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GOVERNOR | KE KIA'ĀINA

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LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
KA 'OIHANA KUMUWAIWAI 'ĀINA

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Testimony of  
DAWN N. S. CHANG  
Chairperson

Before the Senate Committee on  
WATER AND LAND

Monday, March 13, 2023  
1:00 PM  
State Capitol, Conference Room 229

In consideration of  
HOUSE BILL 1200, HOUSE DRAFT 1  
RELATING TO THE CONSERVATION AND RESOURCES ENFORCEMENT PROGRAM

House Bill 1200, House Draft 1, proposes to: 1) require the Department of Land and Natural Resources (Department) to establish an unmanned aircraft systems program; 2) authorize Conservation and Resources Enforcement Officers to use unmanned aircraft systems (UAS); and 3) require the Department submit an annual report of the effectiveness of the UAS program to the Legislature. **The Department supports this bill, provided that its passage does not replace or adversely impact priorities indicated in the Executive Budget request, and sufficient additional funds are provided.**

The Department acknowledges the potential for a UAS program to aid its Division of Conservation and Resources Enforcement (DOCARE) in carrying out its mission. Such a program can increase the effectiveness of the Department's limited number of enforcement officers by enabling them to survey, monitor, investigate, and obtain evidence more efficiently, especially in difficult to reach areas.

The Department appreciates the amendment as provided in the current House Draft 1 to extend the deadline to establish a UAS program in DOCARE to June 30, 2025. The Department believes this additional time will assist with successful implementation of a UAS program.

In consideration of a potential funding amount to establish a UAS program, the Department is aware of other agencies in the United States that have established a UAS program with a cost of approximately \$275,000.00. Should the Legislature provide a similar amount to establish DOCARE's program, we believe this funding could be used toward the following components of a UAS program:

- Purchase of UAS Aircraft and Equipment: \$100,000.00
- Training of DOCARE UAS Pilots statewide: \$100,000.00
- License and Certification Fees: \$50,000.00
- Administrative Support: \$25,000.00

Without sufficient funding, the Department would not be able to establish a viable UAS program. To sustain a UAS program once established, DOCARE will need a slight increase in annual funding for training and certification renewals, and administrative support.

Mahalo for the opportunity to provide testimony in support of this measure.



To: The Honorable Chair Lorraine Inouye, Vice-chair Brandon Elefante, and members of the Senate Committee on Agriculture and Environment

From: Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

Re: Hearing HB1200 HD1 **RELATING TO THE CONSERVATION AND RESOURCES ENFORCEMENT PROGRAM**

Hearing: Monday, March 13, 2023, 1:00 p.m.

Aloha Chair Inouye, Vice Chair Elefante, and members of the Committee:

The Hawai'i Reef and Ocean Coalition (HIROC) is a group of scientists, educators, filmmakers and environmental advocates who have been working since 2017 to protect Hawaii's coral reefs and ocean.

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**The Hawai'i Reef and Ocean Coalition STRONGLY SUPPORTS HB1200 HD1!**

I worked for 15 years as a Deputy Attorney General on water pollution enforcement cases. I know how difficult it can be for State agencies to protect our natural and marine resources when a few officers are stretched thin covering huge areas, many of which are inaccessible to officers.

The DLNR's Division of Conservation Resources Conservation (DOCARE) would be able to protect our resources more effectively if it had a drone program as

proposed in this bill. **Drones used transparently within legal boundaries and appropriate policies would enable DOCARE to monitor larger areas, reduce violations, and improve evidence gathering for enforcement cases.**

DLNR indicates that an appropriation is needed to establish a viable drone program. It states that other agencies in the United States have established a program with a **cost of approximately \$275,000.**

We thank the committee for hearing this important measure and respectfully urge your passage of HB1200 HD1.

Mahalo!

Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

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09 March 2023

I am a scientist and kama‘aina community member who has worked in Hawai‘i’s forests and oceans and with its people for the last 20 years. I work closely with County, State, and federal agencies, the University of Hawai‘i, and several other universities, as well as numerous non-profit (including native Hawaiian) organizations across the State to support natural resource management and community involvement. Today, I submit this testimony as a private citizen, but also as the president of the Hawaii Marine Education and Research Center which was created to support communities and their natural resources. I am also the coordinator of the Miloli‘i Makai Watch.

