

## Bookmarks Available

### Notice of Meeting UNIVERSITY OF HAWAI'I

#### BOARD OF REGENTS COMMITTEE ON RESEARCH AND INNOVATION

Members: Regents Bal (Chair), Haning (Vice-Chair), Acoba, Acopan, and Wilson

**Date:** Thursday, October 7, 2021

**Time:** Noon

**Place:** Virtual Meeting

*In light of the evolving COVID-19 situation, protecting the health and welfare of the community is of utmost concern. As such, this will be a virtual meeting and written testimony and oral testimony will be accepted in lieu of in-person testimony. Meetings may be monitored remotely via the livestream pilot project. See the Board of Regents website for information on accessing the livestream: [www.hawaii.edu/bor](http://www.hawaii.edu/bor). Mahalo for your consideration.*

#### AGENDA

- I. Call Meeting to Order
- II. Approval of Minutes of the June 3, 2021 Meeting
- III. Public Comment Period for Agenda Items:

All written testimony on agenda items received after posting of this agenda and up to 24 hours in advance of the meeting will be distributed to the board. Late testimony on agenda items will be distributed to the board within 24 hours of receipt. Written testimony may be submitted via the board's website through the testimony link provided on the [Meeting Agendas, Minutes and Materials](#) page. Testimony may also be submitted via email at [bor.testimony@hawaii.edu](mailto:bor.testimony@hawaii.edu), U.S. mail, or facsimile at (808) 956-5156. All written testimony submitted are public documents. Therefore, any testimony that is submitted for use in the public meeting process is public information and will be posted on the board's website.

Those wishing to provide oral testimony for the virtual meeting may register [here](#). Given constraints with the online format of our meetings, individuals wishing to orally testify must register no later than 7:00 a.m. on the day of the meeting in order to be accommodated. It is highly recommended that written testimony be submitted in addition to registering to provide oral testimony. Oral testimony will be limited to three (3) minutes per testifier.

- IV. Agenda Items

- A. Research Project Presentation: "Kāhuli: Research for a Changing World"  
Presentation by Dr. Melissa Price, Assistant Professor, Department of Natural Resources & Environmental Management, College of Tropical Agriculture and Human Resources, University of Hawai'i (UH) at Mānoa

- B. Innovation Presentation: "An Overview of the Design, Intention, and Strategic Trajectory of the UH Office of Indigenous Innovation" Presentation by Kamuela Enos, Director, UH Office of Indigenous Innovation
- C. Committee Work Plan
- D. Research and Innovation Fiscal Year (FY) 2021 Year-in-Review and FY 2022 Outlook
- E. Strategic Directions: Extramural Awards Targets vs. Actuals FY 2014 - FY 2021

**V. Adjournment**

**DISCLAIMER - THE FOLLOWING ARE DRAFT MINUTES AND ARE SUBJECT TO FURTHER REVIEW AND CHANGE UPON APPROVAL BY THE COMMITTEE**

**MINUTES**

**BOARD OF REGENTS COMMITTEE ON RESEARCH AND INNOVATION MEETING**

**JUNE 3, 2021**

**Note:** On January 30, 2020, the World Health Organization declared the outbreak of COVID-19 a public health emergency of international concern, subsequently declaring it a pandemic on March 11, 2020. On March 16, 2020, Governor David Y. Ige issued a supplementary proclamation that temporarily suspended Chapter 92, Hawaii Revised Statutes, relating to public meetings and records, “to the extent necessary to enable boards to conduct business in person or through remote technology without holding meetings open to the public.”

**I. CALL TO ORDER**

Chair Eugene Bal called the meeting to order at 8:32 a.m. on Thursday, June 3, 2021. The meeting was conducted virtually with regents participating from various locations.

Committee members in attendance: Chair Eugene Bal; Vice-Chair Jan Sullivan; Regent Randy Moore; and Regent Michelle Tagorda.

Committee members excused: Regent Ernest Wilson.

Others in attendance: Board Chair Benjamin Kudo; Regent Alapaki Nahale-a; Regent Robert Westerman; (ex officio committee members); President David Lassner; Vice President (VP) for Legal Affairs/University General Counsel Carrie Okinaga; VP for Research and Innovation Vassilis Syrmos; VP for Information Technology/Chief Information Officer Garret Yoshimi; VP for Budget and Finance/Chief Financial Officer Kalbert Young; UH-Mānoa (UHM) Provost Michael Bruno; UH-Hilo Chancellor Bonnie Irwin; UH-West O‘ahu Chancellor Maenette Benham; Executive Administrator and Secretary of the Board of Regents (Board Secretary) Kendra Oishi; and others as noted.

**II. APPROVAL OF MINUTES**

Board Chair Kudo arrived at 8:33 a.m.

Regent Moore moved to approve the minutes of the March 4, 2021, meeting, seconded by Regent Tagorda, and noting the excused absences of Regent Sullivan and Regent Wilson, the motion carried with all members present voting in the affirmative.

**III. PUBLIC COMMENT PERIOD**

Board Secretary Oishi announced that the Board Office did not receive any written testimony, and no individuals signed up to provide oral testimony.

#### **IV. AGENDA ITEMS**

##### **A. University of Hawai'i Research: "UH's Search for the Process of Building a Habitable Planet" Presentation by Dr. Karen Meech, Acting Director and Astronomer, Institute for Astronomy (IfA), UHM**

VP Syrmos introduced Dr. Karen Meech and provided her educational background highlighting numerous accomplishments and awards received during her career including the Regents' Medal for Excellence in Research. While Dr. Meech is one of the most renowned researchers and astronomers at the university, he noted that she also serves as the Acting Director for IfA and cited her exceptional performance as an administrator.

Dr. Meech delivered a presentation on astrobiology, a scientific field dedicated to the study of the formation of habitable worlds, the basis of which resides in an understanding of how life begins, how it evolves, and the conditions necessary to allow for its existence elsewhere within the universe. She stated that technological advances, as well as collaborative efforts between leading astronomy facilities across the globe, including IfA, have resulted in the expansion of this scientific field giving astronomers and other scientists the opportunity to obtain a glimpse of the potential processes used to build life-supporting planetary systems. To date, over 10,000 exoplanets have been discovered within more than 3,000 planetary systems with approximately 50 of those planets having the potential for life. It is anticipated that, by 2030, the next generation of telescopes, satellites, and arrays will give scientists the ability to not only view planetary formation in increasingly relevant scales but also allow for a better understanding of the chemistry behind this formation. The manner in which planets and solar systems are formed and the processes used for exploring habitable planet formation in our own solar system, the only known solar system where life exists, were reviewed with it being noted that understanding exactly how Earth was formed as a habitable planet allows scientists to gain a better grasp on how this process could work in other solar systems.

Vice-Chair Sullivan arrived at 8:40 a.m.

The university's role in the study of planetary formation and the formation of our solar system through its School of Ocean and Earth Science and Technology and cosmochemistry program, in addition to IfA and university assets on Maunakea and Haleakalā was reviewed by Dr. Meech. She highlighted several astronomical and astrochemical findings made by university programs using these assets noting that many of these discoveries were the result of interdisciplinary science consultation and cooperation across the campuses of the university system. She also spoke about collaborative efforts being undertaken with space science exploration entities across the globe to conduct additional research on habitable planet formation through the use of spacecraft in conjunction with existing university assets. These efforts, in addition to the university's location and access to invaluable astronomy assets, provide a tremendous opportunity for it to continue to be a world leader in space science.

Regent Moore thanked Dr. Meech for her fascinating presentation expressing his amazement at the miniscule amount of knowledge we possess collectively regarding our own solar system. Dr. Meech agreed that an incredible amount of exploration and discovery within the field of space science remains.

Referencing the role the Pan-STARRS1 telescope played in some of the scientific discoveries highlighted, Chair Bal asked about the importance of other instruments on Maunakea and Haleakalā with regard to space exploration research. Dr. Meech replied that astronomy assets located on Haleakalā and Maunakea are making ground-breaking and important discoveries in space science and exploration. She highlighted the critical role played by all of the telescopes located at both sites in observing and tracking an extremely large and mysterious interstellar object first discovered by Pan-STARRS1 and named 'Oumuamua, which came into very close proximity of the Earth. Although collaboration was occurring between every large telescope on the planet to provide scientific analysis of 'Oumuamua, the facilities in Hawai'i, particularly those atop Maunakea, performed the lion's share of the work. As for ongoing scientific research in the area of astrobiology, the university is heavily utilizing the Gemini North Telescope and Canada–France–Hawaii Telescope on Maunakea. However, all of the facilities play a role in the scientific research of space.

**B. University of Hawai'i Innovation: Overview of the UH Office of Innovation and Commercialization Presentation by Steven Auerbach, Interim Director, Office of Innovation and Commercialization (OIC), University of Hawai'i**

VP Symos introduced Mr. Steven Auerbach, Interim Director for OIC, citing his educational background and work experience and highlighting his extensive knowledge of the realm of innovation and commercialization, much of which was obtained during his employment with Hewlett-Packard (HP). It was noted that during the short time Mr. Auerbach has been with OIC, he has instituted a number of new processes and initiatives aimed at improving innovation commercialization at the university.

Mr. Auerbach provided information on his personal and professional life, explaining that, although his interest in technology began as a student at the university, he left Hawai'i after graduation to pursue career opportunities that were unavailable locally. He reviewed his career at HP stating that the most meaningful and impactful role he held at the company was that of leading a unit responsible for driving innovation and entrepreneurship to develop new services and products. After over two-decades of service at HP, he decided to return home and pursue his interest in developing commercial innovation and entrepreneurship into an emerging sector that could increase the economic diversification of Hawai'i.

Mr. Auerbach stated that the mission of OIC is to bridge connections and build partnerships between the university, the community, and the world; strategically advance discoveries; and inspire innovators and entrepreneurs to create new opportunities for Hawai'i. He reviewed the organizational structure of OIC stating that it is comprised of three key entities including the Office of Technology Transfer, which translates research into commercial opportunities; University of Hawai'i Ventures, which facilitates the commercialization of technology and innovation developed across all 10

campuses of the university system; and the newly established Office of Indigenous Innovation, which will drive commercialization and entrepreneurship centered on indigenous innovation and societal impacts. He also provided a glimpse of the day-to-day operations of OIC, which have evolved from being primarily transactional in nature to operations that strive to increase programming geared toward building agency and industry partnerships, and underscored that the university is the key to developing and nurturing new economic sectors in Hawai'i through these partnerships.

At 9:12 a.m. Regent Moore stepped out to address a personal matter and participated intermittently on Agenda Item B. However, quorum of the committee was maintained throughout this period.

A three-point plan that will be used to grow and scale the operations of OIC was presented by Mr. Auerbach. The approaches contained within the plan include the launching of a new innovation and commercialization strategy geared toward operationalizing a comprehensive platform to bolster the pipeline of high-growth and deep technology ventures; leveraging the university's partnerships and accessibility to government agencies and private industry to establish and build upon collaborative partnerships to develop dual-use ventures; and prioritization of targeted outreach to support innovation and entrepreneurship for faculty researchers and research units with less than five years of experience in this area. He reviewed the details of each of these strategies, provided examples of how each can be successful in improving the university's commercialization and entrepreneurship efforts; and drew attention to two assets recently obtained by the university that will help to drive dual-use ventures. An idea to implement a program to reward researchers and incentivize research patent filing by including the publishing of patents, generation of royalties through licensing of patents, or initiation of start-ups as acceptable metrics for tenure and promotion was also discussed as a means of increasing innovation and commercialization at the university.

