research, workforce development, and data analysis

These relationships will continue to support technical innovation, applied research, and community adoption beyond the scope of this initial funding.

5. Diversified Funding Pipeline

We are actively identifying and preparing to pursue additional funding through:

- **Federal programs**

- **Local grant programs** (State and County level)
- **Private foundations** focused on regenerative agriculture, climate resilience, and Indigenous innovation
- **Impact investors and social enterprises** interested in supporting sustainable building material startups

We also intend to **generate earned revenue** through cooperative membership dues, consulting, product prototyping, and community trainings in the medium term.

6. Policy and Code Integration

By working to integrate **hempcrete into local building codes** via adoption of IRC Appendix BL (https://codes.iccsafe.org/content/IRC2024P2/appendix-bl-hemp-lime-hempcrete-construction), we aim to establish a lasting regulatory foundation that will allow future projects to scale without needing ongoing grant support.

7. Open Access to Knowledge and Data

We will publish our findings, frameworks, and supply chain maps as open resources for community use and replication, ensuring the knowledge created continues to serve Hawaiian communities, builders, and landowners long after the initial grant period.

Risk management

While this project focuses on planning, research, and system development, we recognize various risks that could impact its progress and future implementation. Below are the potential risks and the strategies we will use to mitigate them:

1. Regulatory Uncertainty

Risk: Hempcrete is not yet codified in Hawai‘i building policy. Without formal recognition of the 2024 IRC Appendix BL, permitting future builds may face delays or obstacles.

Mitigation:

- Engage early with County building officials to introduce the IRC hemp-lime standards.
- Provide supporting documentation from jurisdictions where hempcrete is already permitted.
- Collaborate with legal and architectural partners to draft local code amendments.

2. Limited Processing Infrastructure

Risk: Lack of a local facility to process hemp fiber and hurd may limit material availability for future construction projects.

Mitigation:

- Conduct technical assessments and business modeling for a modular processing facility.
- Explore partnerships for equipment leasing or co-investment in infrastructure.
- Investigate mobile processing units as an interim solution.

3. Permitting Delays

Risk: Land use, building, or agricultural permitting may be delayed, especially for demonstration projects.

Mitigation:

- Phase the project so that permitting-dependent activities occur after initial planning is complete.
- Initiate permitting consultations during Phase 1.
- Partner with organizations experienced in Maui County development protocols.

4. Agricultural Viability

Risk: Hemp cultivars may not produce ideal yields or material quality in Maui’s specific microclimates.

Mitigation:

- Begin with small-scale cultivar trials in diverse locations.
- Consult UH CTAHR researchers and existing farmers on island.
- Use multiple fiber-hardy varieties to compare outcomes and build seed knowledge.

5. Funding Continuity

Risk: Insufficient follow-up funding could delay scale-up efforts beyond the grant period.

Mitigation:

- Diversify funding with federal, philanthropic, and investor sources.
- Design monetizable services (consulting, education, materials) within the co-op model.
- Produce robust deliverables and a replicable roadmap to attract additional support.

6. Community Engagement & Perception

Risk: Misconceptions about hemp (e.g., confusion with cannabis) may hinder community support or participation.

Mitigation:

- Offer public education campaigns and hands-on workshops.
- Frame hempcrete as a fire-resistant, healthy, and affordable building material.
- Highlight Native Hawaiian and local-led stewardship in all messaging.

7. Knowledge Gaps & Material Adoption

Risk: Builders, architects, and permitting officials in Hawai‘i may have limited familiarity or comfort with using hempcrete and bio-based materials — slowing adoption.

Mitigation:

- Host training sessions and certifications with experienced hemp builders from Hawai‘i and the mainland.
- Develop a Maui-specific **“Hempcrete Builder’s Guide”** with environmental, structural, and cultural context.
- Create case studies, demonstration builds, and video documentation to build confidence and share success.

Project purpose

Project summary (20%)

Foundations of Change: Hemp as a Catalyst for Regenerative Construction in Maui

This project seeks to lay the foundation for a sustainable and locally-driven industrial hemp construction economy in Maui County, aligning hands-on research, inclusive education, policy innovation, and cooperative enterprise to foster regenerative building practices.

- **Conduct Research and Planting Trials:**
  The initiative begins with rigorous field research, launching hemp cultivar trials and soil compatibility assessments to identify varieties best suited to Maui’s unique environment and construction needs.
- **Train Community Members and Host Workshops:**
  To empower Maui’s diverse communities, the project will offer hands-on training and educational workshops focused on hemp-based building. Special outreach will prioritize women, youth, Native Hawaiian practitioners, and other underrepresented groups, while welcoming all interested citizens eager to participate in sustainable construction.
- **Develop a Feasibility Study and Create an Industrial Hemp Cooperative:**
  Parallel to research and education, the team will assess the feasibility of local infrastructure for hemp processing. Stakeholders will then form an industrial hemp cooperative—a farmer- and builder-led network that will organize processing and distribution across Maui, with the capacity to expand to other Hawaiian islands.

- **Align Building Code and Policy Frameworks:**
  The project will collaborate closely with county officials, planners, and permitting staff to review and initiate integration of IRC Appendix BL. This vital policy step will open the door for code-compliant hempcrete construction, supporting scalable, climate-smart, and resilient housing solutions.

Through these interlinked objectives, the project aims to:

- Elevate local expertise in sustainable building,
- Create new green jobs and pathways for underrepresented groups,
- Develop a scalable cooperative model for broader impact across Hawai‘i,
- And ensure hemp-based, regenerative construction is accessible, permitted, and impactful for Maui’s people and environment.

Statement (25%)

Maui County is facing a critical housing shortage, a significant climate vulnerability, and a growing dependence on imported construction materials — all exacerbated by the 2023 wildfires, rising housing costs, and stalled development of resilient local alternatives.

Recent housing data from the *Hawaii Housing Demand: 2025–2035* report reveals that Maui County will need an average of 5,138 additional housing units over the next decade to meet long-term demand. This stark projection highlights the gaps in the current housing pipeline, especially for affordable and resilient homes that can withstand Maui’s changing environmental conditions.

As of 2022, Maui recorded one of the highest median home prices in the state — exceeding $1 million for single-family homes — placing homeownership far out of reach for many residents. High costs limited buildable land, and reliance on imported materials are causing delays, price surges, and inequitable access to safe homes.

The recent 2023 Lahaina wildfires further intensified housing instability, displacing thousands and underscoring the urgent need for durable, locally sourced, and fire-resilient building solutions.

Yet, Hawai‘i currently lacks the infrastructure, policy pathways, and local supply chains necessary for industrial hemp–based construction — despite hempcrete’s inclusion in the **2024 International Residential Code (Appendix BL)**. Without cultivating a viable framework for cultivation, processing, regulatory acceptance, and workforce development, future housing efforts will continue to rely on high-cost, supply chain–vulnerable, and carbon-intensive materials.

This project directly addresses this gap by creating a comprehensive roadmap for industrial hemp–based construction in Maui. From cultivar trials and policy alignment to processing feasibility and community-led demonstrations, this project responds to critical unmet needs in housing, climate resilience, and equitable opportunity — while supporting a circular, regenerative economy grounded in Native Hawaiian values of stewardship and responsibility.

Project beneficiaries

Primary Beneficiaries:

1. Local Families and Housing-Insecure Residents

Maui residents facing housing instability — particularly those displaced by wildfires, priced out by rising housing costs, or living in substandard conditions — are the central human beneficiaries of this project. By laying the foundation for locally sourced, fire-resilient, and affordable building materials, this project will help increase future access to durable housing options designed for Hawai‘i’s unique environmental and cultural context.

2. Women, Youth, and Native Hawaiian Cultural Practitioners

The project intentionally engages women, youth, and Native Hawaiian practitioners in training, design, and leadership roles throughout the development of the local hemp industry. These groups are often underrepresented in the construction and agriculture sectors yet are deeply impacted by housing, climate, and economic inequities. By providing pathways into green

jobs, skills-based education, and cooperative development opportunities, the project promotes intergenerational resilience and cultural leadership.

3. Local Farmers and Regenerative Land Stewards

Industrial hemp offers a rotational, regenerative crop that can restore degraded soils, improve biodiversity, and offer a high-value alternative to extractive monoculture farming. Farmers participating in cultivar trials or future fiber cultivation will benefit from access to training, processing infrastructure, and inclusion in the emerging cooperative model that ensures shared economic value.

4. Maui County Ecosystems

The project contributes to ecosystem health by reducing reliance on carbon-intensive and chemically treated imported building materials. By promoting carbon-sequestering crops, natural building materials, and waste-to-resource models, the project enhances soil fertility, reduces wildfire risk through improved land use, and protects native ecosystems from further degradation associated with conventional development.

How Beneficiaries Will Benefit

- Increased access to healthy, affordable, fire- and mold-resistant homes for residents in need
- Job creation and training opportunities in regenerative agriculture, natural building, and material processing
- Culturally grounded workforce development for women, youth, and Native Hawaiian leaders
- New market opportunities for local farmers through hemp fiber and hurd production
- Ecosystem restoration and climate resilience, through regenerative land use and carbon-negative materials
- Knowledge access and inclusion through workshops, educational materials, and demonstration projects designed for community benefit

Partnerships and collaboration

Key Partnerships and Collaborations

The success of *Foundations of Change: Hemp as a Catalyst for Regenerative Construction in Maui* relies on a growing network of collaborators who bring expertise, cultural guidance, technical skills, and community connections. These partnerships ensure the project is inclusive, place-based, and capable of creating long-term systems change.

1. Native Hawaiian Organizations and Cultural Practitioners

Role: Cultural stewardship, community engagement, and traditional ecological knowledge

Contribution: Guidance on land use, community protocol, and integration of traditional Hawaiian values into the framework for regenerative housing. These partners also help lead outreach to women, youth, and rural families.

2. University of Hawai‘i – College of Tropical Agriculture and Human Resources (UH CTAHR)

Role: Agricultural research, soil testing, cultivar selection, and knowledge transfer

Contribution: Assisting with identifying suitable industrial hemp strains for Maui’s climate and advising on trial plots and processing research. CTAHR may also help evaluate ecological impact and nutrient cycling benefits of hemp as a regenerative crop.

3. Builders and Hempcrete Practitioners (Hawai‘i and Mainland)

Role: Technical advisors, training facilitators, and construction mentors

Contribution: Providing hands-on training, design input, and support for early-stage prototyping and demonstration projects. These practitioners bring expertise in permitting, code compliance, and material testing.

4. Local Farmers and Regenerative Land Stewards

Role: Pilot growers, research collaborators, and future supply chain partners

Contribution: Hosting small-scale trials, offering agricultural insight, and participating in early-stage cooperative development. Their on-the-ground experience ensures that the cultivation model is realistic and adaptive to Maui's microclimates.

5. Policy Advocates and Planning Consultants

Role: Code analysis, permitting guidance, and policy drafting

Contribution: Supporting the County's exploration and potential adoption of the 2024 IRC Appendix BL (hemp-lime construction), and identifying a viable regulatory pathway for the use of hempcrete in Maui's building code.

6. Maui-Based Nonprofits Focused on Housing and Sustainability

Role: Community alignment, wraparound services, and project amplification

Contribution: Supporting outreach to housing-insecure families and vulnerable communities, sharing public education opportunities, and aligning with ongoing wildfire recovery and resilience initiatives.

7. Industrial Hemp Cooperatives and Innovators (Continental U.S.)

Role: Peer exchange, mentorship, and supply chain modeling

Contribution: Sharing lessons learned, providing open-source business tools, and offering technical support for startup processing infrastructure and cooperative business design.

Scalability Across Hawai'i

While this project is anchored in Maui, it is intentionally designed to create a replicable framework that can expand across all Hawaiian islands. By documenting best practices, building code pathways, cultivar performance, and cooperative models, *Foundations of Change* aims to support a statewide transition to regenerative, hemp-based construction — connecting communities through shared values of 'āina-based living, self-sufficiency, and climate resilience.

Project impact

Project goals

Primary Objectives:

1. Conduct Research and Planting Trials
Initiate hemp cultivar trials and soil compatibility assessments.

2. Train Community Members and Host Workshops.
Create accessible educational opportunities and hands-on trainings focused on women, youth, Native Hawaiian practitioners, and other underrepresented groups in sustainable construction. Inclusive of everyone who is interested in learning about building with industrial hemp.

3. Develop a Feasibility Study and Create an Industrial Hemp Cooperative
Assess the feasibility of local processing infrastructure and create an industrial hemp cooperative that will serve as a processing and distribution model that connects farmers, builders, and material producers across Maui — with pathways for expansion across the State of Hawaii.

4. Align Building Code and Policy Frameworks
Engage County officials, planners, and permitting staff to review and begin integration of IRC Appendix BL for hempcrete

construction.