We submit this testimony in strong support of HB1200 HD1. Specifically, we support the establishment of a DOCARE drone program as authorized under HB1200 HD1 for the following reasons:

1. Currently there are only seven DOCARE patrol officers assigned to the entire island of Hawaii which is over 28,000 square kilometers or 4,000 square miles of mostly inaccessible landscape.
2. UAV technology and data collected from these platforms has become increasingly accurate, allowing for more effective evidence gathering such as clear photographs of a scene, the violator(s), and vehicle and boat registration numbers.
3. Training has improved as regulations on the admissible data and data collection have become more standardized and drone use has already aided in DOCARE’s ability to issue citations and fines. A properly funded drone program will ensure policy safeguards and compliance with FAA regulations as well as bolstering protocols that protect privacy rights and maintenance of proper records for appropriate legal and public use.
4. With the Legislature’s support, a new DOCARE drone program will be a transformative new tool in the enforcement toolbox for the outstanding women and men who serve as our State DOCARE officers.

Respectfully,



Robin Martin PhD  
President, Hawaii Marine Education and Research Center  
Coordinator, Miloli‘i Makai Watch



Aloha no kakou, I am submitting this testimony in support of HB1200

DOCARE plays an important role in monitoring and protecting Hawaii's natural resources. An aerial surveillance system will greatly enhance their ability to carry out their important duties as an enforcement arm of the Department of Land and Natural Resources.

Many of our communities are trying to establish a good relationship with the DLNR and this bill will be the bridge that shows us how much our government respects and cares for our 'aina. The perspectives of our families have evolved from one of mistrust of the DLNR to an understanding that we all are striving to accomplish the same goal of malama'aina.

An aerial surveillance system will also be extremely helpful in locating lost fishermen, hunters, or hikers. It is common sense that there is no substitution for "eyes in the skies" when it comes to saving someone stranded out on the ocean in a forest. This system may be the difference between rescuing someone or retrieving their body.

Finally, it will allow a DOCARE officer to detect illegal activities in the nearshore waters from land saving the DLNR money from having to pursue a suspect with the one boat in West Hawaii. Multiple DOCARE officers will be able to cover more ground and perform the duties of their office more effectively. The ability to video and document a violation will be a significant deterrent to people who violate the laws and rules of this State.

This bill is a win win situation for all of us with the benefits far outweighing any setbacks. Please consider supporting this measure for all the reasons stated above.

Mahalo nui,

Damien Kenison  
Kauhakō Ohana Association



Testimony Before The  
Senate Committee on Water and Land  
**IN SUPPORT OF HB 1200 HD1**  
March 13, 2023, 1:00PM, Room 229

My name is Kevin Chang and I am the Executive Director of [Kua'āina Ulu 'Auamo \(or KUA\)](#). KUA works to empower grassroots rural and Native Hawaiian mālama 'āina groups to celebrate their places and pass on their traditions to better Hawai'i and achieve 'āina momona— an abundant, productive ecological system that supports community well-being.

**KUA supports HB 1200 HD1 as an incremental step towards 'āina momona.** This bill require the Division of Conservation and Resources Enforcement of the Department of Land and Natural Resources (DLNR-DOCARE) “to 1) require the Department of Land and Natural Resources (Department) to establish an unmanned aircraft systems program; 2) authorize Conservation and Resources Enforcement Officers to use unmanned aircraft systems (UAS); and 3) require the Department submit an annual report of the effectiveness of the UAS program to the Legislature. **We further request if this bill is passed that it does not replace or adversely impact DOCARE's current capacity trajectory and that sufficient additional funds are provided.**

KUA employs a community-driven approach that currently supports a statewide network of 36 mālama 'āina community groups collectively referred to as E Alu Pū (moving forward together), 40 fishpond projects and practitioners called the Hui Mālama Loko I'a, and a growing group of over 60 Limu practitioners and supporters called the Limu Hui. Members of these networks and future generations need a more skilled, objectively certified and resourced DOCARE and it is encouraging to see bills that will support this.

Today a number of our network participants partner with DOCARE through growing community-based co-management initiatives from mauka to makai including community-based subsistence fishing areas and Makai Watch programs all of which originated in the collaboration between many of our network communities and government. DOCARE officers are often the first representation community members get of DLNR. In many significant places it has long been known and lamented that there is an absence of almost any DLNR presence. A UAS system would deeply expand and compliment DOCARE's recent growth capacity to be present even where its was once seen as impossible. Such a program would also increase awareness, presence and ability to gather and produce evidence, a deterrence in itself.