Data and statistics on innovation, commercialization, and entrepreneurship, including innovation and entrepreneurship targets versus actuals for fiscal year 2021, as well as the impacts of these activities on the university were provided by Mr. Auerbach. He opined that, while some success has been achieved, a tremendous amount of untapped opportunities in technological research and entrepreneurship remain and OIC is committed to improving outcomes in this area for the university.

Regent Nahale-a asked whether there are unique aspects about Hawai'i that provide it with a competitive advantage when considering the establishment of entrepreneurial opportunities locally. Mr. Auerbach replied that Hawai'i has a respect for the culture, values, and history of its indigenous population which can help to drive indigenous innovation; that the large military presence in the State also lends well to the leveraging of military funding for assets to help drive innovation through dual-use and other technological ventures; and that, from a technology standpoint, Hawai'i has the wherewithal and potential for developing things like artificial intelligence, machine learning, and cyber operations. Regent Nahale-a agreed that opportunities exist in Hawai'i but noted his belief that the setting-aside of some longstanding conflicts and

development of a spirit of cooperation and collaboration will be required to seize these opportunities.

Regent Westerman arrived at 9:23 a.m.

Vice-Chair Sullivan stated that the COVID-19 pandemic has resulted in a clamoring for the increased diversification of Hawai'i's economy. However, over the past 12 to 18 months, actions taken by the State do not appear to address this issue. Additionally, reductions to the university's budget made by the Legislature seems to indicate a lack of appreciation and support for the development of the innovation and technology sector in Hawai'i. She asked about actions that could be taken to gain broader community support for the development of the technology sector. Mr. Auerbach replied that educating lawmakers and the general public to better understand the ripple effect research innovation conducted by the university has throughout the economy, as well as how this can translate into potential commercial opportunities, is one key to improving support for the development of a technology sector. In addition, local, private industry needs to improve its development of an innovation and entrepreneurship culture so that more companies performing meaningful and significant innovation can be established in Hawai'i.

### **C. Fiscal Year (FY) 2020 – 2021 3<sup>rd</sup> Quarter Extramural Awards Update**

- 1. Extramural Awards Analysis Report**
- 2. Research and Innovation Metrics Summary**
- 3. Monthly Report of Extramural Awards (as of April 30, 2021)**

VP Syrmos reported on the receipt of extramural awards for the third quarter of FY 2021; provided a breakdown of trends, significant awards, and award amounts by campus; and summarized data pertaining to various research and innovation metrics. He noted that the university received \$60.7 million in extramural awards during the third quarter, which was 8.9 percent higher than the same period in FY 2020. Overall, the university has received \$440 million in extramural awards to date and anticipates reaching nearly \$500 million by the end of the fiscal year. VP Syrmos also provided information on approximately \$54 million in competitively-awarded COVID-19 related extramural awards received by the university.

While the university continues to do well in obtaining extramural funding, the growth of its successes is flattening. VP Syrmos stated that it was imperative that a hiring freeze implemented as a result of the COVID-19 pandemic be lifted and the investment in personnel be prioritized so that the university does not begin to experience a decline in research enterprise funding which will begin to occur next fiscal year if no action is taken.

Referencing an extramural award of \$210 million recently received by the university from the National Oceanic and Atmospheric Administration (NOAA), Chair Bal asked if this money was accounted for in the extramural funding report and whether these funds would be distributed over a specified period of time. VP Syrmos clarified that the

university was chosen as the site for a new Cooperative Institute for Marine and Atmospheric Research to conduct the work of the Joint Institute for Marine and Atmospheric Research currently operated under a joint agreement with NOAA. As a result, the university is eligible to receive up to \$210 million in awarded research funding throughout the course of five years, with the potential for renewal for another five years based on successful performance. These funds were not included in the extramural awards report.

#### **D. Cancer Center Update**

VP Syrmos provided an update on the University of Hawai'i Cancer Center's early phase clinical research center business plan. After discussions with President Lassner, a five-member committee has been established to review the business plan and validate some of the assumptions made by the plan with the university's external partners.

#### **E. Committee Annual Review**

Chair Bal referenced the committee annual review matrix provided in the materials packet and asked for comments from committee members. Hearing none, he stated that VP Syrmos requested an opportunity to make a statement.

VP Syrmos offered his thanks to Vice-Chair Sullivan for her service and commitment; outstanding work as both a member of the board and as a leader in the technology sector; vision with a purpose; leadership with meaning; loyalty; professionalism; intelligence; insightfulness; candor; and establishment of a high bar of excellence for the university. He also praised the work of Regent Tagorda, as well as her commitment and dedication to the university and the community.

### **V. ADJOURNMENT**

There being no further business, Vice-Chair Sullivan moved to adjourn, seconded by Regent Tagorda, and noting the excused absence of Regent Wilson, and with all members present voting in the affirmative, the meeting was adjourned at 9:43 a.m.

Respectfully Submitted,

Kendra T. Oishi  
Executive Administrator and Secretary  
of the Board of Regents





UNIVERSITY  
of HAWAII®  
SYSTEM

UNIVERSITY OF HAWAII  
BOARD OF REGENTS


Office of the Vice President for Research and Innovation

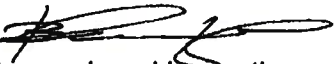
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September 30, 2021

**MEMORANDUM**

**TO:** Eugene Bal III, Chairperson  
BOR Committee on Research and Innovation

**VIA:** David Lassner   
President

**FROM:** Vassilis L. Syrmos   
Vice President for Research and Innovation

**SUBJECT: BOR COMMITTEE ON RESEARCH AND INNOVATION AGENDA MATERIALS FOR OCTOBER 2021 MEETING**

Please find attached the following materials that will be discussed at the October 7, 2021 BOR Committee on Research and Innovation meeting:

IV. Agenda Items:

- A. Research Project Presentation: "Kāhuli: Research for a Changing World" Presentation by Dr. Melissa Price, Assistant Professor, Department of Natural Resources & Environmental Management, College of Tropical Agriculture and Human Resources, University of Hawai'i (UH) at Mānoa
- B. Innovation Presentation: "An Overview of the Design, Intention, and Strategic Trajectory of the UH Office of Indigenous Innovation" Presentation by Kamuela Enos, Director, UH Office of Indigenous Innovation
- C. R&I FY21 Year-in-Review and FY22 Outlook (*\*VPRI presentation*)
  1. FY21 Q4 Extramural Awards Analysis Report
  2. FY21 Q4 Research and Innovation Metrics Summary
  3. FY21 Monthly Report of Extramural Awards (as of June 30, 2021)
  4. FY21 Annual Report on Extramural Awards & Expenditures
- D. Strategic Directions: Extramural Awards Targets vs. Actuals FY14 – FY21 (*\*VPRI presentation*)

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An Equal Opportunity/Affirmative Action Institution

# Kāhuli: Research for a Changing World

**Dr. Melissa Price**

Department of Natural Resources & Environmental Management

College of Tropical Agriculture & Human Resources

University of Hawai'i at Mānoa



**Kāhuli: To change, alter**

**Kahuli: to overturn, overthrow, capsized, upset**



**Ho'okāhuli: How do we create turning points,  
transformation, innovation, movement, change?**



# The lens through which we view the world must change.



How big do we dream?  
How do we view challenges?  
How are decisions made?  
Who makes the decisions?  
With whom do we collaborate?  
How do we predict outcomes?  
Which information matters?  
How can we reduce uncertainty?

**In an era filled with uncertainty, our solutions need to be as big and as multi-dimensional as the challenges we face.**



# Hawai'i: 25% of endangered species in U.S.A.

Plants = 493

Invertebrates = 57

Vertebrates = 36



## Threats:

Invasive plants

Invasive animals

Disease

Climate change

Sea level rise

Land modification

Car strikes

Over-collection

Contaminants





# **Wildlife conservation is a wicked problem.**

- Many complex, interdependent social-ecological factors
- No definitive formula
- Infinite potential solutions
- Every trial counts (consequences are permanent)



# Transformation

From “Extinction Capital of the World” to  
“Recovery Capital of the World”




# **My Lab's Role**

- 1. Which information is needed to improve wildlife management outcomes?**
- 2. How can we improve decision making processes?**

**Genetics**  
**Behavioral Ecology**  
**Distribution Modeling**  
**Climate Change Models**  
**Sea Level Rise Models**  
**Social Sciences**  
**Decision Analysis**

# Impacts of Wild Pigs on Biodiversity?



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# The global impact of wild pigs (*Sus scrofa*) on terrestrial biodiversity