Intended Outcomes:

- A foundation for future hempcrete housing projects permitted and supported in Maui County
- Increased capacity among local builders, farmers, and policymakers to use and support natural building materials
- An Industrial hemp cooperative that will serve as a model that can be expanded across the State of Hawaii.
- A more equitable and resilient housing ecosystem rooted in circular economy practices and Native Hawaiian values

Project objectives, measurable outcomes, and success metrics

	Quarter	Objective	Objective description	Expected outcome/ result	Describe how success will be measured
1	Q3 2025	Conduct Research and Planting Trials	Initiate hemp cultivar trials and soil compatibility assessments.	Established trial sites, initial crop data.	At least 2 trial plots planted, and baseline data collected for hemp performance in Maui climate.
2	Q4 2025	Train Community Members and Host Workshops.	Create accessible educational opportunities and hands-on trainings focused on women, youth, Native Hawaiian practitioners, and other underrepresented groups in sustainable construction. Inclusive of everyone who is interested in learning about building with industrial hemp.	Greater community awareness and readiness; accessible documentation to support future island-wide replication.	At least 2 workshops completed, 40+ participants engaged.
3	Q1 2026	Develop a Feasibility Study and Create an Industrial Hemp Cooperative	Assess the feasibility of local processing infrastructure and create a cooperative-led processing and distribution	Draft business plan for cooperative, short list of processing sites, and partner commitments secured.	1 cooperative business model drafted, 3 equipment vendors identified, and at least 2 letters of support from

			model that connects farmers, builders, and material producers across Maui — with pathways for expansion across other islands.	Preliminary processing feasibility report.	local partners. 1 draft feasibility report completed.
4	Q2 2026	Align Building Code and Policy Frameworks	Engage County officials, planners, and permitting staff to review and begin integration of IRC Appendix BL for hempcrete construction.	Draft language and policy recommendations for adoption of hemp-lime construction code; increased stakeholder awareness.	Completion of 1 draft policy memo, 2 stakeholder meetings held, and adoption of the IRC 2024 standards for Hempcrete. Final feasibility report completed.

Proposed budget

Proposed Budget compromises 25% of the overall score
Outline the proposed budget in detail and include a description. Be sure to include detailed specific information within the narrative t oreduce the risk of expenses being flagged as "Not specified in the budget" during reimbursement processing.

Proposed budget-describe how the requested funds will be utilized to achieve the proposed goals and objectives.

	Expense category	Narrative	Amount of request	Other Resources*
1	Personnel	Project coordinator and part-time research assistant to manage implementation, reporting, and partner coordination.	$38,000.00	0
2	Payroll Taxes & Fringe Benefits	Estimated taxes and fringe benefits for staff, including healthcare and administrative support.	$7,200.00	0
3	Occupancy	Virtual meeting rooms and cloud-based	$2,000.00	0
		Total	$100,000.00	Total

		project management tools used for coordination and collaboration.			
4	Supplies	Workshop materials, field supplies for hemp trials, printed outreach materials, and demonstration tools.	$10,500.00		0
5	Equipment	Small-scale or mobile decortication and hempcrete mixing equipment for demonstration and testing purposes.	$30,000.00		0
6	Promotion	Graphic design, media outreach, and communications to share project findings and engage community.	$4,000.00		0
7	Travel	Inter-island and on-island travel for site visits, partnership meetings, and outreach activities.	$5,000.00		0
8	Insurance	Liability insurance coverage for project activities.	$1,800.00		0
9	Other Expenses	Contingency for permitting fees, expert consulting, and other unforeseen planning needs.	$1,500.00		0
		Total	$100,000.00	Total	

Other Resources: volunteers, other grants, etc

	Other Resources: Volunteers, other grants	Amount
	Total Other Resources	

1	None	0
2		0
3		0
	Total Other Resources	

1.Personnel Budget Breakdown

	Personnel (include % of 40 hr. week)	Amount Requested	Other Resources	Total Budget	Justification
1	Project Coordinator (50%)	$26,000.00	0	$26,000.00	Responsible for overall project coordination, partner engagement, reporting, and timeline tracking. 20 hrs/week for 12 months.
2	Research Assistant (25%)	$12,000.00	0	$12,000.00	Supports data collection, trial plot documentation, communications, and workshop logistics. 10 hrs/week for 12 months.
3		0	0	0	
4		0	0	0	
5		0	0	0	
6		0	0	0	
7		0	0	0	
8		0	0	0	

9	0	0	0
10	0	0	0

Personnel Justification

The proposed project includes two key personnel roles essential to its successful execution:

1. Project Coordinator (50% FTE – 20 hrs/week for 12 months)

Amount Requested: $26,000

The Project Coordinator will be responsible for the overall management of the project, including coordination of activities across partners, scheduling and leading virtual meetings, monitoring timelines, preparing reports, and ensuring alignment with grant objectives. This role will also oversee communication with County staff, manage documentation related to code and policy alignment, and guide the development of the final hemp construction roadmap. Their leadership is critical for maintaining project momentum and delivering high-quality outputs on schedule.

2. Research Assistant (25% FTE – 10 hrs/week for 12 months)

Amount Requested: $12,000

The Research Assistant will support technical and logistical aspects of the project, including assisting with hemp cultivar trial documentation, tracking soil and crop data, compiling research on hempcrete use and processing methods, and coordinating workshop logistics. They will also help produce materials for public education, outreach, and community trainings. This role enables efficient execution of project activities and contributes to building community knowledge and engagement.

Together, these personnel provide the foundational capacity to manage, implement, and document the project's key objectives while engaging the wider community in meaningful and measurable ways.

3.Occupancy Budget Details

	Occupancy	Grant Request	Other Resources*	Total Budget
1	Virtual Meeting Platforms/Administrative Software	$1,200.00	0	$1,200.00
2	Cloud-Based Project Management Tools	$800.00	0	$800.00
3		0	0	0
	Total	$2,000.00	Total	Total $2,000.00

Occupancy Justification

Although the project will not require a physical office space, effective coordination and communication across partners, agencies, and community stakeholders is essential. To support this, the budget includes funding for virtual meeting

platforms, such as Zoom Pro or Google Workspace, which will be used to host remote planning meetings, stakeholder roundtables, and training sessions. Administrative software includes but not limited to Office 365, Adobe Acrobat Pro, etc.

This approach ensures cost-effective project management, maximizes accessibility for geographically dispersed collaborators (including those on other Hawaiian islands), and reduces the environmental footprint associated with in-person coordination. The requested funds directly support the facilitation of project activities aligned with research, policy development, and workforce training goals.

4.Supplies Budget Details

	Supplies	Grant Request	*Other Resources	Total Budget
1	Workshop Materials & Tools	$6,500.00	0	$6,500.00
2	Field Trial Supplies	$3,500.00	0	$3,500.00
3	Website Hosting and Maintenance	$500.00	0	$500.00
	Total	$10,500.00	Total	Total $10,500.00

Supplies Justification

The supplies requested directly support the project's core activities: community engagement, hemp cultivar trials, public education, and long-term accessibility of results. Each expense aligns with key deliverables and measurable outcomes defined in the project timeline.

1. Workshop Materials & Tools – $6,500

These funds will be used for materials needed to facilitate hands-on community workshops and training sessions, including safety gear, hemp hurd, hempcrete mixing supplies, reusable demonstration molds, printed educational packets, signage, and engagement tools. These materials are essential for building practical skills and local familiarity with regenerative construction techniques.

2. Field Trial Supplies – $3,500

To support the agricultural research component, this category includes hemp seed stock, soil amendments, irrigation supplies, and basic field tools needed to establish and monitor small-scale hemp cultivar trials. These supplies will help identify the most viable varieties for fiber and hurd production in Maui's unique microclimates, ensuring a successful foundation for future hemp production.

3. Website Hosting and Maintenance – $500

This line item covers the annual cost of maintaining a dedicated project website. The site will serve as a hub for publishing project updates, research findings, open-source documents, workshop materials, and community-facing resources. Ensuring public access to this content supports transparency, knowledge sharing, and replication across the Hawaiian Islands.

This supplies budget ensures that educational, research, and outreach goals are achieved efficiently and inclusively, while also laying the groundwork for a scalable, community-driven model.

5.Equipment Budget Details

	Type of Equipment	Grant Request	Other Resources*	Total Budget
1	Mobile Decortication Unit (small-scale)	$20,000.00	0	$20,000.00
2	Hempcrete Mixer and Molds	$7,000.00	0	$7,000.00
3	Storage & Safety Equipment	$3,000.00	0	$3,000.00
	Total	$30,000.00	Total	Total $30,000.00

Equipment Justification

The requested equipment is essential to support the development of a local hemp processing and demonstration capacity. These tools will enable hands-on training, testing of building materials, and cultivation of a working supply chain that supports regenerative construction practices in Maui and beyond.

1. Mobile Decortication Unit – $20,000

This unit will be used to process harvested industrial hemp stalks into fiber and hurd, the two primary components needed for building materials like hempcrete. The mobile setup allows flexibility for use at trial plots, workshops, and partner sites across Maui. This investment directly supports research, prototyping, and the early development of a decentralized processing infrastructure.

2. Hempcrete Mixer and Molds – $7,000

This includes a professional-grade portable mixer designed to combine hemp hurd, lime binder, and water to create consistent hempcrete batches for use in testing and training. Reusable molds will allow to produce demonstration blocks and wall panels during workshops. These tools will be used in community engagement efforts and to train future builders and practitioners in regenerative construction techniques.

3. Storage & Safety Equipment – $3,000

Funds will support the purchase of lockable, weather-resistant storage bins for materials and tools, as well as PPE (personal protective equipment) such as gloves, goggles, respirators, and signage. These items are critical for the safe storage and handling of lime-based materials during training and field demonstrations.

This equipment enables the project to move from theory to practice by supporting applied learning, real-world testing, and foundational processing for hemp-based construction in Hawai‘i.

6.Promotion Budget Details

	Promotion	Grant Request	Other Resources*	Total Budget
1	Graphic Design & Branding	$1,500.00	0	$1,500.00
	Total	$3,500.00	Total	Total $3,500.00

2	Printed Materials		$1,000.00		0	$1,000.00
3	Media Outreach & Communications		$1,000.00		0	$1,000.00
		Total	$3,500.00	Total	Total	$3,500.00

Promotion Justification

Effective promotion is essential to ensure broad community awareness, stakeholder engagement, and long-term adoption of hemp-based regenerative construction practices. The promotion budget supports visual communication, public outreach, and media coordination to share project milestones, educational resources, and invitations to participate.

1. Graphic Design & Branding – $1,500

Funds will support the development of clear, professional visual assets for outreach, including a project logo, workshop graphics, informational infographics, and slide templates. These materials will help convey technical content in an accessible, engaging way for community members, builders, and policymakers.

2. Printed Materials – $1,000

Includes the printing of **flyers, posters, signage, and handouts** for events, trainings, and public engagement. Physical materials will be distributed at community centers, libraries, schools, and partner organizations to reach residents without reliable internet access.

3. Media Outreach & Communications – $1,000

Supports the creation of a social media presence, local media engagement, and distribution of press releases to amplify the project's visibility. This includes setting up a newsletter for interested community members, promoting workshops, and sharing key project milestones with local and state networks.

This promotion strategy ensures the project is visible, inclusive, and accessible, while building lasting community interest and participation in regenerative housing solutions.

7.Travel Budget Details

	Travel	Grant Request	Other Resources*	Total Budget
1	On - Island Travel	$2,500.00	0	$2,500.00
2	Inter - Island Travel	$2,500.00	0	$2,500.00
3		0	0	0
	Total	$5,000.00	Total	Total $5,000.00

Travel Justification

Travel is necessary to facilitate in-person coordination, conduct field-based activities, and build cross-island relationships essential to the success and scalability of the project. The budget supports both on-island and inter-island travel for project

staff, trainers, and collaborators.

1. On-Island Travel – $2,500

Covers mileage reimbursement, fuel, and vehicle rental for visits to hemp trial plots, community partner sites, and training locations across Maui. As project activities will take place in both urban and rural areas, this category ensures staff can meet with farmers, conduct site assessments, deliver materials, and host workshops directly within communities.

2. Inter-Island Travel – $2,500

Supports flights and ground transportation for project representatives to engage with collaborators and experts on other islands. This includes attending knowledge-sharing events, meeting with Native Hawaiian organizations, and participating in policy alignment discussions that advance the statewide replicability of hemp-based construction. Inter-island exchange is a key component of building a connected, resilient hemp economy across Hawai‘i.

This travel budget ensures meaningful engagement, site-level support, and collaboration across geographic and community boundaries, strengthening the project’s reach and long-term impact.

8. Insurance Budget Details

	Insurance Type	Grant Request	Other Resources*	Total Budget
1	General Liability Insurance	$1,000.00	0	$1,000.00
2	Equipment and Materials Coverage	$800.00	0	$800.00
3		0	0	0
	Total	$1,800.00	Total	Total $1,800.00

Insurance Justification

Insurance coverage is necessary to comply with County grant requirements and to ensure the safety, security, and professionalism of all project activities. The requested funds will provide protection for public engagement efforts, project equipment, and materials used in fieldwork and demonstrations.

1. General Liability Insurance – $1,000

This policy will cover bodily injury and property damage liability associated with project activities, including workshops, demonstration events, and site visits. It will specifically include naming the County of Maui as an additional insured, as required by the grant guidelines. This coverage ensures all public-facing activities are appropriately protected.

2. Equipment and Materials Coverage – $800

This portion of the insurance budget provides protection for project-owned equipment and supplies, such as mobile hempcrete mixers, safety gear, and field tools. Coverage includes theft, accidental damage, and risks during transportation between sites. This ensures the longevity and usability of key equipment assets throughout the project.

This insurance allocation safeguards both people and property, while ensuring the project is in full compliance with County requirements and best practices for public programming.