The communities we work with are committed to ensuring the long-term health of our biocultural resources. They have depended on them for generations. We believe our environment, the foundation of our very existence, is about long-term investment and a vision of 'āina momona. To get there it requires among other things greater skill and capacity, new and more innovative career pathways, mindsets, relationships and resource flows for mālama 'āina. This definitely includes a properly technology enhanced and properly resourced DOCARE. Passing this bill out of your committee will open a pathway toward reaching this vision.

Mahalo for this opportunity to testify in support. Aloha 'Āina Momona.

**Testimony of The Nature Conservancy  
Supporting HB 1200 HD1, Relating to the Conservation and Resources Enforcement Program**

**Committee on Water and Land  
March 13, 2023, 1:00 PM  
Conference Room 229 via Videoconference**

Aloha Chair Inouye, Vice Chair Elefante, and Members of the Committee:

**The Nature Conservancy (TNC) supports HB 1200 HD1**, Relating to the Conservation and Resources Enforcement Program, which would require the Department of Land and Natural Resources (DLNR) to establish an unmanned aircraft systems (UAS) program. It authorizes the Division of Conservation and Resources Enforcement (DOCARE) officers to use unmanned aircraft systems and requires DLNR to submit a biennial report of the effectiveness of the unmanned aircraft systems program to the legislature.

Hawai'i's environment is the engine that drives our economy and a natural, recreational, and cultural treasure that supports our island lifestyle and livelihoods. At the same time, our native forests and nearshore reefs and fisheries are threatened by local stresses from overharvest, sedimentation, and invasive species, as well as impacts from global climate change, including increasing storms, sea levels, and temperatures. DLNR is charged with protecting our natural environment, with DOCARE enforcing our natural resource protection laws. Enforcement is vital to ensure that the work to manage the environment is successful and sustainable.

DOCARE needs all possible tools to enforce our conservation laws. UAS, commonly known as drones, are used for conservation and enforcement purposes here in Hawai'i, nationally, and around the world. For example, TNC currently use drones to be more efficient by helping detect invasive species in our remote native forest preserves. DOCARE could similarly utilize the technology to monitor areas they are unable to easily access.

Explicitly authorizing this program, along with the requirements for licensing and privacy protections under complementary state and federal laws, will allow for DOCARE to responsibly utilize drones to enforce laws to protect our 'āina.

Mahalo for the opportunity to provide testimony on HB 1200 HD1.

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*The Nature Conservancy of Hawai'i and Palmyra is a non-profit organization dedicated to the preservation of the lands and waters upon which all life depends. The Conservancy has helped protect more than 200,000 acres of natural lands in Hawai'i and Palmyra Atoll. We manage 40,000 acres in 13 nature preserves and work in over 50 coastal communities to help protect and restore the nearshore reefs and fisheries of the main Hawaiian Islands. We forge partnerships with government, private parties, and communities to protect forests and coral reefs for their ecological values and for the many benefits they provide to people.*

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**[www.pupukeawaimea.org](http://www.pupukeawaimea.org)**

March 12, 2023

Re: **HB1200 HD1, WTL Hearing March 13, 2023, Room 229, 1:00pm**

Aloha Chair Inouye, Vice Chair Elefante, and Senate Committee on Water and Land,

**Mālama Pūpūkea-Waimea** (MPW) is a Hawai'i non-profit organization founded on the North Shore of O'ahu in 2005. Our mission is "working to replenish and sustain the natural and cultural resources of the Pūpūkea and Waimea ahupua'a for present and future generations through active community stewardship, education, and partnerships." For eighteen years, we have focused our stewardship and education efforts on the Pūpūkea Marine Life Conservation District (MLCD), one of only three MLCDs on O'ahu.

**MPW strongly supports HB1200 HD1.** Since 2006, MPW has been an official "**Makai Watch**" partner (the first on O'ahu) with the State Department of Land and Natural Resources (DLNR), Division of Conservation and Resources Enforcement (DOCARE). We actively work with DOCARE to increase community engagement in marine stewardship, act as the "**eyes and ears**" for DOCARE in the Pūpūkea MLCD area and offer training to the public annually with DOCARE on education, intervention, monitoring, and reporting. We recently started an **Ocean Education Ambassador** program to expand our efforts to educate new visitors about the rules and regulations of the Pūpūkea MLCD.