**54**

countries with documented threats from wild pigs

Threats throughout the native and non-native range of wild pigs

Native Range:  
**62 taxa**  
THREATENED by wild pigs

Non-native Range:  
**638 taxa**  
THREATENED by wild pigs

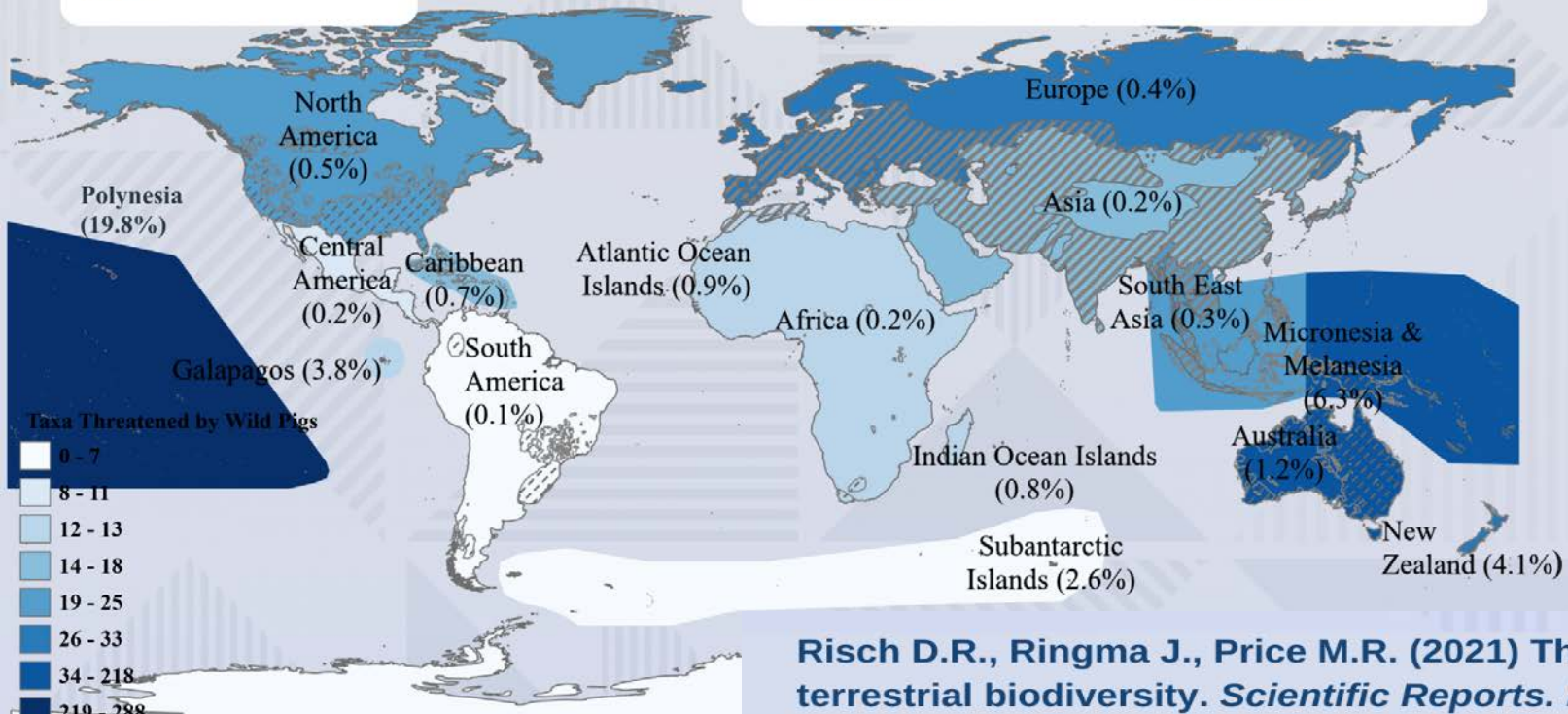
Nearly  
**40%**

of all island endemics threatened by wild pigs in certain regions

**14**  
EXTINCTIONS

**267**  
CRITICALLY ENDANGERED

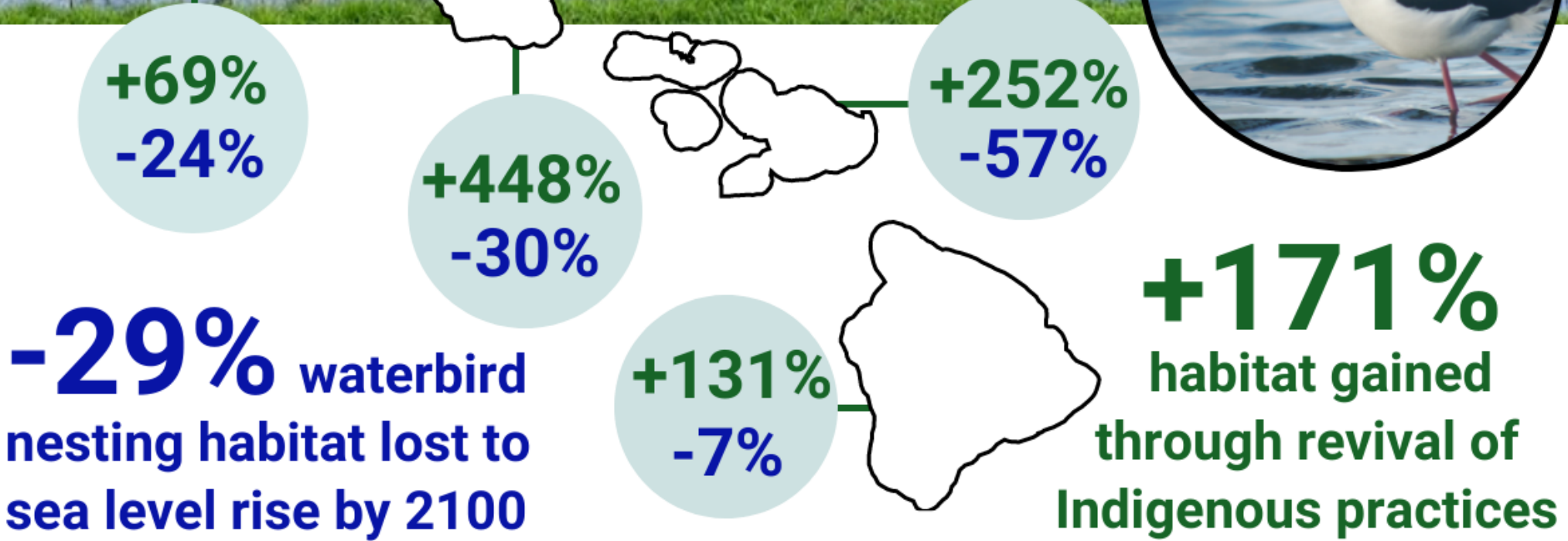
**147**  
ENDANGERED



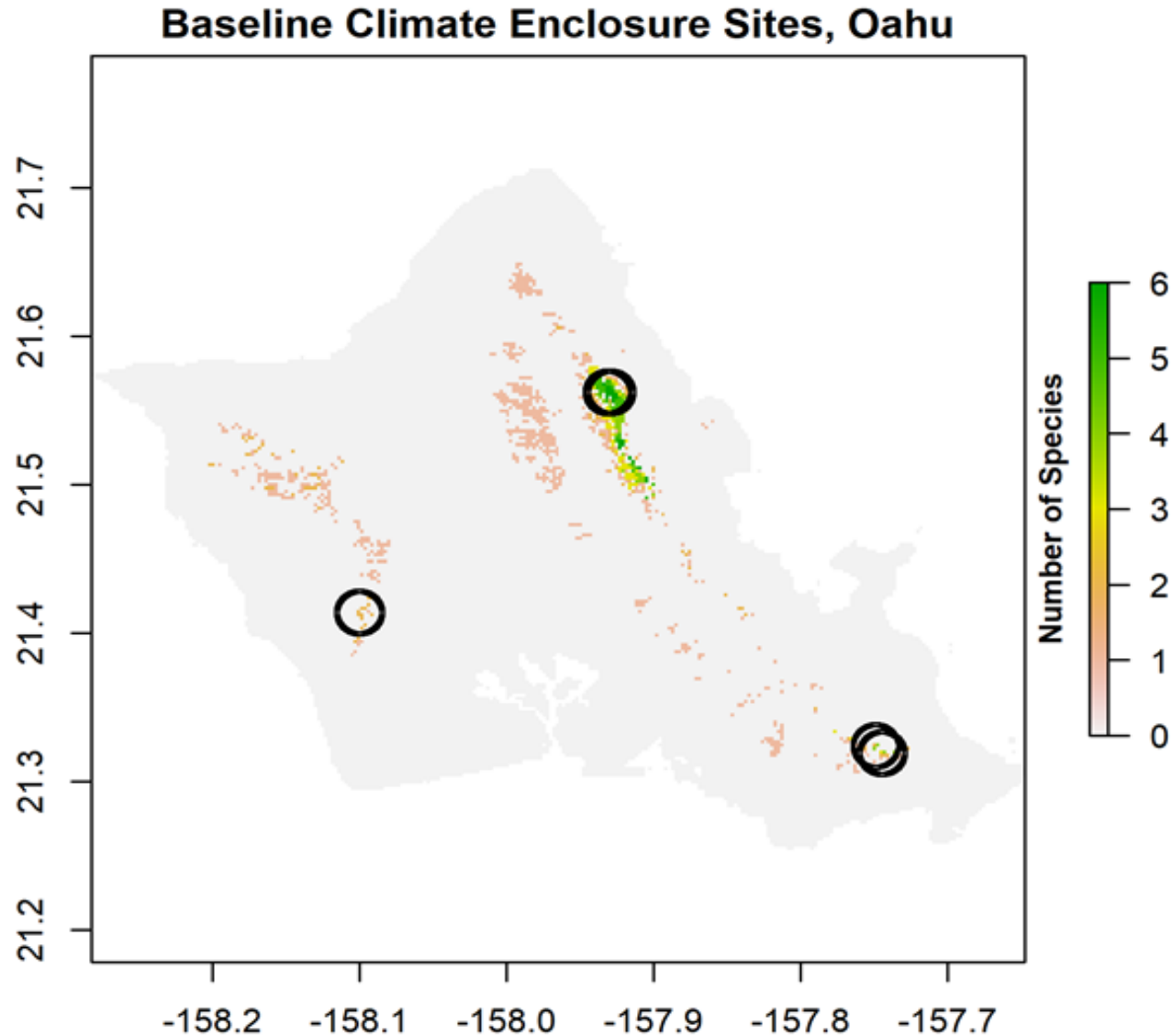
# Sea Level Rise Impacts on Hawaiian Waterbirds



# The role of Indigenous practices in expanding waterbird habitat in the face of rising seas



# Suitable Habitat for Species of *Achatinella* Now and In the Future





Species	Current O'ahu km <sup>2</sup>
<i>A. bulimoides</i>	0.03
<i>A. byronii</i>	0.04
<i>A. concavospira</i>	0.01
<i>A. decipiens</i>	0.03
<i>A. fulgens</i>	0.12
<i>A. fuscobasis</i>	0.01
<i>A. lila</i>	0.06
<i>A. livida</i>	0.05
<i>A. mustelina</i>	0.05
<i>A. sowerbyana</i>	0.02



Species	Current O'ahu km <sup>2</sup>	Future O'ahu km <sup>2</sup>
<i>A. bulimoides</i>	0.03	0.00
<i>A. byronii</i>	0.04	0.23
<i>A. concavospira</i>	0.01	0.00
<i>A. decipiens</i>	0.03	0.15
<i>A. fulgens</i>	0.12	0.16
<i>A. fuscobasis</i>	0.01	0.00
<i>A. lila</i>	0.06	0.03
<i>A. livida</i>	0.05	0.00
<i>A. mustelina</i>	0.05	0.00
<i>A. sowerbyana</i>	0.02	0.01



Species	Current O'ahu km <sup>2</sup>	Future O'ahu km <sup>2</sup>	Currently in the Wild
<i>A. bulimoides</i>	0.03	0.00	No
<i>A. byronii</i>	0.04	0.23	Yes
<i>A. concavospira</i>	0.01	0.00	No
<i>A. decipiens</i>	0.03	0.15	Yes
<i>A. fulgens</i>	0.12	0.16	No
<i>A. fuscobasis</i>	0.01	0.00	No
<i>A. lila</i>	0.06	0.03	No
<i>A. livida</i>	0.05	0.00	No
<i>A. mustelina</i>	0.05	0.00	Yes
<i>A. sowerbyana</i>	0.02	0.01	No