9. Other (detail of Other Expenses or Resources)

	Schedule of Other*	Amount Requested	Other Resources	Total Budget	Justification
1	Permitting and filling fees	$500.00	0	$500.00	For any zoning or research-related approvals
2	Specialized Consulting Services	$1,000.00	0	$1,000.00	For technical support on codes, materials, and equipment
3		0	0	0	
	Total	$1,500.00	Total	Total	$1,500.00

Other Costs Justification

This category ensures the project can respond to technical, regulatory, and administrative needs that may arise during implementation. These flexible funds support foundational aspects of project execution — particularly in a pilot-stage effort that involves research, permitting, and code alignment.

1. Permitting and Filing Fees – $500

These funds will cover potential application or filing fees related to:

- Agricultural research permits
- Temporary demonstration site use
- Zoning or small-scale construction permits

Although this is primarily a planning and research project, permitting flexibility is critical as we engage with County departments to explore adoption of IRC Appendix BL and potential future builds.

2. Specialized Consulting Services – $1,000

Funds will support the engagement of technical experts in:

- Building code compliance for hempcrete
- Hemp material testing (hurd composition, R-values, moisture, etc.)
- Processing equipment selection or engineering review

This expertise ensures that project outputs (such as roadmaps, feasibility studies, and design recommendations) meet professional standards and are scalable beyond the pilot phase.

This category ensures the project can adapt to technical and regulatory complexity while maintaining progress and credibility throughout the grant period.

> No, the requested County grant funds will not be used to pay property taxes.
>
> However, a small portion of the budget (allocated under “Other Expenses”) may be used for permitting or filing fees associated with planning or demonstration activities — such as agricultural research permits, temporary use permits, or small-scale building code reviews — if required by Maui County during the project period.
>
> These costs would be paid to appropriate County departments strictly for compliance-related fees, and only if such permissions are necessary to complete the project’s objectives. No funds will be used for fines, taxes, or penalties.

External project support

	Cash	In-kind	Narrative
1	0	0	We have no funding.
2	0	0	
3	0	0	
Total	Total		

Signature

I QUALIFYING STANDARDS
Applicants must meet ALL of the following standards. (Please check off, as applicable):

- ✓ Be a profit organization incorporated under the laws of the State of Hawaii, or a nonprofit organization determined to be exempt from federal income tax by the Internal Revenue Service

II. GRANT CONDITIONS
The applicant agrees to accept the following terms and conditions prior to receiving a grant award. (Please check off, as applicable):

- ✓ Be current in all state, federal and local tax payments.
- ✓ Applicants based outside of Maui County that propose program services within Maui County must establish a local advisory committee to meet regularly to provide planning and operational input to the County funded program. A designated representative of that committee must also meet regularly with and report directly to the applicant’s board of directors.
- ✓ Meet applicable insurance requirements. Submit a Certificate of Liability Insurance from a Carrier rated no less than “A-“ as established by “AM Best” or “Standard & Poor ratings,” with the County of Maui named as “Additional Insured, providing the following minimum coverage of: No less than a Combined Single Limit (“CSL”) of liability coverage of $1,000,000;No erosion of limit by payment of defense costs, and Minimum annual aggregate limit of $2,000,000; Notification to County 30 days before cancellation prior to scheduled expiration date. Notification to County 30 days before cancellation prior to scheduled expiration date.
- ✓ Agree not to use County funds for purposes of entertainment perquisites (including food), or any other expenditure not directly related to the approved objectives of the project; and

III. CONTRACTS

Upon successful execution of a Grant Agreement of County Funds contract by all parties – incorporating the terms of this grant application, signatures, certification of funds, notarizations, and the inclusion of corporate and County seals – contracts will be awarded and grant funds disbursed only by the County Director of Finance.

Each grant agreement shall expressly state that the recipient or provider is not an employee of the County, but rather an independent contractor that will indemnify and hold harmless the County, the appropriate contracting applicant, involved officers, employees and agents from and against all claims, damages, or costs arising from, or in connection with, acts or omissions of the recipient or provider.

IV. RECORDS AND REPORTING

If applicable, applicant will provide DEM/EP&S/Environmental Programming Section with a copy of the most recent management letter from the organization's CPAs; if none was issued, explanatory documentation must be provided. The applicant must keep separate financial records and prepare reports – according to generally accepted accounting principles and as otherwise prescribed by law – detailing the use of County grant funds so that the status of these funds may be quickly determined at any time.

Reporting Requirements: At the end of each quarter of the fiscal year, each recipient of County funds must submit Quarterly Reports (unless otherwise indicated) WITHIN TWO (2) WEEKS OF THE CLOSE OF THE QUARTER to the EP&S/Environmental Programming Section, according to the provisions specified below, and containing the following information:

• **Quarterly Allotment Request Report (QAR)**: request for payment form

• Quarterly Financial Report (QFR): financial report pertaining to County funds received and expended or encumbered to date

• Quarterly Narrative/Progress Reports (QNR/QPR): program activities, staffing and overall program status;

• **Any other information**, statistics or documentation as may be specified in the Grant Agreement of County Funds or as requested or required by the DEM/EP&S/Environmental Programming Section for the purposes of grant management and/or program performance evaluation.

V. QUARTERLY ALLOCATION OF FUNDS

Grant funds will be disbursed to Grantees through a quarterly allocation process (unless otherwise indicated) which must include documentation as specified in "Quarterly Reports" (above). Allowable expenses include those itemized in the grant application budget and expenses approved by the Grants Manager. The fund's disbursement schedule is based on the conditions for payment as specified in the Grant Agreement of County Funds.

VI. RECOGNITION

The grant recipient shall ensure that the County receives appropriate recognition in all publicity and/or advertising materials, for activities and/or events funded in full or in part by the County.

VII. GRIEVANCE PROCEDURE

The applicant will adopt and maintain a grievance procedure to assure proper accounting for any concerns and complaints about its programs or services that may arise from its members, employees, clients or members of the public.

VIII. DISCLOSURE OF INFORMATION

All information, data, and/or any other material provided to the County by virtue of this application, shall be subject to the Uniform Information Practices Act (UIPA), Chapter 92F, Hawaii Revised Statutes. All such material is deemed government record, open to the public, and may be provided to other public and/or private funding sources.

IX. CONTINIUED ELIGIBILITY

Any applicant or recipient who withholds or omits any material facts or deliberately misrepresents such facts to the County of Maui shall: 1) immediately be disqualified from consideration for DEM/EP&S/Environmental Programming Grant funding; or 2) be in violation of the terms of the Grant Agreement of County Funds. In either case a grant agreement may be terminated by the County and the recipient or provider may be liable to reimburse all or a portion of any funds received from the grant.

Such recipient or provider shall be prohibited from receiving any grant, subsidy or purchase of service agreement from the County of Maui for a period of up to five years.

X. AUTHORITY AND CAPACITY OF APPLICANT

The undersigned hereby certify that the applicant has read and understands all terms, conditions and specifications subject to this application for Recycling Grant funding and that it has the authority and capacity to develop and submit this application, and to fully administer the program(s) pursuant to this application.

ACKNOWLEDGEMENT

Legal Name of Organization	Hawaii Industrial Hemp
Print Name of Board President/Chairperson	Marcus Serrano Rosales
Hereby agrees to administer the following program, in accordance with the regulations, policies and procedures prescribed by the DEM/EP&S. Distribution of DEM Environmental Programming Section grant funds are limited solely to grantees in full compliance with DEM/EP&S/Environmental Programming Section/regulations, policies and procedures. DEM/EP&S/Environmental Programming Section reserves the right to withhold grant distributions at any time the grantee is deemed not to be in compliance.	Marcus Serrano Rosales 8/8/2025

XI. AMENDMENTS

Prior to the execution of any changes, additions, amendments or deletions to any portion(s) of the grant application or duly executed Grant Agreement of County Funds, the applicant must submit a written request and justification for those changes to the DEM/EP&S/Environmental Programming Section for prior review and approval by the Grants Manager.

Print Name of Executive Director/Manager	Marcus Serrano Rosales
Signature and Date	Marcus Serrano Rosales 8/8/2025

UNSIGNED APPLICATIONS WILL NOT BE ACCEPTED

Log in to mauigreengrants.grantplatform.com to see complete application attachments.

Maui County Green Grants (FY26)
211 FY26 Sustainability Grants Program

Hemp for the ʻĀina: Restoring Contaminated Lands

nKJnYNrv

Application details

Organization details

Select which Sustainability Grants Category you are applying for:	Environmental Protection & Green Grant
Total amount of funding requested	$280,000.00
Organization name	Hawaii Industrial Hemp
Type of organization	For-profit
Organization phone number	+18082083237

Organization mailing address

> 84-740 Kili Dr Apt 1430
>
> Waianae HI, 96792

Organization's website address https://hawaiiindustrialhemp.com

Organization background

> Hawai'i Industrial Hemp is a regenerative development organization (LLC) dedicated to establishing a thriving, locally rooted industrial hemp economy in Hawai'i. Our mission is to cultivate sustainable solutions for housing, agriculture, and community resilience by advancing the use of industrial hemp in construction, soil restoration, and circular bio-based manufacturing.
>
> Formed in response to Hawai'i's urgent need for climate-resilient infrastructure and agricultural diversification, our organization brings together farmers, builders, cultural practitioners, researchers, and policy advocates to develop a comprehensive hemp ecosystem — from seed to structure.
>
> We are currently leading efforts to:
>
> - **Advocate for building code innovation** – Supporting the adoption of Appendix BL of the 2024 International Residential Code to enable legal use of hempcrete in Hawai'i building projects.
> - **Advance agricultural research** – Building partnerships with the University of Hawai'i, regenerative farmers, and Native Hawaiian organizations to research locally adapted hemp cultivars.

- **Launch an industrial hemp cooperative** – Focused on supply chain development, processing infrastructure, and green workforce training.
- **Shape supportive policy** – Engaging with policymakers to distinguish industrial hemp (fiber, hurd, grain) from cannabinoid cultivation, enabling a separate regulatory and development pathway for sustainable construction.
- **Facilitate knowledge exchange** – Partnering with builders and organizations in Hawai'i and across the continental U.S. to share proven methods, accelerate technical training, and co-develop demonstration projects.

In addition to these ongoing efforts, we are expanding our work to harness industrial hemp's unique phytoremediation properties to restore degraded and contaminated agricultural lands in Hawai'i.

This new initiative will focus on:

- Using industrial hemp to help clean and restore soil by reducing the presence and movement of contaminants.
- Processing harvested biomass into biochar to permanently sequester carbon and bind residual contaminants.
- Returning charged biochar to the soil to improve water retention, microbial life, and long-term fertility.
- Developing a replicable remediation model that can be scaled from small test plots to large acreage, revitalizing land for safe food production and climate-resilient agriculture.

Through this work, Hawai'i Industrial Hemp is positioning industrial hemp not only as a cornerstone for sustainable construction, but also as a powerful tool for environmental restoration, carbon sequestration, and the regeneration of Hawai'i's agricultural landscapes.

Application Contact Name	Marcus Serrano
Application contact telephone number	+18082083237
Application contact email	marcus.serrano@mogr33n.com
Is this organization or affiliate, currently receiving grant monies from any County of Maui office in fiscal year 2025?	✓ No
Is this organization or affiliate, planning to apply or has applied for grant funding from any other County of Maui office in fiscal year 2026?	✓ Yes
If you have received a grant from the County of Maui in the past have your quarterly reports been submitted on time?	✓ We have not received a County of Maui grant in the past
Do you currently have any existing grants or funding sources that could conflict with or overlap with the activities or objectives of the work proposed in this application?	✓ No
Have you obtained all of the necessary permits to complete the work you are outlining in this application? If not, please explain	✓ No

what types of permits are necessary for the described work in this application in the section below.

Will any of the required permits need to be obtained from the County of Maui?	✓ No

If "yes" was checked for any of the questions above, provide details below.

> The project will operate within existing agricultural zoning and comply with all applicable County and State regulations. No County of Maui permits are anticipated beyond possible coordination for temporary processing equipment. Required State of Hawai'i hemp licensing and any remediation approvals will be secured prior to planting.

Project management

Project manager	Marcus Serrano
Title	Project Manager
Project manager phone number	+18082083237
Project manager email	marcus.serrano@mogr33n.com

Project sustainability

> This pilot is designed as the first phase of a long-term soil restoration program, with clear pathways for financial, technical, and community sustainability beyond the County's support.
>
> Key actions include:
>
> 1. **Leveraging Additional Funding Sources**
>   - Pursue state and federal programs and grants.
>   - Approach private foundations and corporate sustainability programs focused on regenerative agriculture, climate resilience, and carbon sequestration to secure matching or continuation funds.
> 2. **Revenue from By-Products**
>   - While hemp grown on contaminated sites will not enter the food or feed supply, the biochar produced can be marketed for non-food agricultural, landscaping, and environmental remediation uses.
>   - Revenue from biochar sales will help offset operational costs and support expansion to new sites once remediation is complete.
> 3. **Integration with Ongoing Hemp Industry Development**
>   - Align remediation work with our existing industrial hemp cooperative initiative so that clean-site hemp production can share infrastructure, workforce, and processing systems established through this pilot.
>   - Utilize the same processing and biochar systems for future clean biomass, ensuring equipment investment is maximized over many years.
> 4. **Capacity Building & Workforce Development**
>   - Train local workers, including Native Hawaiian farmers and youth, in hemp cultivation, safe handling of contaminated biomass, pyrolysis operation, and biochar application.
>   - These skills will remain in the community, enabling replication without full reliance on outside contractors or single-source funding.