Currently, **only two DOCARE officers** are assigned to our large rural district. And while they are both wonderful, these officers are stretched thin, covering mauka to makai from Ka'ena to Wahiawa to Kawela – a **huge area that has many inaccessible and hard to observe areas** along the shoreline as well as mauka.

**A DOCARE drone program**, as authorized under HB1200 HD1, would be a **significant benefit** to community and DOCARE efforts to monitor and protect areas like the Pūpūkea MLCD. We often observe – and report – potential illegal activities in the MLCD that occur in areas that are **inaccessible to officers** on foot or vehicle. Poachers know how to hide from DOCARE – under cliffs, behind boulders, and along steep shorelines – and to do their illegal activities during the "off hours."

If DOCARE had drones, it would allow officers to monitor much larger areas, much more efficiently, boost overall coverage, deter sneaky behavior, and reduce violations. Drones also allow more effective evidence gathering, such as clear photos of the scene,

the violator, and vehicle and boat registration numbers. These challenges are currently real barriers to prosecution of sometimes blatant violations.

When DOCARE develops the proposed drone program, we understand that an **appropriation** is necessary, as well as certain **policy safeguards** to ensure the program is FAA compliant, protects privacy rights, and maintain **appropriate records** that can be shared with the Legislature and public.

With the Legislature's support, a new DOCARE drone program will be a **transformative new tool** in the enforcement toolbox for the outstanding women and men who serve as our State DOCARE officers.

We **SUPPORT HB1200 HD1** and look forward to working with DOCARE on this exciting new program.

Mahalo nui,



Jenny Yagodich  
Director, Educational Programs &  
Makai Watch Coordinator  
Mālama Pūpūkea-Waimea

Denise Antolini  
59-463 Alapio Road  
Pūpūkea, HI 96712

Re: HB1200 HD1, WTL Hearing Mar. 13, 2023, Conference Room 229, 1:00 pm

Aloha WTL Chair Inouye, Vice Chair Elefante, and Members of the Committee,

I write in **strong support of HB1200 HD1** – “Drones for DOCARE”!

DOCARE has enormous responsibility to oversee the enforcement of the laws that protect our State’s natural and cultural resources -- across **one million** acres of state land and **three million** acres of state ocean waters. An unmanned aircraft system (UAS), or drone, program would add significant capacity to DOCARE, allowing new methods for monitoring, investigating, and evidence gathering with modern, efficient, and cost-effective technology.

Given the exponential increase in the use of drones in Hawai‘i and across the U.S. (and world) in recent years by individuals, businesses, and governments, it makes sense for the Legislature to support a drone program for our State natural resources law enforcement agency. **Drone can be a very effective fact-gathering tool, used within appropriate policies and legal boundaries.**

For many years, as a law professor devoted to environmental protection and a community member involved in marine stewardship programs, I have worked on various projects to assist DOCARE build capacity and its enforcement toolkit. Recently, as a way to further build DOCARE’s capacity, through my position as the volunteer President of Mālama Pūpūkea-Waimea (MPW), I worked with two Richardson law students, Sophia Morgan and Kanani Smull, to analyze the potential for DOCARE to develop a drone program. We reviewed drone programs recently established by law enforcement agencies in Alaska,<sup>1</sup> Florida,<sup>2</sup> California,<sup>3</sup> and Texas,<sup>4</sup> and also found that the Honolulu Police Department adopted a drone policy in 2021.<sup>5</sup> These programs provide excellent yet diverse models for a new DOCARE drone program.

In my view, to keep up with modern law enforcement methods, and to match the methods of increasingly clever and elusive violators of our state natural resources laws, a drone program is extremely important for DOCARE. I believe DOCARE *could* legally establish a drone program without a specific legislative authorization but as a matter of good public policy, it is best for DOCARE to have **express statutory authority**.

However, the program must be **funded**, and the program must be **transparent** to ensure public confidence and support. The proposed appropriation in HD1 -- \$125,000 per year for two years – for a total of \$250,000 is a very good launching point for a long-term DOCARE drone program.