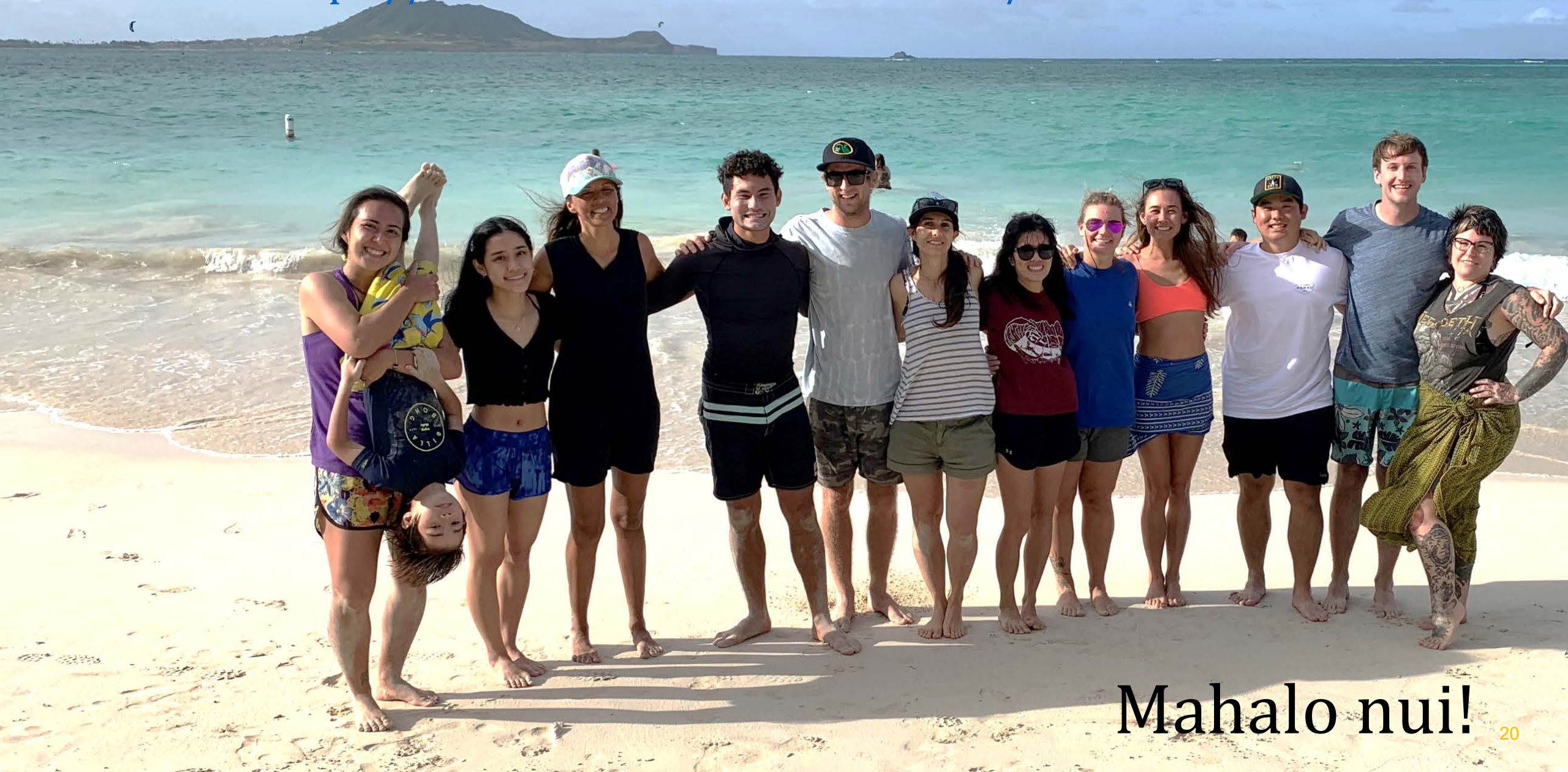


The future is here.



Personal Website: [melissarprice.weebly.com](http://melissarprice.weebly.com)

Lab Website: <https://hawaiiwildlifelab.wixsite.com/hawaiiwildlife>



Mahalo nui!

An Overview of the Design, Intention, and Strategic  
Trajectory of the Office of Indigenous Innovation for the  
OVPRI

Kamuella Enos  
Director of the UH Office of Indigenous Innovation

# Mission

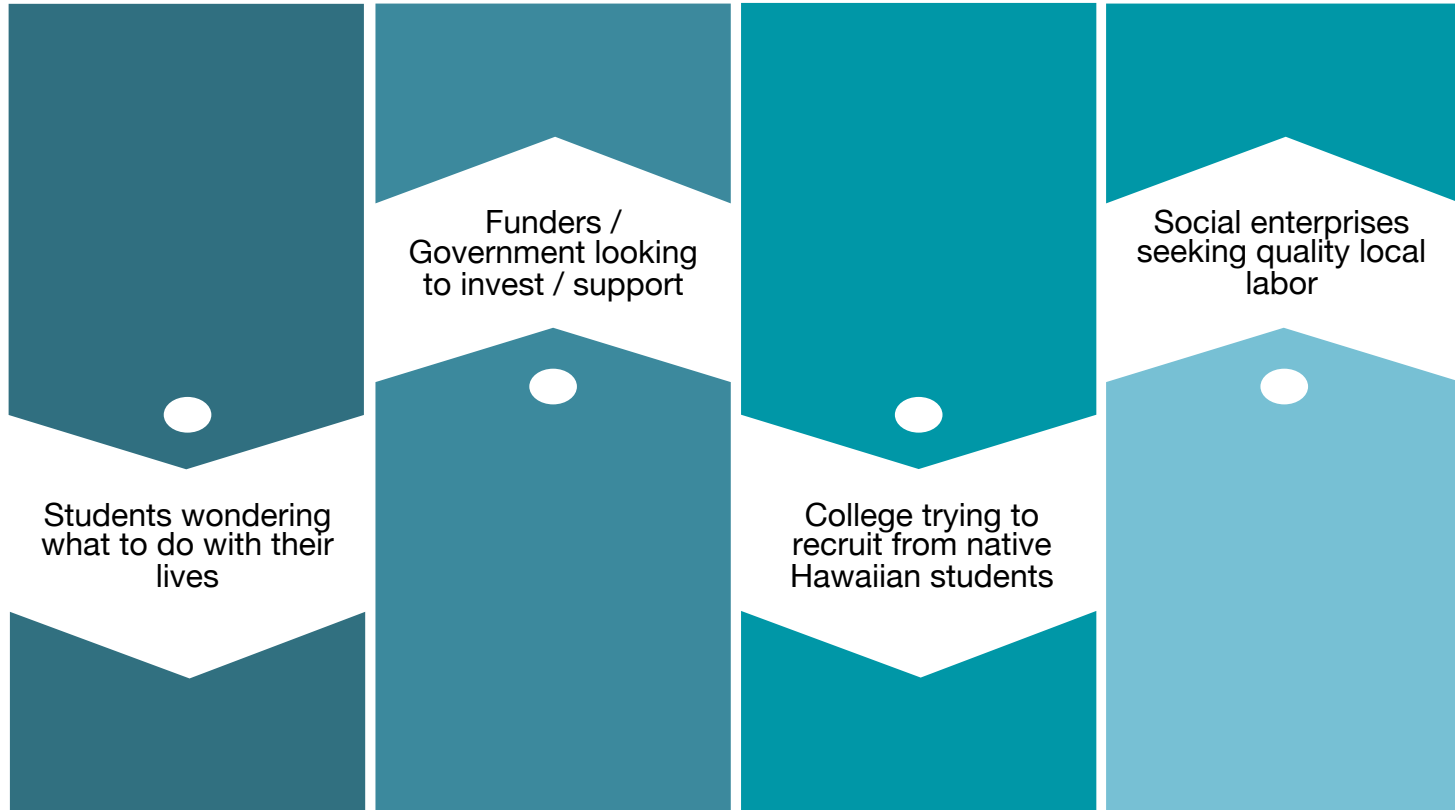
To serve as a catalyst, convener, and pathway for UH students, faculty, and regional communities of practice to support and grow the contemporary application of ancestral knowledge and systems: (1) in response to local and global challenges, and (2) to build and scale community-driven enterprises that strengthen social, economic, and environmental resilience.

*OII serves as an intermediary between players in the system, capable of attracting, aggregating and tracking fiscal resources to support the mission.*