5. **Partnership Continuity**
    - Maintain active collaborations with University of Hawai'i researchers, regenerative farmers, biochar producers, and environmental remediation specialists to share data, refine methods, and pursue joint funding opportunities.

6. **Replicable Model & Knowledge Sharing**
    - Develop a Hawai'i-specific hemp–biochar remediation protocol with cost and yield data that can be used by other landowners and organizations.
    - Host public field days, create instructional materials, and present results to agricultural and environmental networks to encourage adoption beyond this project.

Through these strategies, the County of Maui's grant will act as a catalyst—establishing the infrastructure, expertise, and partnerships needed to make industrial hemp soil remediation a self-sustaining, revenue-generating, and widely adopted practice across the island and state.

Risk management

Hawai'i Industrial Hemp has identified the following potential risks to the successful delivery of the project and has developed mitigation strategies to minimize their likelihood and impact.

1. **Regulatory Delays** – Possible delays in obtaining required licenses and approvals from the Hawai'i Department of Agriculture (HDOA), Hawai'i Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office, or the DOH Clean Air Branch for pyrolysis operations.

   Mitigation: Initiate all permit and license applications at least three to four months before project launch, maintain regular communication with regulatory agencies, and build a buffer into the project schedule to accommodate potential delays.

2. **Higher-than-Expected Contamination Levels** – Soil hot spots could require more intensive remediation methods than originally planned.

   Mitigation: Conduct detailed baseline sampling before planting to identify high-risk zones, isolate and treat these areas separately, and utilize contingency funds for additional amendments or treatment cycles if required.

3. **Equipment Availability Issues** – Difficulty in securing a mobile pyrolysis unit or other specialized equipment on time.

   Mitigation: Reserve equipment well in advance, secure rental agreements with multiple suppliers, and schedule processing windows early to ensure availability.

4. **Extreme Weather Events** – Heavy rainfall, drought, or high winds could damage crops or delay project activities.

   Mitigation: Plan planting and harvesting to avoid peak storm seasons, use erosion control measures such as silt fencing and mulch, and have both drought irrigation and storm recovery protocols ready.

5. **Biochar Handling and Safety** – Risk of improper handling of contaminated biomass during pyrolysis or biochar application.

   Mitigation: Provide all crew members with PPE and safety training, use lined totes and covered storage, and follow DOH/EPA guidelines for handling contaminated biomass and biochar.

6. **Market Demand Fluctuations for Biochar** – Demand for biochar in non-food applications could be lower than projected.

   Mitigation: Secure purchase agreements with local farms, landscapers, and environmental contractors before production, and diversify biochar end-use markets to include erosion control, stormwater management, and environmental remediation projects.

7. **Community Concerns or Opposition** – Misunderstanding about industrial hemp cultivation or pyrolysis technology could cause public opposition.

   Mitigation: Host community information sessions, site tours, and workshops to explain the project's purpose, non-CBD/THC status, and environmental benefits, ensuring transparency and trust.

8. **Labor Shortages** – Difficulty in hiring skilled workers for hemp cultivation, remediation, and pyrolysis operations.

   Mitigation: Partner with the University of Hawai'i, workforce development programs, and the industrial hemp cooperative to recruit and train local workers; stagger operational tasks to match workforce availability.

9. **Funding Gaps Post-Grant** – Lack of follow-on funding could slow or halt project expansion after the grant period.

   Mitigation: Build revenue streams from biochar sales, apply for additional USDA, EPA, and foundation grants during the pilot year, and leverage partner contributions for co-funding.

10. **Supply Chain Delays** – Delays in receiving compost, amendments, or seed due to shipping constraints.

    Mitigation: Order critical inputs several months in advance, source from multiple suppliers, and maintain a small reserve inventory on-site to prevent disruptions.

11. **Access to Land** – Delay in securing access to project site land (lease, license, or use agreement takes longer than expected).

    Mitigation: Secure backup site through partners and begin access negotiations early to avoid project delays.

Project purpose

Project summary (20%)

Hawai'i Industrial Hemp proposes a 10-acre pilot project on Maui to restore contaminated and degraded agricultural land using industrial hemp as a natural, regenerative remediation tool. This innovative approach integrates phytoremediation — planting high-biomass hemp varieties to help reduce the presence and movement of contaminants — with biochar technology that locks away carbon and binds residual pollutants to prevent their spread.

Over a 12-month cycle, the project will grow, harvest, and process two hemp crops. All harvested biomass will be converted into biochar through pyrolysis, "charged" with nutrient-rich compost extract, and returned to the soil. This closed-loop system will simultaneously improve soil structure, increase organic matter, sequester carbon, and reduce contaminant mobility.

The pilot will serve as a proof-of-concept for a scalable, Hawai'i-specific remediation model. It will generate measurable environmental benefits, documented soil health improvements, and a detailed protocol that can be replicated across Maui and the state.

Beyond environmental restoration, the project will build local expertise and workforce capacity by training farmers, Native Hawaiian land stewards, and green industry workers in hemp cultivation, safe biomass handling, pyrolysis operation, and biochar application. These skills, along with strengthened partnerships between researchers, builders, and agricultural cooperatives, will lay the groundwork for a sustainable local hemp industry capable of producing raw materials for climate-resilient construction and other environmental applications.

By project completion, 10 acres of currently unsafe or degraded agricultural land will be measurably improved and made more viable for future agricultural use. Maui will have a culturally grounded, economically viable, and environmentally sound pathway for land restoration — ready for island-wide adoption.

Statement (25%)

Maui faces a pressing challenge of agricultural lands that are either degraded from decades of intensive use or contaminated with legacy pollutants such as heavy metals and persistent pesticides. According to the Hawai'i Department of Health's Hazard Evaluation and Emergency Response (HEER) Office, multiple former plantation and agricultural sites in Maui County contain soil contaminants that limit safe agricultural use and pose risks to water quality and human health. These degraded lands often remain underutilized, contributing neither to local food production nor to the island's environmental resilience.

Soil degradation is not limited to contamination. The USDA Natural Resources Conservation Service (NRCS) reports that Hawai'i's agricultural soils are losing organic matter and fertility at a rate that threatens long-term productivity. Loss of organic matter reduces water-holding capacity, increases erosion risk, and diminishes the soil's ability to support healthy crops without high inputs. On Maui, where agriculture accounts for a significant portion of land use, degraded soils exacerbate the island's vulnerability to climate impacts such as drought, flooding, and invasive species pressure.

Conventional remediation methods for contaminated soils—such as excavation and landfill disposal—are costly, disruptive, and often impractical for large acreage. Chemical soil treatments may temporarily immobilize contaminants but do little to restore soil health or capture carbon. As a result, there is a need for an approach that can both reduce contaminant mobility and regenerate the soil's natural function, while being economically and logistically feasible for Hawai'i's unique island context.

Industrial hemp offers a dual solution. Research, including studies by the University of Hawai'i and USDA, shows that hemp's deep root systems and high biomass yield make it effective at drawing contaminants from the soil, stabilizing pollutants, and building organic matter. When harvested biomass is processed into biochar through pyrolysis, carbon is permanently sequestered, and the resulting biochar can bind residual contaminants, improve soil structure, and enhance microbial activity.

By piloting a hemp–biochar remediation model on 10 acres of Maui farmland, this project addresses a critical environmental need: restoring land to productive use while providing a scalable, regenerative method that aligns with Hawai'i's climate goals, agricultural diversification plans, and cultural stewardship values. Without intervention, these lands will remain idle or underproductive, continuing to represent both an environmental liability and a missed opportunity for local food and resource security.

Project beneficiaries

The primary beneficiaries of this project include:

1. **Local Farmers and Agricultural Landowners**
   - **Who:** Small- and medium-scale farmers, Native Hawaiian land trusts, and other landowners managing degraded or contaminated agricultural parcels.
   - **Benefit:** Restored soil health and reduced contaminant mobility will make currently underproductive land safer and more viable for future agricultural use, supporting increased yields and diversified crop options without costly synthetic inputs. Farmers will also gain hands-on training in industrial hemp cultivation, biochar production, and soil restoration techniques, building long-term self-reliance.

2. **Native Hawaiian Communities and Cultural Land Stewards**
   - **Who:** Native Hawaiian organizations and practitioners.
   - **Benefit:** Restoration of soil health aligns with cultural values of mālama 'āina (care for the land) and supports the return of degraded lands to productive, culturally appropriate uses. Training and participation in the project will build capacity for community-led remediation on ancestral lands.

3. **Local Green Workforce**
   - **Who:** Emerging workers in agriculture, environmental restoration, and green construction sectors.
   - **Benefit:** Workforce development opportunities in hemp cultivation, safe biomass handling, pyrolysis technology, and biochar application create transferable skills and pathways into Hawai'i's growing

regenerative economy.

4. **Maui Community at Large**
   - **Who:** Residents, policymakers, educators, and local businesses.
   - **Benefit:** Cleaner, more productive agricultural lands contribute to local food security, economic diversification, and climate resilience. Public workshops and demonstration days will provide education on regenerative remediation, encouraging wider adoption.

5. **Ecosystems and Natural Resources**
   - **Who:** Maui's soils, watersheds, and nearshore marine environments.
   - **Benefit:** By reducing contaminant mobility and improving soil organic matter, the project will help protect groundwater quality, reduce sediment and pollutant runoff into streams and reefs, and enhance biodiversity in agricultural landscapes. Increased carbon sequestration through biochar application will contribute to climate change mitigation.

Partnerships and collaboration

The following partnerships are essential to the success of this hemp–biochar soil remediation pilot:

1. **Local Regenerative Farmers & Native Hawaiian Land Stewards** – Provide pilot acreage, assist with cultivation, irrigation, and field maintenance, and integrate cultural stewardship practices into soil restoration activities.
2. **University of Hawai'i – College of Tropical Agriculture & Human Resilience (CTAHR)** – Serve as research partner and technical advisor on hemp cultivars, soil testing, and remediation protocols; conduct baseline and follow-up soil sampling, analyze results, and recommend best-fit hemp varieties.
3. **Biochar Producers & Pyrolysis Technology Providers** – Supply mobile pyrolysis units, train local crews in safe operation, and advise on contaminant-handling protocols to ensure biochar production meets safety and performance standards.
4. **Environmental Remediation Specialists** – Ensure compliance with Hawai'i Department of Health Hazard Evaluation and Emergency Response (HEER) requirements and, when applicable, EPA guidelines; review remediation plans, monitor contaminant handling, and assist with reporting.
5. **Builders & Architects Experienced in Hempcrete** – Provide technical guidance on climate-resilient construction applications for clean-site hemp in future phases, and connect the project with sustainable building markets.
6. **Agricultural Cooperatives & Processing Partners** – Coordinate with remediation work to prepare for future processing of clean-site hemp fiber, hurd, and biochar, ensuring market readiness for post-pilot production.
7. **Nonprofit Environmental & Climate Resilience Organizations** – Lead community engagement, public education, and outreach efforts through field days, workshops, and educational materials, ensuring broad awareness and support.
8. **State & Federal Agencies (HDOA, DOH HEER)** – Provide licensing, regulatory oversight, technical guidance, and potential co-funding opportunities; support soil conservation planning and remediation oversight.

Project impact

Project goals

The overarching aim of this project is to restore contaminated and degraded agricultural land on Maui using industrial hemp as a natural, regenerative remediation tool, while building local capacity, advancing environmental resilience, and creating a replicable model for island-wide soil restoration.

Through this pilot, we seek to:

1. **Improve Soil Health and Safety** – Use high-biomass industrial hemp to help reduce the presence and movement of contaminants, improve soil structure, and increase organic matter content, making the land safer

and more productive for future agricultural use.

2. **Permanently Sequester Carbon and Stabilize Residual Contaminants** – Convert all harvested hemp biomass into biochar, locking away atmospheric carbon and binding any remaining contaminants to prevent leaching or further spread.
3. **Demonstrate a Scalable Remediation Model** – Develop and document a Hawai'i-specific hemp–biochar remediation protocol, including data on contaminant reduction, soil health improvements, and cost per acre, so the method can be adopted by other landowners and communities.
4. **Build Local Expertise and Workforce Capacity** – Train local farmers, Native Hawaiian land stewards, and emerging green workers in industrial hemp cultivation, safe biomass handling, pyrolysis operation, and biochar application.
5. **Strengthen Community and Economic Resilience** – Lay the foundation for a sustainable local hemp industry that not only supports soil restoration but also provides raw materials for climate-resilient construction and environmental products.

Desired Outcome:

By the end of the project, 10 acres of currently unsafe or degraded agricultural land will be measurably improved in soil health and reduced contaminant mobility. Maui will have a proven, culturally grounded, and economically viable approach to land restoration that integrates environmental, social, and economic benefits — ready to be replicated across the island and the state.

Project objectives, measurable outcomes, and success metrics

	Quarter	Objective	Objective description	Expected outcome/ result	Describe how success will be measured
1	Q3 2025	Planning & Regulatory Compliance	Obtain HDOA hemp license, DOH remediation approval, and any required permits for pyrolysis. Finalize site selection, baseline soil testing, and contaminant mapping.	All permits and licenses in place. Baseline soil health and contamination profile established.	Copies of permits/licenses secured. Baseline soil test reports completed for all zones.