Here is a vivid example of how drones can help DOCARE. You are all aware of the myriad of violations caused by the grounding of the **luxury yacht Nakoa** at Honolua on Maui. Without drones (or an expensive helicopter or boat), the DOCARE officers are basically stuck standing on the shoreline with binoculars and cameras as evidence gathering tools. In contrast, a drone (as seen in the *Honolulu Advertiser* photo and video link below) would have easily and vastly extended the photographic and real-time evidence capacity of these DOCARE officers on the scene (and allowed remote viewing by DOCARE supervisors and other DLNR divisions) and would have helped their

ability to collaborate with all the agencies involved working urgently to resolve the yacht grounding crisis and document ongoing violations.



Left photo: <https://spectrumlocalnews.com/hi/hawaii/news/2023/02/22/luxury-yacht-runs-aground-in-maui--pumps-diesel-into-water>

Right photo: [https://www.youtube.com/watch?v=tboAGT0Kvco&feature=youtu.be&ab\\_channel=Star-Advertiser](https://www.youtube.com/watch?v=tboAGT0Kvco&feature=youtu.be&ab_channel=Star-Advertiser)

Please let me know if I may assist with any questions about this bill. We would be happy to conduct additional research to support the establishment of an effective drone program for DOCARE.

Mahalo nui loa for passing this important bill!

Best regards,

Denise Antolini

<sup>1</sup> Alaska Stat. Ann. § 18.65.902.

<sup>2</sup> Fla. State. Ann. § 934.50(4).

<sup>3</sup> See, e.g., Drone Program, City of Chula Vista Police Department (July 2, 2022),

<https://www.chulavistaca.gov/departments/police-department/programs/uas-drone-program>.

<sup>4</sup> Texas Parks and Wildlife Department, Law Enforcement Division, 2019-2020 Small Unmanned Aircraft Systems Legislative Report (Dec. 31, 2020), <https://tpwd.texas.gov/warden/media/final-2019-2020-uas-report.pdf>.

<sup>5</sup> Small Unmanned Aircraft System (sUAS) Policy, HPD Policy Number 2.73, 1 (May 19, 2021), <https://www.honoluluupd.org/wp-content/uploads/2021/05/HPD-Policy-273-05-19-2021.pdf>.

**HB-1200-HD-1**

Submitted on: 3/9/2023 4:21:29 PM

Testimony for WTL on 3/13/2023 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Cynthia Punihaole Kennedy	Individual	Support	Written Testimony Only

Comments:

In strong support of this bill to help DOCARE enforcement.

**HB-1200-HD-1**

Submitted on: 3/10/2023 6:41:52 AM

Testimony for WTL on 3/13/2023 1:00:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Olan Leimomi Fisher	Individual	Support	Written Testimony Only

Comments:

Aloha mai kakou,

Nui ka'u kako'o no keia Pila Hale 1200 no kona palena papaha nui e kokua ai i ka ho'omalua 'ana i ko kakou i'a aloha nui. I strongly support HB1200 as a much-needed tool to better protect our dwindling beloved marine life here in Hawai'i. As a Native Hawaiian & lifelong resident of O'ahu, I stand with the majority of our local people that have long waited to see more responsible management & protection of our surrounding ocean life. If the constant "reason" for the current embarrassing & irresponsible lack of enforcement is constantly "not enough people/funding/eyes"...then it seems like the use of drone technology just might be a huge solution to this increasing problem. Please support HB1200!

Mahalo nui for considering my testimony.

Aloha i'a, aloha no,

Olan Leimomi Fisher, Pupukea, O'ahu

**HB-1200-HD-1**

Submitted on: 3/11/2023 6:07:46 PM

Testimony for WTL on 3/13/2023 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Sophia Morgan	Individual	Support	Written Testimony Only

Comments:

Aloha WTL Chair Inouye, Vice Chair Elefante, and Members of the Committee,

I write in **strong support of HB1200 HD1** with an appropriation of \$125,000 for each of fiscal years 2023-2024 and 2024-2025.

I am a second-year environmental law student at the University of Hawai‘i at Mānoa William S. Richardson School of Law. I was a 2022 summer law extern for Mālama Pūpūkea-Waimea. As part of my externship project, I conducted legal research regarding the use of drones for natural resource law enforcement.