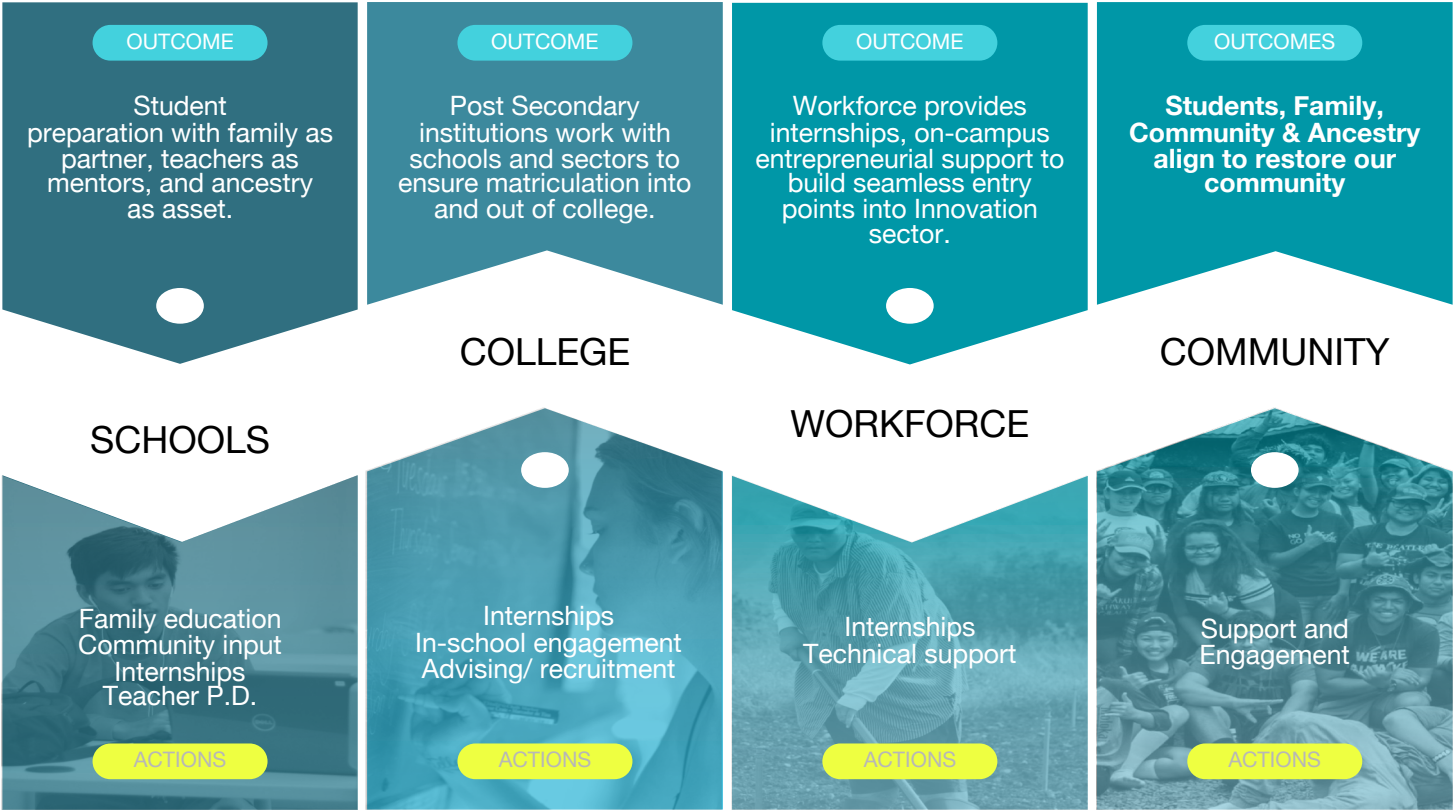
ECOLOGY AS ECONOMY

## OUR ALIGNMENT: FROM SILOED...





# OUR ALIGNMENT: ...TO ALIGNED



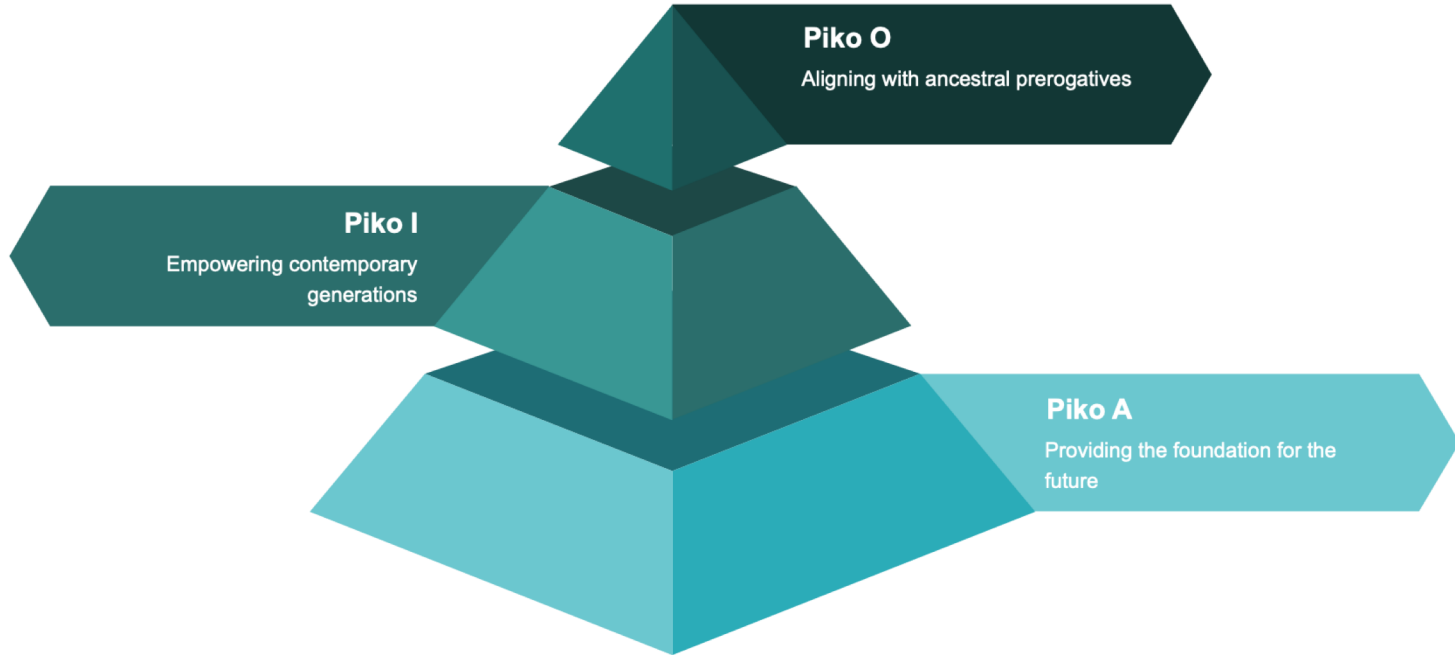
## Theory of Change

When the **practice** of utilizing ancestral sciences and technologies in ways that optimize contemporary innovation to restore Hawai'i biosystems through community-driven projects **is demonstrated and applied at scale**, *then equitable regeneration can be achieved, catalyzing social, ecological, and economic abundance at all levels.*



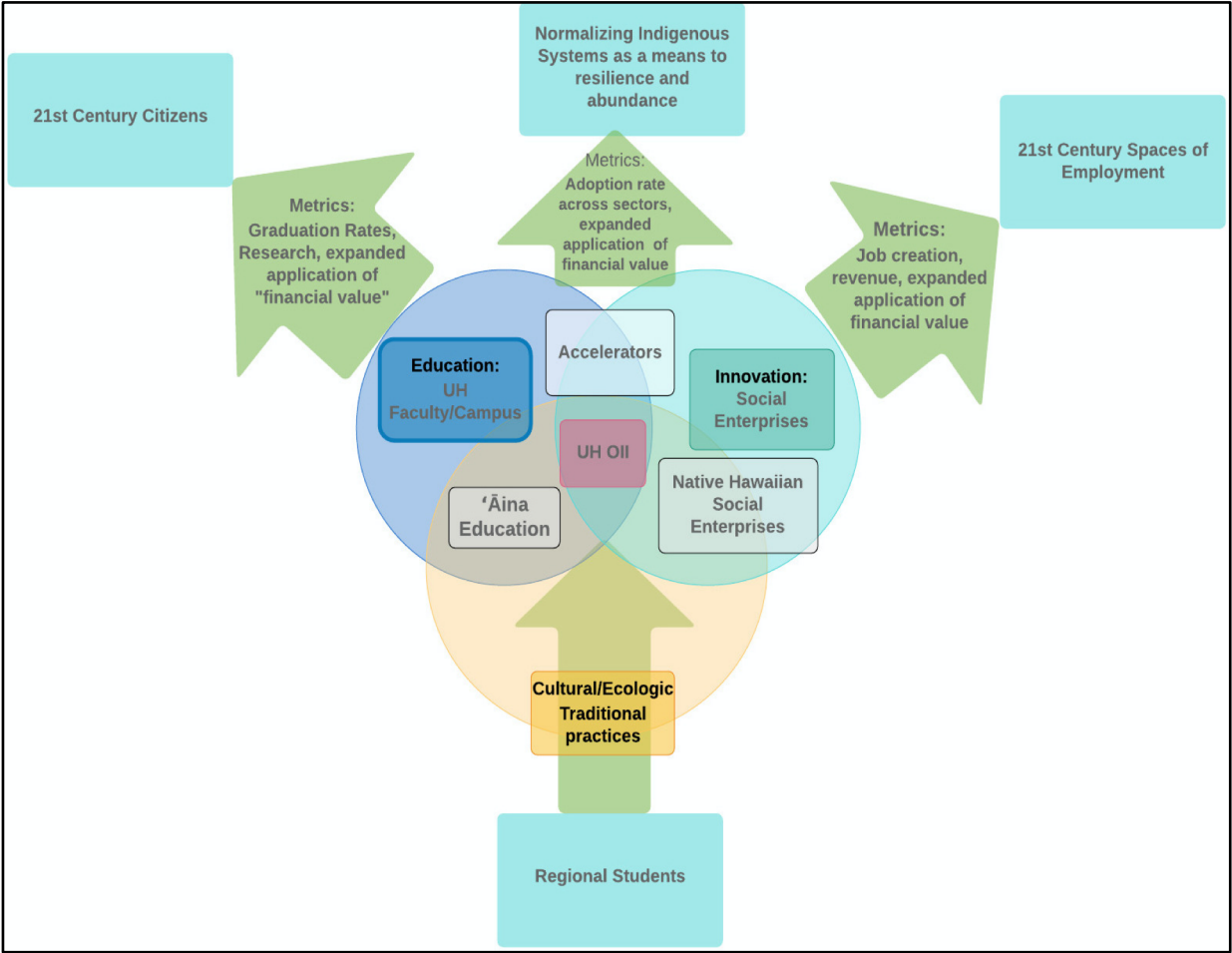
# Guiding Principles

Grounded in Ancestral Knowledge and Practice



# Value Proposition

- Unlock opportunities for collaboration
- Intermediary that foster collective agency
- Catalyst for action



# Role

- **Convening** the partners
- **Processing** the histories
- **Synthesizing** the findings
- **Designing** for reciprocity
- **Supporting** the implementation
- **Evaluating** the efficacy

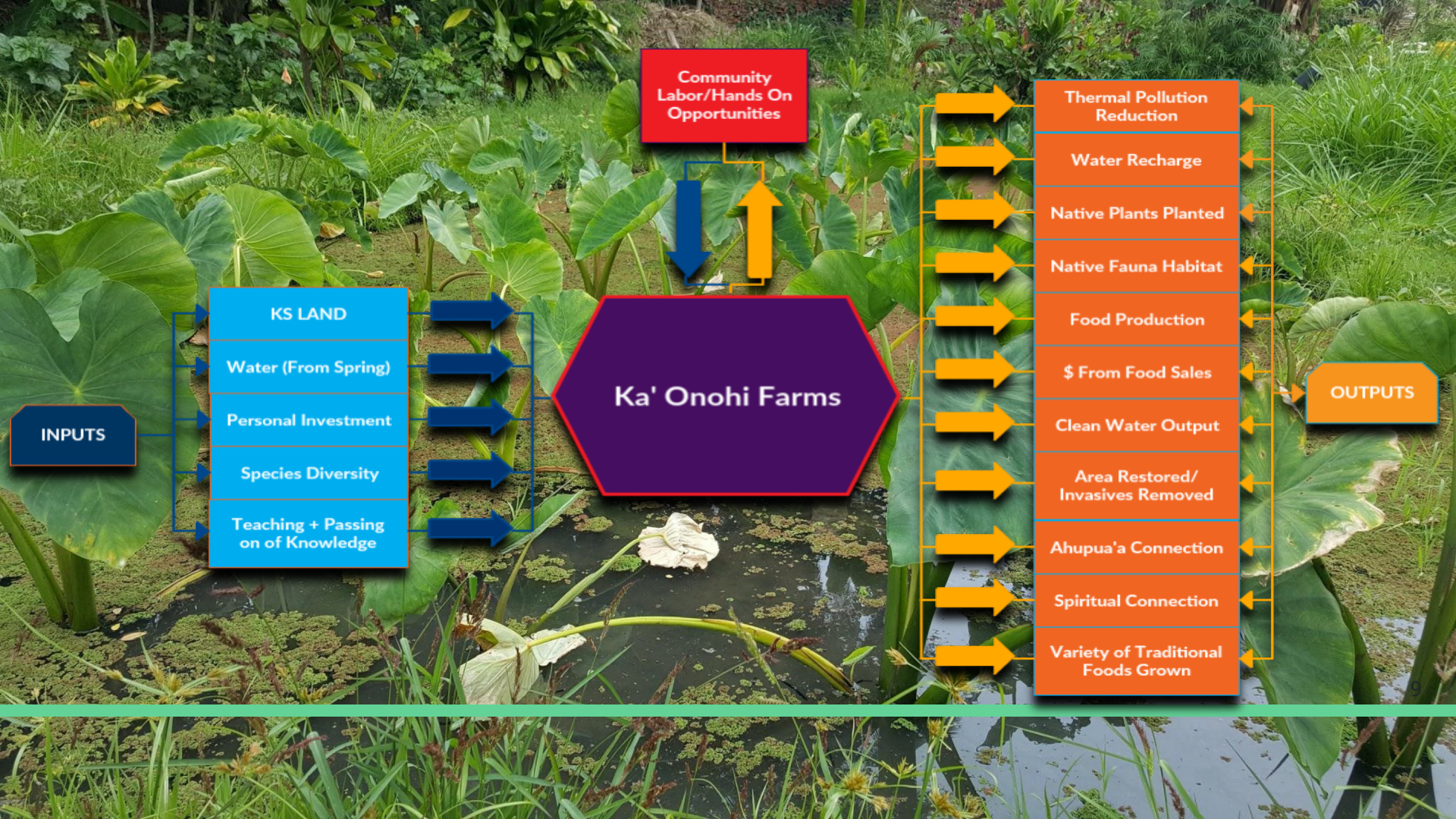


**Pewa** - n. Rectangular patch or wedge used for mending bowls, perhaps so called because of resemblance to a fishtail.

**Equity:** *A willingness to understanding the nature of the fracture: A willingness to acknowledge the history of dispossession, and a willingness to affirm the value of what was lost*