2	Q4 2025	Improve Soil Health and Safety – Cycle 1 Planting	Prepare 10-acre site, apply initial amendments, and plant high-biomass hemp for first remediation cycle. Install temporary irrigation and erosion control.	10 acres planted with hemp. Irrigation and erosion controls fully functional.	Field inspection confirming full planting coverage. Visual confirmation and photographic records of erosion control measures.
3	Q1 2026	Carbon Sequestration & Contaminant Stabilization – Cycle 1 Processing	Harvest first hemp crop, process all biomass via pyrolysis into biochar, charge biochar with compost extract, and reapply to same plots.	6–10 tons of biochar produced. Biochar re-applied to 10 acres.	Biochar production logs and weight records. Application records and photo documentation.
4	Q2 2026	Improve Soil Health and Safety – Cycle 2 Planting	Plant second hemp crop in same plots to further draw out contaminants and build organic matter. Continue irrigation and maintenance.	10 acres replanted with hemp. Cover crop establishment >90% of intended area.	Field inspection reports. Crop establishment counts from sample plots.
5	Q3 2026	Carbon Sequestration & Contaminant Stabilization – Cycle 2 Processing	Harvest second crop, process into biochar, and reapply to plots. Begin data collection for end-of-project analysis.	Additional 6–10 tons biochar produced and re-applied. Comprehensive data set compiled.	Biochar logs. Interim soil test results compared to baseline.
6	Q4 2026	Demonstrate a Scalable Remediation Model & Build Workforce Capacity	Final soil and tissue testing, data analysis, report writing, and hosting of 2 community field days. Train local	End-of-project report published. 50+ participants trained through workshops. Soil organic matter	Final soil test data compared to baseline. Attendance logs and feedback forms from workshops.

workforce on hemp–biochar remediation methods.	increased; contaminants reduced or stabilized.	Distribution of final remediation protocol and SOP.

Proposed budget

Proposed Budget compromises 25% of the overall score
Outline the proposed budget in detail and include a description. Be sure to include detailed specific information within the narrative t oreduce the risk of expenses being flagged as "Not specified in the budget" during reimbursement processing.

Proposed budget-describe how the requested funds will be utilized to achieve the proposed goals and objectives.

	Expense category	Narrative	Amount of request	Other Resources*
1	Personnel	Covers Project Manager, Field Technicians, and Technical Specialist to manage day-to-day operations, compliance, training, and project reporting. Personnel lead planting, maintenance, harvesting, and biochar application.	$100,000.00	0
2	Payroll Taxes & Fringe Benefits	Employer-paid Social Security, Medicare, unemployment insurance, workers' compensation, and health benefits for project staff.	$22,000.00	0
		Total	$280,000.00	Total

3	Occupancy	Lease/use of agricultural land, utilities for irrigation and equipment operation, and temporary storage structures for supplies and biomass.	$10,000.00	0
4	Supplies	Includes hemp seed, compost, biochar charging materials, erosion control supplies, PPE, irrigation fittings, and materials for field day workshops.	$42,000.00	0
5	Equipment	Mobile pyrolysis unit rental/operation, tractors, compost spreaders, seeders, and biomass storage totes. Prioritizes rentals to minimize capital costs.	$70,000.00	0
6	Promotion	Outreach materials, project signage, digital content, and community engagement tools to share project goals and results.	$7,000.00	0
7	Travel	Mileage reimbursement, vehicle rental, and inter-island travel if needed for technical expertise or partner engagement; includes equipment transport.	$8,000.00	0
8	Insurance	General liability coverage, workers' compensation, and	$6,000.00	0
		Total	$280,000.00	Total

		equipment coverage for project operations.			
9	Other Expenses	Contingency for unexpected soil testing, repairs, additional supplies, or permit fees; includes professional services as needed.	$15,000.00		0
			Total $280,000.00	Total	

Other Resources: volunteers, other grants, etc

	Other Resources: Volunteers, other grants	Amount
1	None	0
2		0
3		0
	Total Other Resources	

1.Personnel Budget Breakdown

	Personnel (include % of 40 hr. week)	Amount Requested	Other Resources	Total Budget	Justification
1	Project Manager (50% 20hrs/week)	$40,000.00	0	$40,000.00	Oversees all project activities, manages budget, coordinates partners, ensures compliance with HDOA/DOH, and prepares reports.
2	Technical Specialist – Remediation &	$32,000.00	0	$32,000.00	Designs and monitors hemp–biochar

	Biochar Ops (40% 16hrs/week)				remediation plan, supervises safe biomass handling, trains crew on pyrolysis, and reviews soil testing data.
3	Hemp Farmers (2 positions)	$28,000.00	0	$28,000.00	Plant, irrigate, maintain, and harvest hemp; assist with biochar production and application; set up for field days.
4		0	0	0	
5		0	0	0	
6		0	0	0	
7		0	0	0	
8		0	0	0	
9		0	0	0	
10		0	0	0	

Personnel Justification

The proposed project requires skilled personnel to ensure successful implementation, compliance with regulatory requirements, and delivery of measurable environmental outcomes.

1. **Project Manager**

   The Project Manager will be responsible for coordinating all aspects of the 10-acre hemp–biochar remediation pilot, including scheduling, budgeting, partner communication, and compliance with the Hawai'i Department of Agriculture (HDOA) licensing and Department of Health (DOH) remediation protocols. This role is essential to keeping the project on track, ensuring timely reporting, and managing resources efficiently.

2. **Technical Specialist – Remediation & Biochar Operations**

   This position provides the technical expertise required for safe and effective remediation. The Technical Specialist will design and monitor the hemp–biochar remediation plan, supervise the safe handling of contaminated biomass, oversee operation of the pyrolysis system, and analyze soil testing results. Their

specialized knowledge ensures the project meets environmental targets, regulatory standards, and best practices for phytoremediation.

3. **Hemp Farmers (2 positions)**

   These roles will perform the hands-on agricultural work required to plant, irrigate, maintain, and harvest hemp crops. They will also assist in biochar production, application, and preparation for community demonstration events. Having dedicated on-the-ground farmers ensures that cultivation and remediation tasks are carried out consistently and to a high standard, which is critical for achieving the desired soil health improvements.

This allocation is essential for assembling a team that blends project management, technical expertise, and direct agricultural labor. Together, these roles ensure the project is implemented effectively, meets its remediation objectives, and provides a replicable model for broader application across Maui and Hawai'i.

3.Occupancy Budget Details

	Occupancy	Grant Request	Other Resources*	Total Budget
1	Land Use / Lease Contribution	$4,800.00	0	$4,800.00
2	Water Service for Irrigation	$3,200.00	0	$3,200.00
3	Electricity for Equipment	$800.00	0	$800.00
4	Temporary Storage & Shelter	$1,200.00	0	$1,200.00
	Total	$10,000.00	Total	Total $10,000.00

Occupancy Justification

The Occupancy budget ensures the project has uninterrupted access to the 10-acre remediation site and the essential utilities and facilities required for hemp cultivation, biochar production, and safe material storage.

This allocation covers:

- **Land Use / Lease Contribution** – Secures the right to use the agricultural site for the full duration of the project, including planting, harvesting, and on-site processing activities. Consistent access is critical for maintaining the project schedule and achieving remediation targets. Assuming that this land is not in use and will be provided at low cost for remediation purposes.
- **Water Service for Irrigation** – Provides the water supply necessary to establish and sustain two hemp cultivation cycles, including cover crop irrigation during the biochar application phase. Adequate irrigation is vital to maximize biomass yield and the remediation effectiveness of the hemp crops.
- **Electricity for Equipment** – Supports irrigation pump operation, storage area lighting, and small equipment needs during cultivation and processing activities.
- **Temporary Storage & Shelter** – Protects seeds, soil amendments, harvested biomass, and biochar from weather damage and contamination prior to application, ensuring materials are available and in good condition when needed.

By covering these essential site and utility costs, the Occupancy budget ensures that project operations can proceed without delays caused by access restrictions, lack of irrigation, or loss of materials. Without this allocation, the project's capacity to maintain consistent crop growth and safe material handling would be at significant risk.

4.Supplies Budget Details

	Supplies	Grant Request	*Other Resources	Total Budget
1	Baseline & Follow-Up Soil Testing	$30,000.00	0	$30,000.00
2	Hemp Seed	$2,500.00	0	$2,500.00
3	Soil Amendments	$3,500.00	0	$3,500.00
4	Erosion Control Materials	$1,500.00	0	$1,500.00
5	Irrigation Fittings & Replacement Parts	$1,000.00	0	$1,000.00
6	Personal Protective Equipment (PPE)	$1,500.00	0	$1,500.00
7	Workshop & Field Day Materials	$2,000.00	0	$2,000.00
	Total	$42,000.00	Total	Total $42,000.00

Supplies Justification

The Supplies budget provides the essential materials needed to carry out all phases of the hemp–biochar remediation pilot, from baseline testing and planting through biochar application and community engagement.

This allocation covers:

- **Baseline & Follow-Up Soil Testing** – Comprehensive laboratory analysis before, during, and after the project to measure contaminant levels, nutrient profiles, pH, and organic matter content. Testing is critical for tracking environmental outcomes and verifying project success.
- **Hemp Seed** – High-biomass industrial hemp cultivars specifically selected for phytoremediation performance. Seeds are needed for two complete planting cycles to maximize biomass yield and contaminant uptake.
- **Soil Amendments** – Compost, mineral inputs, microbial inoculants, and biochar charging materials to improve soil structure, nutrient balance, and microbial life. These amendments enhance the remediation process and long-term soil health.
- **Erosion Control Materials** – Silt fencing, mulch, and cover crop seeds to stabilize soil, reduce runoff, and protect water quality during and between hemp planting cycles.
- **Irrigation Fittings & Replacement Parts** – Drip and micro-spray components, valves, and connectors to maintain efficient water delivery systems essential for hemp establishment and growth.

- **Personal Protective Equipment (PPE)** – Gloves, masks, protective coveralls, and other safety gear to protect project personnel during handling of contaminated biomass and biochar.
- **Workshop & Field Day Materials** – Educational handouts, signage, and demonstration tools to share project methods, results, and best practices with the community, farmers, and partner organizations.

By ensuring that all materials—from seeds to safety gear—are in place, the Supplies budget directly supports the successful completion of the project's cultivation, remediation, and outreach activities. Without this allocation, the project would not be able to meet its environmental, safety, and educational goals.

5.Equipment Budget Details

	Type of Equipment	Grant Request	Other Resources*	Total Budget
1	Mobile Pyrolysis Unit – Rental/Operation	$44,000.00	0	$44,000.00
2	Tractor & Implements – Rental	$10,000.00	0	$10,000.00
3	Compost Spreader – Rental	$4,500.00	0	$4,500.00
4	Seeder/Planter – Rental	$3,000.00	0	$3,000.00
5	Biomass Storage Totes & Handling Equipment	$3,000.00	0	$3,000.00
6	Safety & Monitoring Equipment	$2,500.00	0	$2,500.00
7	Equipment Transport & Mobilization	$3,000.00	0	$3,000.00
	Total	$70,000.00	Total	Total $70,000.00

Equipment Justification

The Equipment budget provides the specialized machinery and tools needed to cultivate hemp at scale, safely process contaminated biomass into biochar, and apply the resulting soil amendments across the 10-acre pilot site. Because this is a pilot project, equipment will primarily be rented or contracted to minimize long-term capital costs, with purchases limited to reusable items essential for compliance and safety.

Key items include:

- **Mobile Pyrolysis Unit – Rental/Operation** – The single most critical piece of equipment for this project, enabling the on-site conversion of hemp biomass into biochar. The allocation covers two processing periods, operator fees,

setup, and breakdown, ensuring both harvest cycles are fully processed into a stable carbon form that binds residual contaminants.

- **Tractor & Implements – Rental** – Required for soil preparation, amendment incorporation, mowing, and general site maintenance throughout both crop cycles.
- **Compost Spreader – Rental** – Ensures even distribution of compost, soil amendments, and charged biochar, which is vital for consistent soil health improvement.
- **Seeder/Planter – Rental** – Allows for uniform hemp seeding at optimal density for phytoremediation effectiveness.
- **Biomass Storage Totes & Handling Equipment** – Lined, weatherproof containers, pallet jacks, and securing equipment for safe staging of harvested biomass prior to pyrolysis and storage of finished biochar before reapplication.
- **Safety & Monitoring Equipment** – Portable air quality monitors, temperature probes, and basic field meters to monitor pyrolysis safety and ensure biochar meets project specifications.
- **Equipment Transport & Mobilization** – Hauling services for bringing the mobile pyrolysis unit and other large equipment to and from the project site, as well as on-island transport between locations.

By securing the right equipment for cultivation, processing, and application, this budget allocation ensures the project can carry out all phases of the remediation cycle efficiently, safely, and in compliance with regulatory requirements. Without these tools, the project could not achieve its targeted environmental outcomes or demonstrate a scalable, replicable model for Maui and the state.