During my research, I found that several states have successfully implemented UAS programs for law enforcement, including conservation agencies. For example, Texas Parks and Wildlife Department Law Enforcement Division established a UAS program specifically to accomplish their mission of “the conservation of natural resources and protection of human life and property.” Within two years, the UAS program ran over 7,000 missions for law enforcement investigation and surveillance, conservation management, and wildlife damage assessment and survey. Texas Parks and Wildlife Department Law Enforcement Division, 2019-2020 Small Unmanned Aircraft Systems Legislative Report (Dec. 31, 2020), <https://tpwd.texas.gov/warden/media/final-2019-2020-uas-report.pdf>.

Another example comes from Alaska, where Alaska statute permits law enforcement to gather evidence in criminal investigations and other specific circumstances, as long as the drone use does not violate personal privacy rights and adheres to FAA guidelines. Alaska Stat. Ann. § 18.65.902. For example, Alaska’s Fish and Wildlife Service has implemented use of UASs to help aid in wildlife surveillance and animal recovery efforts. 2018 Alaska Fish and Wildlife Fund Grant Awards, AFWF (2018),

<https://www.nfwf.org/sites/default/files/2020-04/2018-afwf-grant-slate.pdf>.

In Florida, law enforcement agencies are also permitted to use drones to gather evidence under specific circumstances. Fla. State. Ann. § 934.50(4). Florida has the fifth greatest number of public safety agencies implementing drones in the US: most of which consist of law enforcement agencies. For example, the Tuscaloosa County Sheriff’s Office has 30 certified pilot deputies, a fleet of 13 small and 2 large drones, and a mobile drone command unit. Stephen Dethrage,

Sheriff's Office Donates Its Helicopters to Tuscaloosa Police in Switch to Drone Program, Tuscaloosa Thread (May 4, 2022), <https://tuscaloosathread.com/sheriffs-office>

-donates-its-helicopters-to-tuscaloosa-police-in-switch-to-drone-program/.

In California, many county law enforcement agencies run drone programs. For example, since its first drone operation on October 22, 2018, City of Chula Vista Police Department (CVPD) has responded with drones to 11,375 calls, assisted in 1,324 arrests, been first on scene 6,467 times, and avoided the need to dispatch a patrol unit 2,874 times. Drone Program, City of Chula Vista Police Department (July 2, 2022), <https://www.chulavistaca.gov/departments/police-department/programs/uas-drone-program>. CVPD posts information on each flight publicly and provides public forums to involve their community in the program. *Id.* Chief Roxana Kennedy has called the Drone Program “one of her most important tools in improving situational awareness, de-escalating dangerous situations, and protecting her officers and community.” *Id.* See also UAS-Unmanned Aerial Systems, Placer County Sheriff's Office (last visited July 1, 2022), <https://www.placer.ca.gov/5822/UASUnmanned-Aerial-System>.

Mahalo nui loa for your time and consideration of my testimony!

Best regards, Sophia Morgan



March 13, 2023

The Honorable Lorraine R Inouye  
Chair  
Water and Land Committee  
Hawaii Senate  
415 South Beretania Street  
Honolulu, HI 96813

Subject: Written Testimony in Support of HB 1200 and Suggested Amendment

Dear Chair Inouye:

Thank you for the opportunity to submit testimony in support of HB 1200 that would establish an unmanned aircraft systems program at the Hawaii Department of Land and Natural Resources (Department). I appreciate you and the committee taking the time to consider the below comments and others in evaluating this legislation. As the Director of Policy and Community Affairs at Skydio, we have partnered without countless state and local agencies to help them implement and upgrade their unmanned aircraft systems programs. The benefits of a drone program for the Department would be numerous, including by improving the agency's efficiency in accomplishing a multitude of tasks, while also increasing the safety of its staff that previously had to perform such tasks themselves. However, using drones from entities in certain foreign countries of concern pose serious risks to cybersecurity and national security, human rights, and U.S. competitiveness in aviation. To that end, I have included below a suggested amendment to the bill in order to ensure that this new drone program does not inadvertently expose the state of Hawaii to these well documented risks or provide public tax dollars to entities that the U.S. Department of Defense has said are working directly for adversarial foreign militaries.