**Reciprocity:** *A willingness build interventions that address the reason for the fracture, and are built to hold each side equally strong: to ID interventions that recognize historical injustice **and** ancestral efficacy and then create approaches that work on investments into restorative interventions.*

**Transparency:** *the willingness to be clear and honest in intent, and to operate in a transparent way: Pewa are emphasized on the 'umeke, not hidden. They show that the carrier is now strong. We do not hide the fact that there was a fracture, but honor our work to mend it. And now we can have abundance*



Community Labor/Hands On Opportunities

- KS LAND
- Water (From Spring)
- Personal Investment
- Species Diversity
- Teaching + Passing on of Knowledge

**Ka' Onohi Farms**

- Thermal Pollution Reduction
- Water Recharge
- Native Plants Planted
- Native Fauna Habitat
- Food Production
- \$ From Food Sales
- Clean Water Output
- Area Restored/ Invasives Removed
- Ahupua'a Connection
- Spiritual Connection
- Variety of Traditional Foods Grown

**OUTPUTS**

**INPUTS**

# Evaluation metrics

## Key points:

- Community Derived
- Basis for future metric creation
- Living process

How we know

What we do

Social systems

Ecological systems

Internal to university

External to university

Indigeneity

Restoration

Relationship

Values

# Progress



A Program Administered by the University of Hawaii's System



HAU'OLI MAU LOA  
FOUNDATION



UNIVERSITY  
of HAWAII  
WEST O'AHU



Edith Kanaka'ole Foundation

Hawaiian  
Electric



UNIVERSITY of HAWAII  
LEeward  
COMMUNITY COLLEGE



# Looking ahead

## Programs: CIIHE

**UNIVERSITY of HAWAI'I NEWS**

Academic Research People Community Athletics Administrative By Campus ▾

### \$1M for UH center to advance Indigenous innovation to improve NHPI health

UH News » Community » \$1M for UH center...

September 23, 2021 UH News

MA'O Farms UH Interns Liona Elwin, Elerina Henry and Emilin David, participants in Alika Maunakea's Maoli Ola Study.

The University of Hawai'i will receive \$999,994 to advance its efforts to establish a Center for Indigenous Innovation and Health Equity (CIIHE) to leverage Indigenous innovation (the restoration of ancestral practices to solve contemporary problems) to improve health equity among Native Hawaiian and Pacific Islander (NHPI) communities. The federal funding from the [U.S. Department of Health and Human Services \(HHS\)](#) was made possible thanks to a provision authored by U.S. Senator Brian Schatz, chairman of the Senate Committee on Indian Affairs, in the December 2020 spending bill.

**Universities**

- » UH Mānoa
- » UH Hilo
- » UH West O'ahu

**Community Colleges**

- » Hawa'i CC
- » Honolulu CC
- » Kap'olani CC
- » Kaua'i CC
- » Leeward CC
- » UH Maui College
- » Windward CC

**Most Popular**

Students encouraged to 'Get Vaccinated UH'

## Publications: Urban 'Āina

Journals / Sustainability / Special Issues / Biocultural Restoration in Hawai'i

**Special Issue "Biocultural Restoration in Hawai'i"**

- [Print Special Issue Flyer](#)
- [Special Issue Editors](#)
- [Special Issue Information](#)
- [Keywords](#)
- [Published Papers](#)

A special issue of *Sustainability* (ISSN 2071-1050). This special issue belongs to the section "Environmental Sustainability and Applications".

Deadline for manuscript submissions: **closed (31 July 2018)**.

**IMPACT FACTOR 3.251**

**CITESCORE 3.9 SCOPUS**

**Submit to Sustainability**

**Review for Sustainability**

**Edit a Special Issue**

**Journal Menu**

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- » [Topical Advisory Panel](#)
- » [Instructions for Authors](#)
- » [Special Issues](#)

**Committee on Research and Innovation**  
 Work Plan for the 2021-2022 Academic Year

	Committee duties per bylaws	2021-2022 Committee Goals and Objectives	Projected Timeline			
			1 <sup>st</sup> Q Jul-Sept	2 <sup>nd</sup> Q Oct-Dec	3 <sup>rd</sup> Q Jan-Mar	4 <sup>th</sup> Q Apr-Jun
1	Evaluate and approve long range plans that establish the strategic goals and objectives for research, innovation, and technology transfer at the University.	Research and Innovation Long-Range Plans and Goals				X
		Innovation Presentation: Office of Indigenous Innovation, by Kamuela Enos (~10/7/21)		X		
		UH Cancer Center Task Force Update – Early Phase Clinical Research Center (EPCRC) Business Plan Report			X	
2	Review and make recommendations regarding investments, policies, and practices relating to University research, innovation and technology transfer programs.	FY21 Year in Review and FY22 Extramural Award Outlook (~10/7/21)		X		
		Extramural Awards Quarterly Report			X	X
		Research Project Presentation: Natural Resources Management/Conservation, by Melissa Price (~10/7/21)		X		
		Extramural project briefing to Committee			X	X
		Facilities and Administrative (F&A) Cost Rate Primer			X	
3	Review and make recommendations on proposals to establish or to terminate Organized Research Units (ORU) and research centers.					
4	Work in concert with Administration to establish performance goals and metrics to evaluate progress against the strategic goals and objectives.	Strategic Directions: Update on Metrics (Extramural Awards Targets vs. Actuals) (~10/7/21)		X		X

5	<i>Committee Governance</i>	Review committee work plan (~10/7/21)		<b>X</b>		
		Review committee's work for the year				<b>X</b>

# Research & Innovation FY21 Year in Review and FY22 Outlook

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BOR Research & Innovation Committee

October 7, 2021

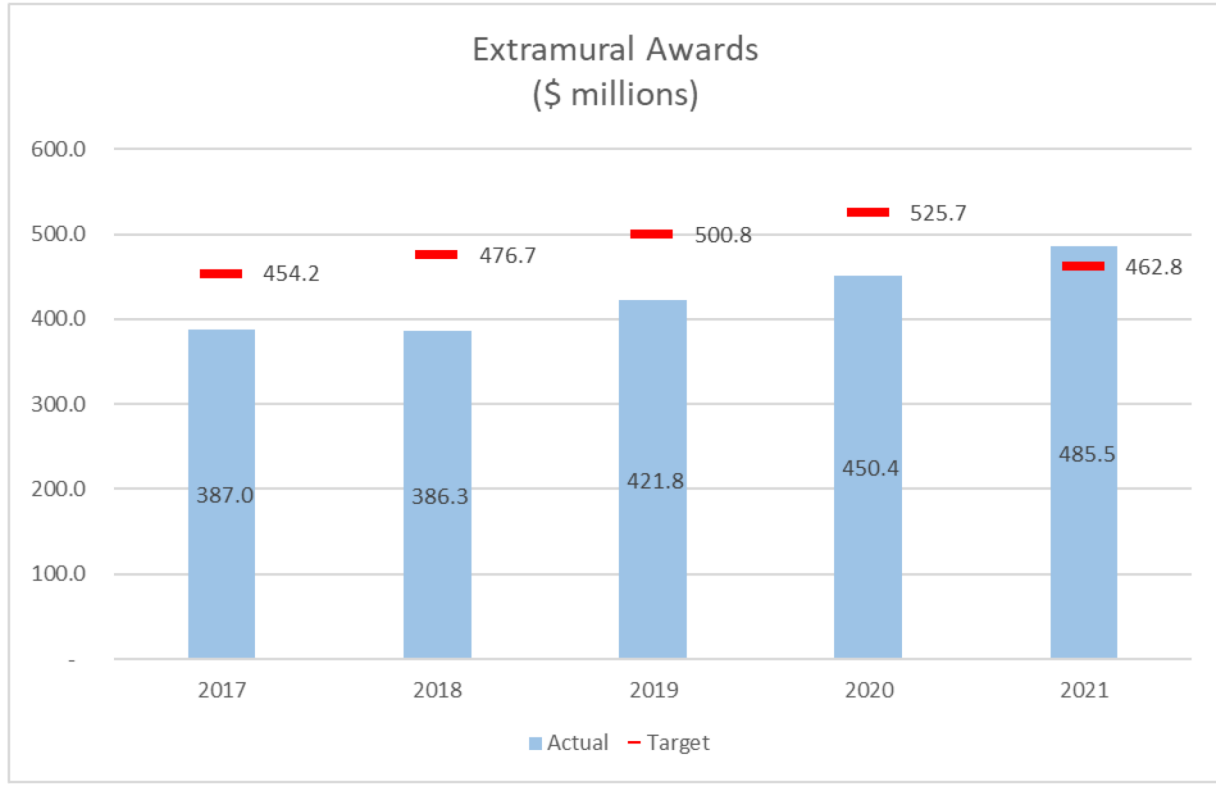


# Overview

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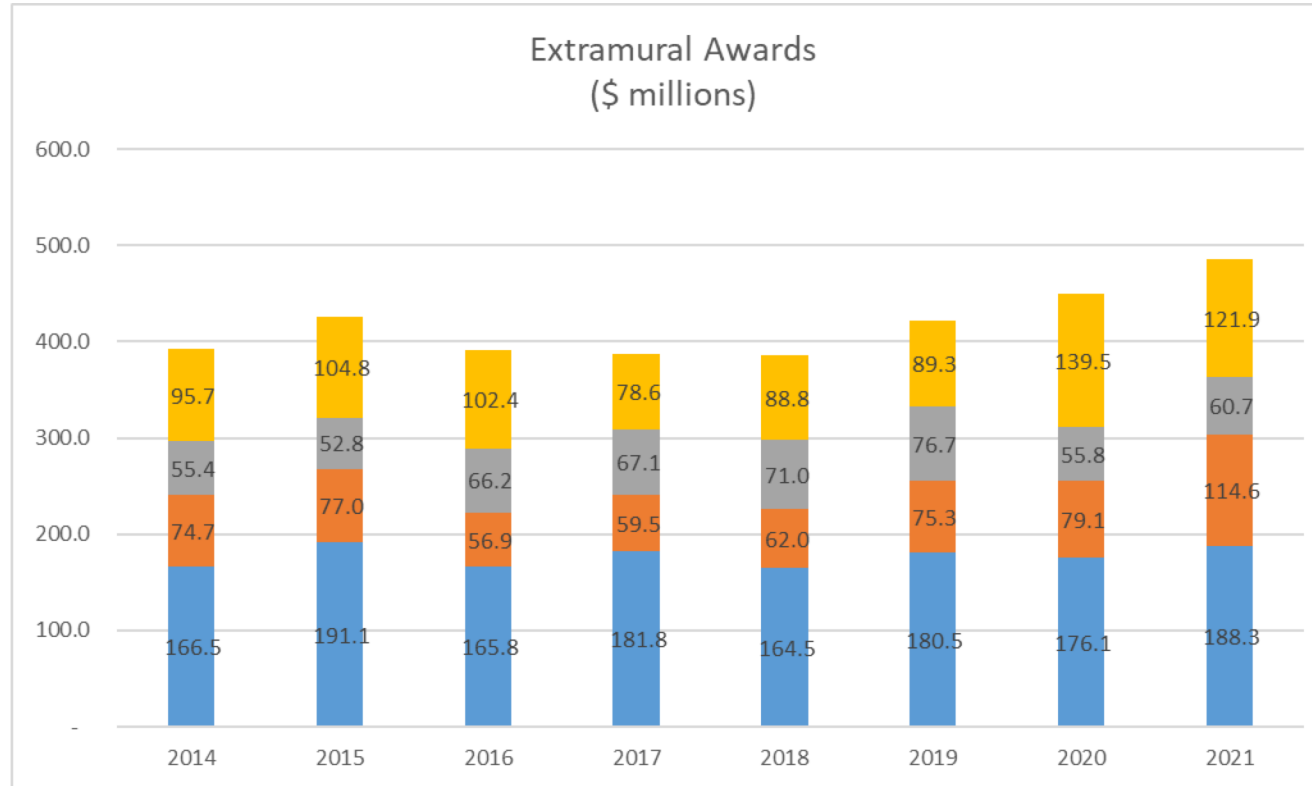
- FY 21 Performance Metrics
  - Extramural awards
  - Disclosures; patents; licenses
- FY 22 Projection
- Appendix (other metrics)