6.Promotion Budget Details

	Promotion	Grant Request	Other Resources*	Total Budget
1	Educational Materials – Design & Printing	$2,000.00	0	$2,000.00
2	Community Field Day Signage & Banners	$1,000.00	0	$1,000.00
3	Photography & Videography	$1,500.00	0	$1,500.00
4	Media Outreach	$1,000.00	0	$1,000.00
5	Website Updates & Hosting Support	$1,500.00	0	$1,500.00
	Total	$7,000.00	Total	Total $7,000.00

Promotion Justification

The Promotion budget ensures the project's methods, progress, and results are effectively communicated to the Maui community, local farmers, policymakers, and other stakeholders. Outreach is critical not only for public transparency but also for building interest in replicating the hemp–biochar remediation model elsewhere on Maui and across Hawai'i.

This allocation covers:

- **Educational Materials – Design & Printing** – Professionally designed brochures, fact sheets, and infographics explaining the remediation process and project results. These will be distributed at community events, field days, and partner meetings to support public education.
- **Community Field Day Signage & Banners** – Reusable outdoor signage and event banners to clearly identify project sites, guide visitors during tours, and highlight key educational messages.
- **Photography & Videography** – Professional documentation of before/after site conditions, field days, and key milestones for grant reporting, media outreach, and replication training materials.
- **Media Outreach** – Paid placements in local newspapers, radio, and targeted social media to promote workshops and public events, ensuring broad community participation.
- **Website Updates & Hosting Support** – Adding project-specific pages, downloadable resources, and multimedia galleries to the existing Hawai'i Industrial Hemp website for ongoing public access to project data and outcomes.

By investing in promotion, the project will create lasting educational resources, foster community involvement, and expand the reach of this innovative remediation approach. This outreach will also strengthen relationships with partners and potential funders, supporting project sustainability beyond the grant term.

7.Travel Budget Details

	Travel	Grant Request	Other Resources*	Total Budget
1	On-Island Mileage Reimbursement	$2,000.00	0	$2,000.00
2	Field Day & Community Event Transport	$1,500.00	0	$1,500.00
3	Partner Site Visits	$1,000.00	0	$1,000.00
4	Off-Island Partner & Training Travel	$2,500.00	0	$2,500.00
5	Pyrolysis Unit Mobilization Support	$1,000.00	0	$1,000.00
	Total	$8,000.00	Total	Total $8,000.00

Travel Justification

The Travel budget ensures project staff can carry out essential site visits, partner coordination, training, and outreach activities that require on-site presence. Because this project involves multiple stages of cultivation, biomass processing, biochar application, and community engagement, travel is critical to maintaining operational efficiency and strong partner relationships.

This allocation covers:

- **On-Island Mileage Reimbursement** – Travel between the project office, 10-acre remediation site, University of Hawai'i laboratory facilities, equipment rental yards, and compost suppliers.
- **Field Day & Community Event Transport** – Vehicle use and mileage for transporting staff, educational materials, and demonstration equipment to public events and partner-hosted workshops.

- **Partner Site Visits** – On-island travel for coordination with other farms, research plots, and processing facilities to share data, align methodologies, and ensure smooth logistics.
- **Off-Island Partner & Training Travel** – Inter-island airfare, ground transportation, and per diem for 2–3 staff to visit established hemp remediation or biochar production sites on O'ahu or Hawai'i Island, facilitating knowledge exchange and hands-on technical training.
- **Pyrolysis Unit Mobilization Support** – Staff travel associated with the delivery, setup, and operation of the mobile pyrolysis unit, including overnight stays if mobilization requires extended time on-site.

By funding these travel activities, the project will maintain seamless coordination between field operations, partner engagement, technical training, and community education, ensuring that all project phases are completed efficiently and to the highest standard.

8. Insurance Budget Details

	Insurance Type	Grant Request	Other Resources*	Total Budget
1	General Liability Insurance	$3,000.00	0	$3,000.00
2	Workers' Compensation Insurance	$2,000.00	0	$2,000.00
3	Equipment Coverage	$1,000.00	0	$1,000.00
	Total	$6,000.00 Total	Total	$6,000.00

Insurance Justification

The Insurance budget ensures that all project activities are carried out in compliance with legal requirements and with adequate protection for personnel, partners, equipment, and the public. Given the nature of the work — including agricultural field operations, handling of contaminated biomass, use of heavy equipment, and hosting community events — comprehensive insurance coverage is essential for managing risk and safeguarding project continuity.

This allocation covers:

- **General Liability Insurance** – Protects the project against claims for bodily injury or property damage during cultivation, biomass processing, biochar application, and community engagement events at the project site.
- **Workers' Compensation Insurance** – Provides legally required coverage for field technicians, farmers, and other project personnel, ensuring medical care and wage replacement in the event of a work-related injury.
- **Equipment Coverage** – Short-term insurance for rented and borrowed equipment, including tractors, seeders, compost spreaders, and the mobile pyrolysis unit, protecting against damage or loss while in transit and on-site.

By securing this coverage, the project will operate responsibly, protect all stakeholders, and reduce the risk of financial or operational setbacks that could jeopardize its successful completion.

9. Other (detail of Other Expenses or Resources)

	Schedule of Other*	Amount Requested	Other Resources	Total Budget	Justification
1	Permit & Regulatory Fees	$3,000.00	0	$3,000.00	County and State permits for hemp cultivation, soil remediation work, and pyrolysis operations; includes soil movement or disposal approvals if required.
2	Laboratory Data Analysis Services	$4,000.00	0	$4,000.00	Specialized contaminant testing and interpretation beyond standard soil panel (e.g., heavy metal speciation, persistent organic pollutants).
3	Professional Consulting Services	$4,500.00	0	$4,500.00	Expert guidance on biochar quality assurance, hemp phytoremediation optimization, and compliance documentation.
4	Contingency Fund	$3,500.00	0	$3,500.00	Reserved for unforeseen project-related costs, such as replacement of damaged equipment parts, additional safety supplies,
	Total	$15,000.00	Total	Total	$15,000.00

					or expanded community outreach needs.
	Total	$15,000.00	Total	Total	$15,000.00

Other Costs Justification

The Other Expenses budget covers essential costs that support project compliance, technical quality, and operational resilience but do not fall under other budget categories. These expenditures are critical for meeting regulatory requirements, ensuring accurate data collection, and addressing unforeseen needs during the project timeline.

This allocation covers:

- **Permit & Regulatory Fees** – Secures the necessary County and State approvals for industrial hemp cultivation, soil remediation, and on-site pyrolysis operations. These permits ensure legal compliance and minimize the risk of project delays due to regulatory issues.
- **Laboratory Data Analysis Services** – Funds specialized contaminant testing and interpretation beyond standard soil health panels, including heavy metal speciation and persistent organic pollutant analysis, to fully assess remediation effectiveness.
- **Professional Consulting Services** – Engages experts in biochar quality control, phytoremediation strategies, and environmental compliance to optimize project performance and ensure data integrity.
- **Contingency Fund** – Provides flexibility to address unexpected needs such as equipment part replacement, additional safety supplies, or expanded outreach activities. This reserve ensures the project can adapt to operational challenges without compromising deliverables.

By funding these activities, the Other Expenses category strengthens project execution, ensures regulatory compliance, and builds resilience against unforeseen disruptions — all of which are essential for delivering the project's promised environmental and community benefits.

County of Maui

Yes — a portion of the "Other Expenses" allocation will be used to cover County of Maui permit fees required for project activities. These may include agricultural use permits for industrial hemp cultivation, operational approvals for on-site pyrolysis, and any soil movement or remediation-related permits.

No grant funds will be used to pay property taxes. All other County-related expenses will be limited to the regulatory fees necessary to ensure legal compliance, public safety, and environmental protection throughout the project.

External project support

	Cash	In-kind	Narrative
1	0	0	None
2	0	0	
3	0	0	
Total	Total		

Signature

I QUALIFYING STANDARDS
Applicants must meet ALL of the following standards. (Please check off, as applicable):

- ✓ Be a profit organization incorporated under the laws of the State of Hawaii, or a nonprofit organization determined to be exempt from federal income tax by the Internal Revenue Service

II. GRANT CONDITIONS
The applicant agrees to accept the following terms and conditions prior to receiving a grant award. (Please check off, as applicable):

- ✓ Be current in all state, federal and local tax payments.
- ✓ Agree not to use County funds for purposes of entertainment perquisites (including food), or any other expenditure not directly related to the approved objectives of the project; and

III. CONTRACTS
Upon successful execution of a Grant Agreement of County Funds contract by all parties – incorporating the terms of this grant application, signatures, certification of funds, notarizations, and the inclusion of corporate and County seals – contracts will be awarded and grant funds disbursed only by the County Director of Finance.
Each grant agreement shall expressly state that the recipient or provider is not an employee of the County, but rather an independent contractor that will indemnify and hold harmless the County, the appropriate contracting applicant, involved officers, employees and agents from and against all claims, damages, or costs arising from, or in connection with, acts or omissions of the recipient or provider.

IV. RECORDS AND REPORTING
If applicable, applicant will provide DEM/EP&S/Environmental Programming Section with a copy of the most recent management letter from the organization's CPAs; if none was issued, explanatory documentation must be provided. The applicant must keep separate financial records and prepare reports – according to generally accepted accounting principles and as otherwise prescribed by law – detailing the use of County grant funds so that the status of these funds may be quickly determined at any time.
Reporting Requirements: At the end of each quarter of the fiscal year, each recipient of County funds must submit Quarterly Reports (unless otherwise indicated) WITHIN TWO (2) WEEKS OF THE CLOSE OF THE QUARTER to the EP&S/Environmental Programming Section, according to the provisions specified below, and containing the following information:
• **Quarterly Allotment Request Report (QAR)**: request for payment form
• Quarterly Financial Report (QFR): financial report pertaining to County funds received and expended or encumbered to date
• Quarterly Narrative/Progress Reports (QNR/QPR): program activities, staffing and overall program status;
• **Any other information**, statistics or documentation as may be specified in the Grant Agreement of County Funds or as requested or required by the DEM/EP&S/Environmental Programming Section for the purposes of grant management and/or program performance evaluation.

V. QUARTERLY ALLOCATION OF FUNDS
Grant funds will be disbursed to Grantees through a quarterly allocation process (unless otherwise indicated) which must include documentation as specified in "Quarterly Reports" (above). Allowable expenses include those itemized in the grant application budget and expenses approved by the Grants Manager. The fund's disbursement schedule is based on the conditions for payment as specified in the Grant Agreement of County Funds.

VI. RECOGNITION
The grant recipient shall ensure that the County receives appropriate recognition in all publicity and/or advertising materials, for activities and/or events funded in full or in part by the County.

VII. GRIEVANCE PROCEDURE
The applicant will adopt and maintain a grievance procedure to assure proper accounting for any concerns and complaints about its programs or services that may arise from its members, employees, clients or members of the public.

VIII. DISCLOSURE OF INFORMATION

All information, data, and/or any other material provided to the County by virtue of this application, shall be subject to the Uniform Information Practices Act (UIPA), Chapter 92F, Hawaii Revised Statutes. All such material is deemed government record, open to the public, and may be provided to other public and/or private funding sources.

IX. CONTINIUED ELIGIBILITY

Any applicant or recipient who withholds or omits any material facts or deliberately misrepresents such facts to the County of Maui shall: 1) immediately be disqualified from consideration for DEM/EP&S/Environmental Programming Grant funding; or 2) be in violation of the terms of the Grant Agreement of County Funds. In either case a grant agreement may be terminated by the County and the recipient or provider may be liable to reimburse all or a portion of any funds received from the grant.

Such recipient or provider shall be prohibited from receiving any grant, subsidy or purchase of service agreement from the County of Maui for a period of up to five years.

X. AUTHORITY AND CAPACITY OF APPLICANT

The undersigned hereby certify that the applicant has read and understands all terms, conditions and specifications subject to this application for Recycling Grant funding and that it has the authority and capacity to develop and submit this application, and to fully administer the program(s) pursuant to this application.

ACKNOWLEDGEMENT Legal Name of Organization	Hawaii Industrial Hemp
Print Name of Board President/Chairperson	Marcus Serrano Rosales
Hereby agrees to administer the following program, in accordance with the regulations, policies and procedures prescribed by the DEM/EP&S. Distribution of DEM Environmental Programming Section grant funds are limited solely to grantees in full compliance with DEM/EP&S/Environmental Programming Section/regulations, policies and procedures. DEM/EP&S/Environmental Programming Section reserves the right to withhold grant distributions at any time the grantee is deemed not to be in compliance.	Marcus Serrano Rosales 8/8/2025

XI. AMENDMENTS

Prior to the execution of any changes, additions, amendments or deletions to any portion(s) of the grant application or duly executed Grant Agreement of County Funds, the applicant must submit a written request and justification for those changes to the DEM/EP&S/Environmental Programming Section for prior review and approval by the Grants Manager.

Print Name of Executive Director/Manager	Marcus Serrano Rosales
Signature and Date	Marcus Serrano Rosales 8/8/2025

UNSIGNED APPLICATIONS WILL NOT BE ACCEPTED

Log in to mauigreengrants.grantplatform.com to see complete application attachments.

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e-mail info@hfbf.org; www.hfbf.org

February 2, 2026

HEARING BEFORE THE
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT
SENATE COMMITTEE ON EDUCATION
SENATE COMMITTEE ON HAWAIIAN AFFAIRS

TESTIMONY ON SB 2178
RELATING TO INDUSTRIAL HEMP

Conference Room 224 & Videoconference
1:00 PM

Aloha Chairs Gabbard, Kim, and Richards, Vice-Chairs Kidani and Lamosao, and Members of the Committees:

I am Brian Miyamoto, Executive Director of the Hawaiʻi Farm Bureau (HFB). Organized since 1948, the HFB is comprised of 1,800 farm family members statewide and serves as Hawaiʻi's voice of agriculture to protect, advocate, and advance the social, economic, and educational interests of our diverse agricultural community.