Based in San Mateo, California, Skydio is the global leader in advanced aerial autonomy and the largest U.S. drone manufacturer. Skydio is dedicated to making drones more useful than ever by making them smarter than ever. Co-founded by former MIT classmates who pioneered technology that allows drones to fly themselves with the skills of an expert pilot, Skydio builds drones from the ground up for autonomy, leveraging advances in artificial intelligence and computer vision technology. Since we were founded in 2014, we have grown from three people to hundreds of employees across the country. We manufacture small drones at scale and speed in

the United States--something never before accomplished in this country. And we are just getting started.

Originally developed as consumer toys, drones have evolved into critical tools. As a result, drones are part of the internet of things (IoT)--the web of network-connected devices on which government agencies and individuals alike rely to provide useful services every day. Because IoT devices have the capability to connect to networks, public and private organizations are increasingly taking action to ensure these devices comply with cybersecurity standards. As long as IoT devices comply with appropriate cybersecurity measures, which should include reasonable precautions on the use of technology subject to influence by foreign countries of concern, they can be safely used by agencies with the most demanding cybersecurity requirements--from the military to large municipal agencies to power plants.

Additionally, drones made by companies based in countries of concern, including the PRC are subject to military-civil fusion which presents serious risks to cybersecurity, national security, human rights, and U.S. competitiveness in aviation. As a result of China's Made in 2025 program, drone companies based in the PRC control nearly 90% of the US and global drone market. The PRC views global leadership in drones as a key lever enabling the PRC to dominate a new era of aviation that is increasingly defined by uncrewed and autonomous systems.

The risks associated with PRC drones are very well known and detailed below. On August 9, 2017, the Department of Homeland Security published a declassified alert entitled "Da Jiang Innovations (DJI) Likely Providing U.S. Critical Infrastructure and Law Enforcement Data to Chinese Government." In 2020, the Commerce Department added DJI to the entity list for playing a role in China's human rights violations against the Uighur people. On December 16, 2021, the Treasury Department declared DJI as part of the Chinese Military-Industrial Complex, and precluded U.S. investment in any publicly traded securities. On October 5, 2022, the Department of Defense determined DJI is a "Chinese Military Company," a significant finding that denotes DJI's close ties with the Chinese military and security services. The Administration is also in the process of implementing Executive Order 13981, which makes it U.S. policy "to prevent the use of taxpayer dollars to procure UAS that present unacceptable risks and are manufactured by, or contain software or critical

In 2019, Congress enacted Section 848 of the National Defense Authorization Act (NDAA) for Fiscal Year 2020, which prohibited the Department of Defense from purchasing or operating drones made in the PRC. In the FY23 NDAA, Congress expanded Section 848 to prohibit the DOD from contracting for services performed by foreign-made drones that pose a national security risk in Section 817 of the NDAA for FY 2023. Also in 2023, Congress prohibited the U.S. Coast Guard from purchasing or operating foreign-made drones that pose a national security risk.

In order to ensure the security of the Department's new drone program, I strongly urge you to amend the bill to include a provision similar to those adopted by the federal government that would prohibit the Department from purchasing or using drones from countries of concern.

I appreciate the opportunity to comment on this legislation. This legislation is both timely and necessary in order for the state and the Department to unlock the full benefits of drones. Thank you for considering our comments.

Ben Husch  
Director  
Policy and Community Affairs  
Skydio, Inc.

*(e) The department of land and natural resources shall adopt rules pursuant to chapter 91 to carry out the purposes of this section."*

- (1) the Department may not purchase, operate, or otherwise acquire or use an unmanned aircraft system manufactured or assembled by a covered foreign entity,*
- (ii) Unless waived, no state funds, including funds awarded through a contract, grant, or cooperative agreement or otherwise made available, may be used by the department in connection with such UAS.*
- (iii) Waiver. The Secretary of the [Department] may waive this requirement on a case-by-case basis to the extent necessary for Counter-UAS activities, criminal investigative purposes, or exigent circumstances, provided the Secretary notifies the [insert relevant committees] within 15 calendar days.*

*The term "covered foreign entity," as determined by the Department, means an entity—*

- (A) included on the Consolidated Screening List or Entity List as designated by the United States Secretary of Commerce;*
- (B) domiciled in the People's Republic of China or the Russian Federation;*
- (C) Da-Jiang Innovations*
- (D) subject to influence or control by the government of the People's Republic of China or by the Russian Federation; or*
- (E) is a subsidiary or affiliate of an entity described in subparagraphs (A) through (D).*