	FY 2019		FY 2020		FY 2021	
	Target	Actual	Target	Actual	Target	Actual
Extramural Awards (\$ millions)	500.8	421.8	525.7	450.4	462.8	485.5





	2014	2015	2016	2017	2018	2019	2020	2021
<b>Q1</b>	166.5	191.1	165.8	181.8	164.5	180.5	176.1	188.3
<b>Q2</b>	74.7	77.0	56.9	59.5	62.0	75.3	79.1	114.6
<b>Q3</b>	55.4	52.8	66.2	67.1	71.0	76.7	55.7	60.7
<b>Q4</b>	95.7	104.8	102.4	78.6	88.8	89.3	139.5	121.9
<b>FY</b>	392.3	425.7	391.3	387.0	386.3	421.8	450.4	485.5



# UH Mānoa '16 – '21

Campus Details	2016 Amount	2017 Amount	2018 Amount	2019 Amount	2020 Amount	2021 Amount	'16 vs. '21
College of Arts and Humanities	502,487	614,377	386,335	631,332	525,375	759,976	51.24%
College of Education	19,943,721	16,177,466	13,415,976	27,932,378	15,024,424	22,861,804	14.63%
College of Engineering	7,142,117	4,680,411	3,942,763	7,240,729	16,981,442	6,666,931	-6.65%
College of Language, Linguistics and Literature	3,378,932	2,243,734	2,640,397	2,817,523	2,504,231	3,249,379	-3.83%
College of Natural Sciences	33,558,922	32,794,485	32,165,964	36,609,301	39,984,754	34,430,078	2.60%
College of Social Sciences	14,075,445	11,544,031	13,811,775	15,766,251	17,321,277	21,223,378	50.78%
College of Tropical Agriculture and Human Resources	16,142,548	13,619,801	17,648,266	14,032,537	20,787,503	25,405,328	57.38%
Hawai'inuiakea School of Hawaiian Knowledge	3,679,757	1,996,314	2,555,214	3,238,552	1,813,078	1,075,675	-70.77%
Institute for Astronomy	20,520,303	18,339,284	15,670,948	18,772,579	25,504,897	18,509,182	-9.80%
John A. Burns School of Medicine	54,629,071	61,527,128	59,950,931	53,062,041	46,456,743	60,836,598	11.36%
Lyon Arboretum	1,276,866	752,957	478,823	255,585	1,106,044	528,112	-58.64%
Outreach College	55,761	165,214	149,263	167,295	121,258	151,296	171.33%
School of Architecture	139,696	163,646	150,175	230,565	188,831	218,102	56.13%
School of Nursing and Dental Hygiene	1,746,083	1,223,898	2,407,654	839,543	642,016	1,247,224	-28.57%
School of Ocean and Earth Science and Technology	87,128,306	79,154,444	93,144,266	91,118,186	99,057,713	99,240,489	13.90%
School of Pacific and Asian Studies	3,598,934	934,209	2,011,240	1,371,262	1,985,685	1,497,981	-58.38%
Shidler College of Business	(208,957)	269,596	-	325,617	114,880	24,500	100.00%
Thompson School of Social Work & Public Health	4,907,971	5,923,941	7,024,273	6,368,791	6,729,137	16,887,672	244.09%
University of Hawaii Cancer Center	25,874,191	29,999,976	20,857,092	23,137,759	30,111,661	25,778,578	-0.37%
Vice Chancellor, Academic Affairs	1,612,550	1,463,442	1,426,738	1,318,498	1,645,862	2,019,732	25.25%
Vice Chancellor, Research	-	-	74,853	105,000	75,000	17,279	100.00%
Water Resources Research Center	735,955	1,458,277	3,989,558	638,833	677,921	1,715,198	133.06%
William S. Richardson School of Law	2,737,026	2,176,471	2,540,068	3,016,620	3,430,231	1,654,261	-39.56%
Non-academic & non-research units	5,624,687	6,783,457	4,652,694	5,533,030	5,220,493	6,557,941	16.59%
<b>Grand Total</b>	<b>308,802,372</b>	<b>294,006,559</b>	<b>301,095,266</b>	<b>314,529,807</b>	<b>338,010,456</b>	<b>352,556,694</b>	<b>14.17%</b>





# UH Hilo & UH West O'ahu '16 – '21

UH Hilo Campus Details	2016 Amount	2017 Amount	2018 Amount	2019 Amount	2020 Amount	2021 Amount	'16 vs. '21
Chancellor, UH Hilo	1,144,232	1,436,257	1,958,215	1,148,825	1,260,827	1,216,522	6.32%
College of Agriculture, Forestry and Natural Resource Mgt	1,674,869	1,409,810	1,077,332	1,527,095	914,014	1,402,821	-16.24%
College of Arts and Sciences	999,836	962,502	1,202,177	2,007,276	2,519,495	1,520,968	52.12%
College of Business and Economics	-	-	120,000	-	163,400	61,903	100.00%
College of Natural and Health Sciences	2,864,717	3,253,296	1,726,048	3,485,189	1,198,208	2,217,233	-22.60%
College of Continuing Education and Community Svc	35,039	99,931	31,750	-	40,000	-	-100.00%
College of Pharmacy	629,526	667,726	196,873	672,673	300,271	657,634	4.46%
Hawaii Small Business Development Center	775,150	909,979	1,142,235	818,278	2,460,982	875,556	12.95%
Imiloa Astronomy Center Of Hawaii	378,393	505,336	832,854	195,978	541,000	963,641	154.67%
Ka Haka'Ula O Ke'Elīkolani-UHH	557,887	860,980	1,774,041	1,324,631	2,078,461	1,805,097	223.56%
Vice Chancellor for Academic Affairs (UH Hilo)	-	-	57,000	-	-	-	0.00%
Vice Chancellor for Administrative Affairs	3,925	-	2,250	2,250	4,375	22,500	473.25%
Vice Chancellor for Research	1,606,691	874,009	1,482,154	2,079,445	1,236,819	2,246,051	39.79%
Vice Chancellor for Student Affairs	1,999,490	1,901,860	1,347,664	3,925,512	1,607,354	2,975,114	48.79%
<b>Grand Total</b>	<b>12,669,755</b>	<b>12,881,686</b>	<b>12,950,593</b>	<b>17,187,152</b>	<b>14,325,206</b>	<b>15,965,040</b>	<b>26.01%</b>
Campus	2016 Amount	2017 Amount	2018 Amount	2019 Amount	2020 Amount	2021 Amount	'16 vs. '21
UH West Oahu	5,326,027	5,631,172	6,035,273	8,210,429	2,893,179	3,078,823	-42.19%



# UH Community Colleges '16 – '21

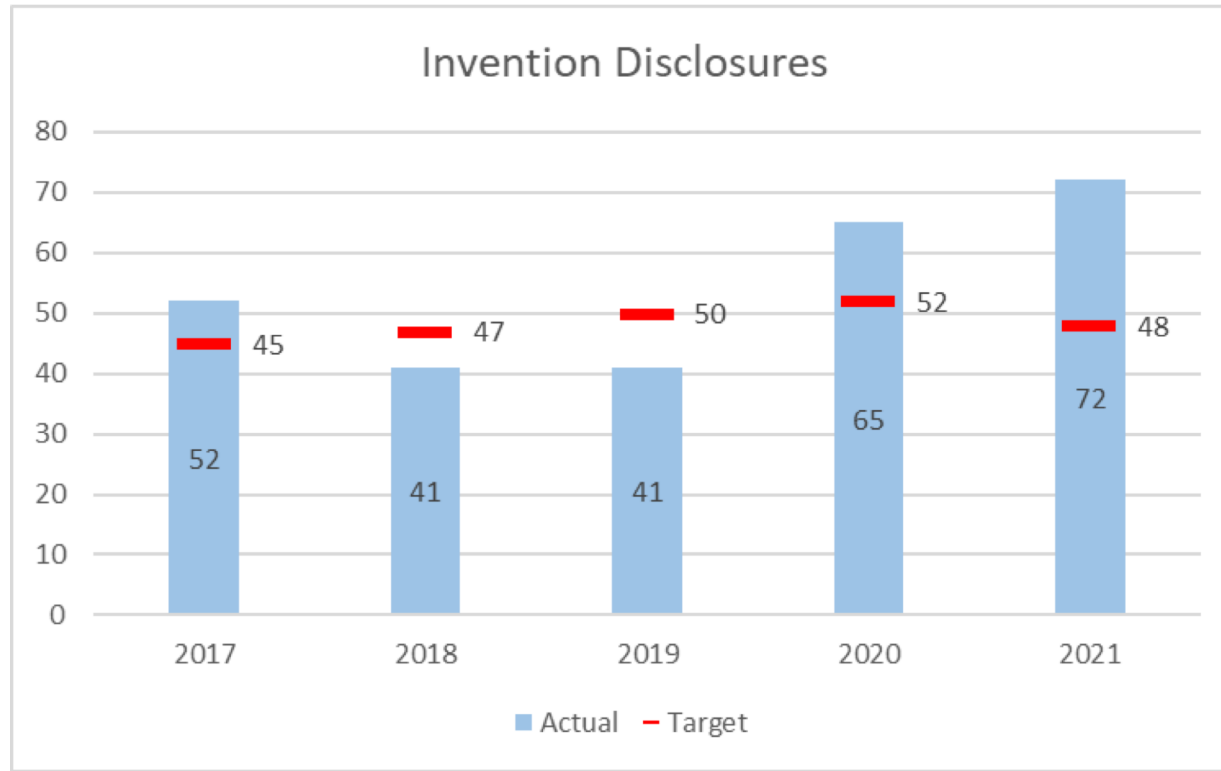
Campus	2016 Amount	2017 Amount	2018 Amount	2019 Amount	2020 Amount	2021 Amount	'16 vs. '21
Hawai'i Community College	68,000	179,897	557,101	766,655	1,775,648	1,938,010	2750.01%
Honolulu Community College	2,639,133	2,864,032	1,679,521	1,594,061	1,851,636	1,822,177	-30.96%
Kapi'olani Community College	4,100,121	6,736,316	5,211,039	5,950,760	2,991,758	3,487,491	-14.94%
Kaua'i Community College	1,004,692	2,007,725	876,089	971,368	1,240,530	1,116,840	11.16%
Leeward Community College	3,455,755	4,260,373	3,064,574	3,303,870	1,564,863	1,695,026	-50.95%
University of Hawai'i Maui College	10,510,676	7,440,725	11,925,050	13,347,013	14,981,750	12,604,643	19.92%
Windward Community College	5,313,299	7,406,077	7,324,832	7,669,161	4,611,575	5,684,114	6.98%
<b>Grand Total</b>	<b>27,091,676</b>	<b>30,895,145</b>	<b>30,638,206</b>	<b>33,602,888</b>	<b>29,017,760</b>	<b>28,348,301</b>	<b>4.64%</b>