The Hawaiʻi Farm Bureau supports the intent of SB 2178, which establishes a state industrial hemp program within the Department of Agriculture and Biosecurity focused on non-cannabinoid hemp, including research, education, program coordination, and market development to support sustainable cultivation and use in Hawai'i.

Hemp continues to present opportunities for agricultural diversification, innovation, and value-added production when markets and regulatory frameworks are workable. While we recognize hemp's potential, hemp producers in Hawai'i have also experienced regulatory challenges, including over-regulation and, at times, duplicative state and federal requirements. As a result, HFB encourages that any new industrial hemp program be implemented in a manner that avoids unnecessary regulatory burdens and aligns closely with federal standards.

HFB recognizes the importance of appropriate oversight, particularly regarding THC compliance, and supports reasonable regulations that protect both producers and the public while allowing legitimate agricultural activity to proceed.

SB 2178's focus on non-cannabinoid industrial hemp, research, and market development represents an important step toward clarifying the role of industrial hemp within Hawai'i agriculture. As the program is implemented, HFB encourages continued engagement with farmers to ensure that licensing, inspection, and reporting requirements are practical, coordinated, and supportive of on-the-ground agricultural operations.

Thank you for the opportunity to provide comments on this measure.

Hawaii State Council
A Chapter of the
American Institute of Architects

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1.1.19 ver.

February 2, 2026

TO: Honorable Mike Gabbard, Chair
Honorable Tim Richards, III, Vice Chair
Senate Committee on Agriculture and the Environment

Honorable Donna Mercado Kim, Chair
Honorable Michelle Kidani, Vice Chair
Senate Committee on Education

Honorable Tim Richards, III, Chair
Honorable Rachele Lamosao, Vice Chair
Senate Committee on Hawaiian Affairs

FROM: Legislative Advocacy Committee
American Institute of Architects, Hawai'i State Council

Aloha Chair and Members of the Committee,

The American Institute of Architects, Hawaii Chapter (AIA Hawaii) would like to submit testimony in **strong support of SB 2178**, which establishes an Industrial Hemp Program for Hawai'i.

SB 2178 takes an important step toward creating a clear, practical, and accessible pathway for industrial hemp production in Hawai'i—particularly for non-cannabinoid uses such as fiber, hurd, grain, construction materials, and environmental applications. By recognizing industrial hemp as an agricultural and materials-based industry, the bill appropriately distinguishes it from cannabinoid-focused cultivation and aligns with federal intent under the U.S. Domestic Hemp Production Program. SB 2178 provides Hawai'i with the flexibility to design an industrial hemp program tailored to local agricultural conditions, island logistics, and community values, while establishing the foundational structure needed to responsibly implement a new industry. The bill also supports research, workforce training, and education pathways that build local capacity, promote land stewardship, and deliver long-term economic and cultural benefits statewide.

We support the bill's use of committees and advisory bodies to guide program implementation. We respectfully recommend that SB 2178 establish high-level statutory parameters while delegating specific requirements—such as licensing, inspections, fees, transportation, and enforcement—to administrative rules developed in consultation with the Industrial Hemp Advisory Board. This approach allows the program to remain aligned with USDA requirements, adapt to industry developments, and respond efficiently to federal changes without requiring frequent statutory amendments.

SB 2178 lays a strong foundation for agricultural innovation, local materials production, workforce development, and climate-resilient building solutions.

We ask the committee to pass this bill and mahalo for the opportunity to testify.

Respectfully submitted,

Melanie Islam, AIA
President
AIA Hawai'i

SB-2178
Submitted on: 2/2/2026 12:31:01 AM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Scott Wong	Testifying for Ohana Hui Ventures	Oppose	Written Testimony Only

Comments:

I currently oppose this bill in its current form in the following aspects:

Having to register with the State for a License to grow and pay a fee when there already exists a detailed process with the USDA Federal Application requiring an FBI background check.

The State is allowing for a 2 year license when the Federal USDA Hemp license is good for 3 years.

I see alot of overlapping requirements with conflicting results which I think will already hinder and cause a backlog where there currently is none.

USDA already had an extensive industrial hemp education course online and growers support to include tracking systems monitored by the USDA and by FSA.

I DO SUPPORT:

An advisory board and an educational grant to propel the Hawaii Hemp Industry forward.

Respectfully submitted

Scott Wong

CEO Ohana Hui Ventures

SB-2178
Submitted on: 2/2/2026 8:49:26 AM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Regina Peterson(Nani)	Individual	Support	Remotely Via Zoom

Comments:

Aloha Chair, Vice Chair, and Honorable Members of the AEN/EDU/HWN Committees,

My name is Nani Peterson, and I respectfully submit this testimony in strong support of SB2178 relating to industrial hemp.

Hemp represents more than an agricultural commodity. For Hawai‘i, it represents an opportunity to align agriculture, education, environmental stewardship, and Native Hawaiian well-being into one regenerative pathway.

From an agriculture and environment (AEN) perspective, hemp is a low-input, soil-building crop that can assist in carbon sequestration, erosion control, and land restoration. At a time when we are seeking climate resilience and reduced dependence on imports, hemp provides a practical tool to diversify local agriculture while restoring ‘āina health.

From an education (EDU) standpoint, SB2178 creates opportunities for workforce development in emerging green industries. Hemp cultivation, processing, manufacturing, and sustainable construction can be integrated into vocational training, university research, and community college programs. This bill supports not just farming, but science, engineering, entrepreneurship, and innovation rooted in local needs.

From a Hawaiian affairs (HWN) lens, hemp offers a culturally aligned approach to resource stewardship. It supports mālama ‘āina principles and provides potential economic pathways for rural and Native Hawaiian communities seeking sustainable livelihoods connected to land rather than detached from it. Hemp building materials such as hempcrete could even contribute to more affordable, climate-resilient housing solutions across the pae ‘āina.

Hawai‘i imports most of its construction materials, textiles, and manufactured goods. Hemp allows us to shift from extraction and dependency toward local production and circular economies. It is a step toward greater self-reliance, environmental responsibility, and community empowerment.

SB2178 is not simply about expanding a crop. It is about investing in regenerative systems that connect land, learning, and lāhui.

I respectfully urge your committee to pass SB2178 and move Hawai‘i forward in a way that is economically viable, environmentally responsible, and culturally grounded.

Mahalo for the opportunity to testify.

Nani Peterson

SB-2178
Submitted on: 1/30/2026 8:30:02 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
KATRINA ZAVALNEY	Individual	Support	Written Testimony Only

Comments:

Aloha,

Thank you for considering this bill, which would be so helpful for local, natural building to happen on the Hawai'i Islands, and to increase the local economy by using this local material instead of shipping things in. The local economy would grow if we were to establish and expand the processing infrastructure and commercialization of industrial hemp. I am in support of this bill and hemp as a building material for housing, given that the islands are facing a housing shortage. Using a locally available material that can be grown on the islands and processed on the islands for local use, in particular to build housing, would be advantageous on so many levels.

It is also notable that the focus is on using this plant for a building material, which has already been identified as a legal material with the international building codes. There are many benefits to using the hemp plant for this purpose. Please note that I am not promoting other uses of this plant, I personally do not consume cannabis, which is a different species, and the hemp plant can be grown specifically for building purposes, this is the species I am supporting. When the hemp hurd is mixed with lime, it creates a safe building material that is mold and fire-resistant, creating a safer home when used in construction. I believe we all want safer homes for the residents on this island, this bill supports that. Please support this bill, it will help the people of Hawai'i and the housing issues. Mahalo.

SB-2178
Submitted on: 2/2/2026 11:12:38 AM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Kelly King	Individual	Support	Written Testimony Only

Comments:

Aloha,

Mahalo for hearing SB2178. I fully support local construction industry materials and view hemp as an optimum choice to replace imported lumber. As a member of the State's previous Hemp Task Force, I am a bit concerned that so much funding is proposed to set up more research and task force activity rather than moving this industry ahead with direct support for hemp farmers, grants for processing equipment, easing of permits for hemp construction and acknowledgment of additional materials, such as bamboo and sunflower. that could and should be added to our official construction materials roster. My understanding is that hempcrete is already an allowable material nationwide and in our state.

I have been advocating for hemp in Hawai`i for over two decades now. Mahalo to all the good folks who understand the promise of hemp and hempcrete, and let's move faster to fulfill that promise!

SB-2178
Submitted on: 1/30/2026 8:39:48 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Glen Kagamida	Individual	Support	Written Testimony Only

Comments:

STRONG SUPPORT FOR INDUSTRIAL ONLY.

SB-2178
Submitted on: 2/2/2026 2:04:56 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Staci Taniguchi	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Members of the Committee,

My name is Staci Taniguchi, and I am submitting testimony in **strong support of SB 2178**, which establishes an Industrial Hemp Program for Hawai‘i. I recently attended several hands-on building workshops on both Oahu and Maui that were related to building with industrial hemp into actual hempcrete structures and I found along with many others who attended, that industrial hemp would be a great resource in Hawaii for building materials as a local supply chain could be developed and reduce reliance on material imports for construction in Hawaii.

SB 2178 takes an important step toward creating a clear, practical, and accessible pathway for industrial hemp production in Hawai‘i—particularly for non-cannabinoid uses such as fiber, hurd, grain, construction materials, and environmental applications. By recognizing industrial hemp as an agricultural and materials-based industry, the bill appropriately distinguishes it from cannabinoid-focused cultivation and aligns with federal intent under the U.S. Domestic Hemp Production Program.

SB 2178 provides Hawai‘i with the flexibility to design an industrial hemp program tailored to local agricultural conditions, island logistics, and community values, while establishing the foundational structure needed to responsibly implement a new industry. The bill also supports research, workforce training, and education pathways that build local capacity, promote land stewardship, and deliver long-term economic and cultural benefits statewide.

I support the bill’s use of committees and advisory bodies to guide program implementation. I respectfully recommend that SB 2178 establish high-level statutory parameters while delegating specific requirements—such as licensing, inspections, fees, transportation, and enforcement—to administrative rules developed in consultation with the Industrial Hemp Advisory Board. This approach allows the program to remain aligned with USDA requirements, adapt to industry developments, and respond efficiently to federal changes without requiring frequent statutory amendments.

SB 2178 lays a strong foundation for agricultural innovation, local materials production, workforce development, and climate-resilient building solutions. I respectfully urge the Committee to pass SB 2178.

Mahalo for the opportunity to submit testimony.

Respectfully submitted,

Staci Taniguchi

SB-2178
Submitted on: 2/2/2026 1:56:47 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Janelle	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Members of the Committee,

My name is Janelle Inouye, and I am submitting testimony in strong support of SB 2178, which establishes an Industrial Hemp Program for Hawai‘i.

SB 2178 takes an important step toward creating a clear, practical, and accessible pathway for industrial hemp production in Hawai‘i—particularly for non-cannabinoid uses such as fiber, hurd, grain, construction materials, and environmental applications. By recognizing industrial hemp as an agricultural and materials-based industry, the bill appropriately distinguishes it from cannabinoid-focused cultivation and aligns with federal intent under the U.S. Domestic Hemp Production Program.

SB 2178 provides Hawai‘i with the flexibility to design an industrial hemp program tailored to local agricultural conditions, island logistics, and community values, while establishing the foundational structure needed to responsibly implement a new industry. The bill also supports research, workforce training, and education pathways that build local capacity, promote land stewardship, and deliver long-term economic and cultural benefits statewide.

I support the bill’s use of committees and advisory bodies to guide program implementation. I respectfully recommend that SB 2178 establish high-level statutory parameters while delegating specific requirements—such as licensing, inspections, fees, transportation, and enforcement—to administrative rules developed in consultation with the Industrial Hemp Advisory Board. This approach allows the program to remain aligned with USDA requirements, adapt to industry developments, and respond efficiently to federal changes without requiring frequent statutory amendments.

SB 2178 lays a strong foundation for agricultural innovation, local materials production, workforce development, and climate-resilient building solutions. I respectfully urge the Committee to pass SB 2178.

Mahalo for the opportunity to submit testimony.

Respectfully submitted,

Janelle Inouye

Aloha Chair and Members of the Committee,

My name is Christina Cloud, and I am submitting testimony in **strong support of SB 2178**, which establishes an Industrial Hemp Program for Hawai‘i.

Industrial hemp is key to building sustainable, affordable, resilient, and carbon negative homes. Hawai’i has the perfect climate to grow 3-4 crops of hemp per year and self supply hemp hurd for hempcrete (a non-structural hemp-lime insulation) so we do not have to rely on all building materials being shipped in. Hempcrete creates a mass wall that is fire, mold, termite, rodent, and wind/hurricane resistant. Its high R value, acoustic properties, low VOCs, and humidity regulation make an energy efficient, comfortable, and healthy home with a lifespan of approximately 100 years. The oceanfront hempcrete home built in 2016 on Maui has proven that hempcrete is suitable for the Hawaiian climate. It has been used for centuries in Europe. Native American tribes are using hempcrete to build affordable and sustainable homes for their tribal members and we can do the same with Hawaiian homelands.

The Honolulu Department of Plans and Permitting approving permits for hempcrete homes is key so the hemp grown here can become homes here. Hempcrete was added to the 2024 IRC building code, but Honolulu is still on 2018. It is vital that code officials be able to jump forward and approve new materials or technologies that are in current IRC codes because the code adoption process is egregiously slow. I have a hempcrete home and ADU that I plan to build in Aiea that is currently in the design phase. I hope to help pave the way for hempcrete home construction on Oahu.

SB 2178 takes an important step toward creating a clear, practical, and accessible pathway for industrial hemp production in Hawai‘i—particularly for non-cannabinoid uses such as fiber, hurd, grain, construction materials, and environmental applications. By recognizing industrial hemp as an agricultural and materials-based industry, the bill appropriately distinguishes it from cannabinoid-focused cultivation and aligns with federal intent under the U.S. Domestic Hemp Production Program.

SB 2178 provides Hawai‘i with the flexibility to design an industrial hemp program tailored to local agricultural conditions, island logistics, and community values, while establishing the foundational structure needed to responsibly implement a new industry. The bill also supports research, workforce training, and education pathways that build local capacity, promote land stewardship, and deliver long-term economic and cultural benefits statewide.

I support the bill's use of committees and advisory bodies to guide program implementation. I respectfully recommend that SB 2178 establish high-level statutory parameters while delegating specific requirements—such as licensing, inspections, fees, transportation, and enforcement—to administrative rules developed in consultation with the Industrial Hemp Advisory Board. This approach allows the program to remain aligned with USDA requirements, adapt to industry developments, and respond efficiently to federal changes without requiring frequent statutory amendments.

SB 2178 lays a strong foundation for agricultural innovation, local materials production, workforce development, and climate-resilient building solutions. I respectfully urge the Committee to pass SB 2178.

Mahalo for the opportunity to submit testimony.

Respectfully submitted,

Christina Cloud

Kailua

SB-2178
Submitted on: 2/2/2026 2:57:23 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Keoni DeFranco	Individual	Support	Written Testimony Only

Comments:

Aloha Chair, Vice Chair, and Members of the Committee,

My name is Keoni DeFranco, and I submit this testimony in strong support of SB2178, which establishes an Industrial Hemp Program within the Department of Agriculture and Biosecurity.

SB2178 represents an important step toward building a regenerative, locally owned, and resilient agricultural and manufacturing sector in Hawai‘i. By creating a comprehensive program focused on non-cannabinoid industrial hemp cultivation and use, the State can unlock significant opportunities in sustainable building materials, textiles, bioplastics, soil health, and rural economic development.

The establishment of the Industrial Hemp Program Advisory Board and the requirement for a strategic plan to expand local processing infrastructure are particularly critical. Without local processing and commercialization capacity, Hawai‘i farmers are unable to capture the full value of hemp production. Strategic investment in decortication, manufacturing, and market development will allow wealth to remain in our communities rather than being exported out of state.

I also strongly support the role of the University of Hawai‘i College of Tropical Agriculture and Human Resilience in advancing research and development tailored to Hawai‘i’s unique climate and ecosystems. Locally adapted hemp varieties and sustainable cultivation practices will be essential to ensuring long-term success, environmental stewardship, and economic viability.

Equally important is SB2178’s emphasis on partnerships with Native Hawaiian practitioners, cooperatives, and ‘āina-based programs. Hemp has tremendous potential to support community-led agriculture, cooperative ownership models, and culturally grounded land stewardship efforts. These partnerships can help ensure that the benefits of this emerging industry are shared equitably while strengthening food security, workforce development, and rural economies.

The adoption of state building codes for hemp-based materials such as hempcrete is another transformative component of SB2178. Hemp-based construction materials are fire-resistant, carbon-sequestering, and well-suited for Hawai‘i’s climate. Enabling their use can reduce reliance on imported construction materials, lower environmental impacts, and support a new local green manufacturing sector.

Finally, the appropriation of funds is essential to move this industry from concept to reality. Strategic public investment at this early stage will catalyze private investment, workforce training, and long-term economic returns.

Industrial hemp offers Hawai‘i a rare opportunity to align climate resilience, economic development, housing innovation, and community ownership into a single, regenerative value chain. SB2178 lays the groundwork for that future.

Mahalo for the opportunity to testify in strong support of SB2178.

Respectfully,
Keoni DeFranco

SB-2178
Submitted on: 2/2/2026 3:15:21 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Megan Villa	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Members of the Committee,

My name is Megan Villa, and I am submitting testimony in strong support of SB 2178, which establishes an Industrial Hemp Program for Hawai‘i.

I strongly believe Hawai‘i is in urgent need of a locally rooted industrial hemp industry. This bill represents a meaningful opportunity to support our farmers, strengthen local supply chains, and create new industries that align with our values of land stewardship, resilience, and community well-being. Industrial hemp is not just another crop—it is a versatile, regenerative resource that can benefit Hawai‘i economically, environmentally, and socially.

SB 2178 takes an important step toward creating a clear, practical, and accessible pathway for industrial hemp production in Hawai‘i, particularly for non-cannabinoid uses such as fiber, hurd, grain, construction materials, and environmental applications. By clearly distinguishing industrial hemp from cannabinoid-focused cultivation, the bill aligns with federal intent under the U.S. Domestic Hemp Production Program while recognizing hemp as an agricultural and materials-based industry with tremendous potential for our islands.

An industrial hemp program tailored to Hawai‘i can help diversify our agricultural economy, support local manufacturing, and reduce our reliance on imported building materials. From sustainable construction and climate-resilient building solutions to soil regeneration and carbon sequestration, hemp offers solutions that are especially relevant as Hawai‘i faces increasing climate impacts, housing challenges, and rising material costs.

I also appreciate that SB 2178 allows flexibility for Hawai‘i to design a program that reflects local agricultural conditions, island logistics, and community priorities. The bill’s support for research, workforce training, and education is critical to building long-term capacity and ensuring that this industry benefits local communities rather than outside interests.

I support the use of committees and advisory bodies to guide implementation and respectfully recommend that SB 2178 establish high-level statutory parameters while allowing administrative rules—such as licensing, inspections, fees, transportation, and enforcement—to be developed in consultation with the Industrial Hemp Advisory Board. This approach ensures adaptability, alignment with USDA requirements, and the ability to evolve as the industry grows without the need for frequent statutory changes.

SB 2178 lays a strong foundation for agricultural innovation, local materials production, workforce development, and a more resilient future for Hawai‘i. I respectfully urge the Committee to pass this bill and help move Hawai‘i toward a more self-sufficient and sustainable path forward.

Mahalo for the opportunity to submit testimony.

Respectfully submitted,
Megan Villa

SB-2178
Submitted on: 2/2/2026 3:24:12 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Donald Cloud	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Members of the Committee,

My name is Donald Wayne Cloud, Jr, and I am submitting testimony in **strong support of SB 2178**, which establishes an Industrial Hemp Program for Hawai‘i.

SB 2178 takes an important step toward creating a clear, practical, and accessible pathway for industrial hemp production in Hawai‘i -- particularly for non-cannabinoid uses such as fiber, hurd, grain, construction materials, and environmental applications. By recognizing industrial hemp as an agricultural and materials-based industry, the bill appropriately distinguishes it from cannabinoid-focused cultivation and aligns with federal intent under the U.S. Domestic Hemp Production Program.

SB 2178 provides Hawai‘i with the flexibility to design an industrial hemp program tailored to local agricultural conditions, island logistics, and community values, while establishing the foundational structure needed to responsibly implement a new industry. The bill also supports research, workforce training, and education pathways that build local capacity, promote land stewardship, and deliver long-term economic and cultural benefits statewide.

I support the bill’s use of committees and advisory bodies to guide program implementation. I respectfully recommend that SB 2178 establish high-level statutory parameters while delegating specific requirements (such as licensing, inspections, fees, transportation, and enforcement) to administrative rules developed in consultation with the Industrial Hemp Advisory Board. This approach allows the program to remain aligned with USDA requirements, adapt to industry developments, and respond efficiently to federal changes without requiring frequent statutory amendments.

Industrial hemp is key to building sustainable, affordable, resilient, and carbon negative homes and to developing an industrial hemp circular economy in Hawai’i. Hawai’i has the perfect climate to grow 3-4 crops of industrial hemp per year and self supply hemp hurd for hempcrete (a non-structural hemp-lime insulation) so that we would no longer have to rely on all building materials being imported from off-island. Hempcrete creates a mass wall that is fire, mold, termite, rodent, and wind/hurricane resistant. Its high R value, acoustic properties, low VOCs, and humidity regulation make an energy efficient, comfortable, and healthy home with a lifespan measured in centuries. The oceanfront Maui hempcrete home built in 2016 has proven that hempcrete is suitable for the Hawaiian climate. Native American tribes are already using

hempcrete to build affordable and sustainable homes for their tribal members, and we can do the same with Hawaiian Homelands.

On a more personal note, my wife and I plan to build a new family home in Aiea, Hawai‘i using industrial hempcrete and other industrial hemp-based construction materials. Our future home is currently in the design phase, and we hope to help pave the way for hempcrete home construction in Oahu. SB 2178 will enable us (and other Hawai‘i residents) to better support the development of Native Hawaiian industrial hemp farmers, processors, building material companies, and construction workers/trades to help grow a Hawai‘i-based industrial hemp circular economy for our community, our ohana, and our ‘āina for generations.

SB 2178 lays a strong foundation for agricultural innovation, local materials production, workforce development, and climate-resilient building solutions. I respectfully urge the Committee to pass SB 2178.

Mahalo for the opportunity to submit testimony.

Respectfully submitted,

Signed - Donald Wayne Cloud, Jr. - 02/02/2026
Resident of Kailua, Hawai‘i

SB-2178
Submitted on: 2/2/2026 8:02:38 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Alana Borsa	Individual	Support	Written Testimony Only

Comments:

I support SB2178 and it's efforts to create a way to research and use non-cannabinoid industrial hemp in a way that could benefit Hawaii's families and economy. I am a fiber artist who grows, spins, weaves, crochets, and does macrame with various other fiber plants. It would be wonderful if industrial hemp could be legally added to the list of usable materials. Industrial hemp has thousands of years of history from so many cultures as a durable and plentiful textile crop to make everything from fabric to rope. Alongside the other bast fiber plants of linen (flax), nettles, and cotton, it is one of the four power-houses that got humanity to where it is today, historically speaking. As a crop, it uses the least amount of water resources of any other fiber crop, with cotton being the thirstiest. It is also one of the fastest growing, with some varieties able to grow up to fifteen feet tall in about four months, with the entire plant from tip to roots being harvestable for textile use. Compare that with cotton which while only taking a bit longer at six months to reach harvest-age, only a small portion of the plant, the fluffy bolls, are usable, and requires vaster quantities of land to produce the same amount of fiber. If we care about being able to provide Hawaii with abundant fabric that could then be exported, industrial hemp is definitely the crop to grow. Many families could grow just a ten foot by ten foot plot to produce enough fiber for a couple of shirts. If everyone did that, we could make Hawaii self-sufficient in clothing. And I am all for helping the people of Hawaii connect back to aina and be able to provide for their families at the same time. We are working towards self-sufficiency in food, why should we not do the same with our clothes?

SB-2178
Submitted on: 2/2/2026 8:24:06 PM
Testimony for AEN on 2/3/2026 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
annalene williams	Individual	Support	Written Testimony Only

Comments:

Aloha Chair, Vice-Chair, and Members of the Committee,

My name is **Annalene Williams**, a resident of Hawi on the Big Island. I am writing to express my **strong support for S.B. 2178**, the Hawai‘i Industrial Hemp Infrastructure and Innovation Act.

As Hawai‘i seeks to address the dual challenges of economic diversification and housing affordability, industrial hemp presents a sophisticated, multifaceted solution. This bill provides the necessary framework to transition hemp into a pillar of a sustainable, circular economy.

The majority of residential construction in Hawai‘i is currently dependent on imported timber. These supply chains are not only carbon-intensive but are subject to significant market volatility and shipping delays.

S.B. 2178 paves the way for a **carbon-negative building material** that is naturally resistant to mold, pests, and fire—essential qualities for Hawai‘i’s tropical climate, and with the more recent increase of wildfires.
Hemp fibers can be combined with locally available minerals to create a durable, concrete-like material, significantly reducing our reliance on external imports.

Unlike many specialty crops, industrial hemp is well-suited to mechanized harvesting. This scalability is critical for:
Reducing Labor Costs: The ability to harvest with machinery helps keep the final product competitive with traditional building materials.
Revitalizing Fallow Land: Hemp’s rapid growth cycle allows for multiple harvests per year, maximizing the utility and carbon-sequestration potential of Hawai‘i’s agricultural lands.

While hemp has been utilized globally since ancient times, S.B. 2178 acknowledges that its modern application requires a clear, distinct regulatory pathway. By establishing an Industrial Hemp Program, SB 2178 takes an important step toward creating a clear, practical, and accessible pathway for industrial hemp production in Hawai‘i.

I respectfully urge the committee to **pass S.B. 2178**, as it represents a strategic investment in the environmental and economic health of our islands.

Mahalo for your time and for your consideration of this important measure.

Sincerely,

Annalene Williams Hawi, Hawai‘i