# UH System '16 – '21

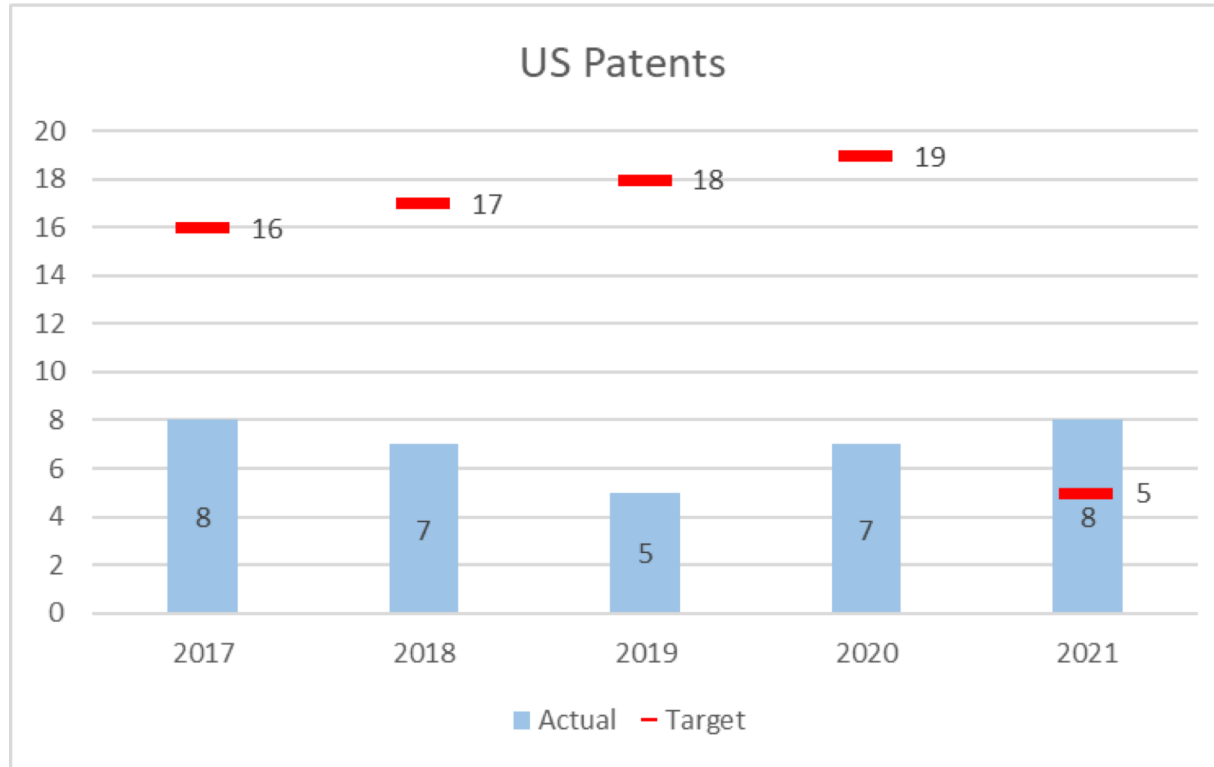
Campus Details	2016 Amount	2017 Amount	2018 Amount	2019 Amount	2020 Amount	2021 Amount	'16 vs. '21
Office of the Vice President for Community Colleges	1,021,329	1,329,109	1,409,610	504,702	13,324,533	19,175,798	1777.53%
Office of the Vice President for Research and Innovation	417,387	8,817,197	8,149,281	18,093,132	22,266,107	32,287,342	7635.59%
Office of the VP for Academic Planning and Policy	10,345,760	10,151,665	4,609,372	6,911,960	13,701,436	5,402,061	-47.78%
Office of the VP for Information Tech/Chief Info Officer	25,660,222	23,252,872	21,414,102	22,668,032	16,687,933	28,537,133	11.21%
President, University of Hawaii System	-	-	-	-	142,739	160,933	100.00%
Office of the VP For Administration	-	36,300	10,000	144,058	69,900	16,801	100.00%
<b>Grand Total</b>	<b>37,444,698</b>	<b>43,587,143</b>	<b>35,592,365</b>	<b>48,321,884</b>	<b>66,192,648</b>	<b>85,580,068</b>	<b>128.55%</b>





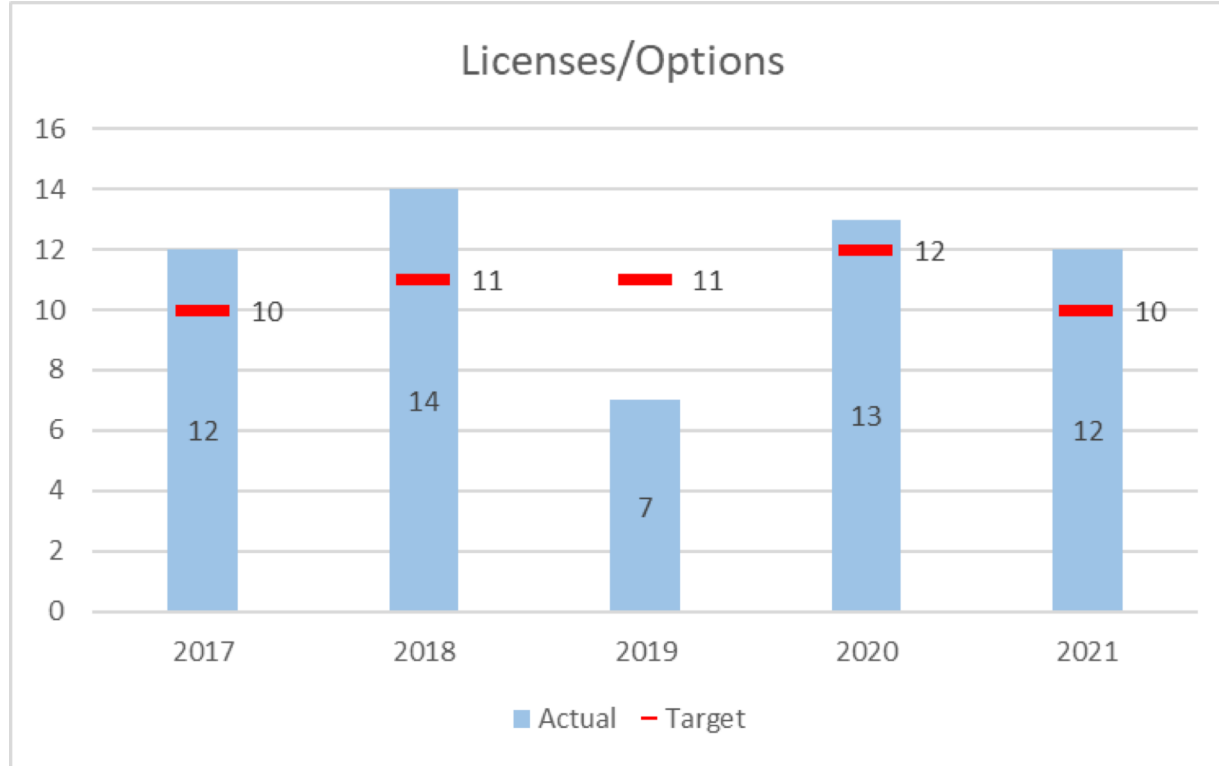
	FY 2019		FY 2020		FY 2021	
	Target	Actual	Target	Actual	Target	Actual
Invention Disclosures	50	41	52	65	48	72





	FY 2019		FY 2020		FY 2021	
	Target	Actual	Target	Actual	Target	Actual
US Patents	18	5	19	7	5	8





	FY 2019		FY 2020		FY 2021	
	Target	Actual	Target	Actual	Target	Actual
Licenses/Options	11	7	12	13	10	12



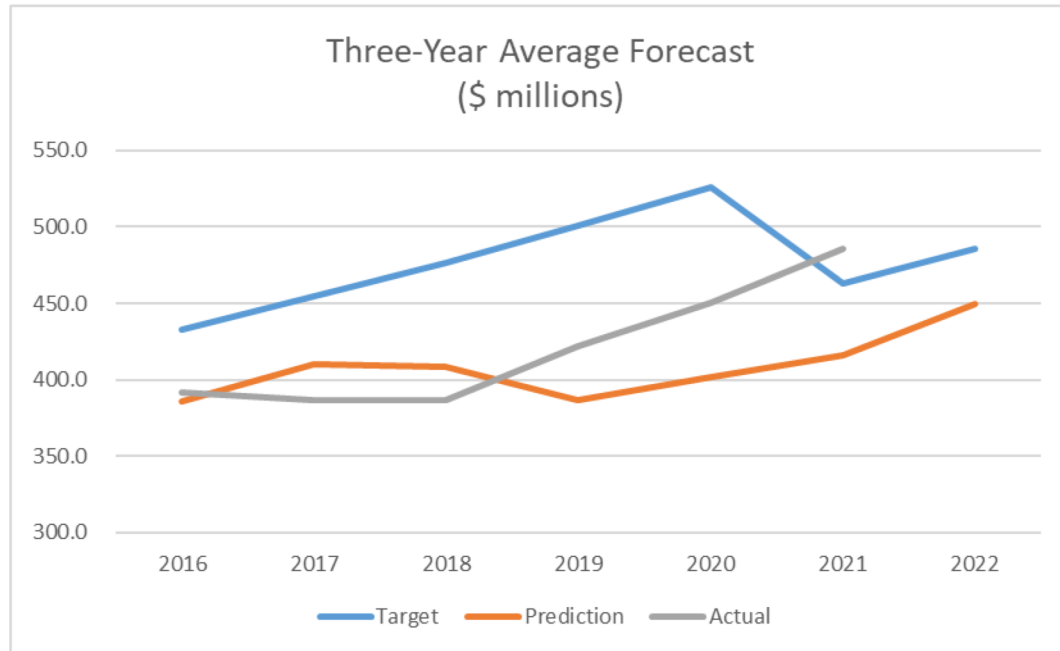
# Federal R&D Budget '16-'22

Total R&D by Agency, FY 2016-2022							
(budget authority in millions of dollars; actuals except where noted)							
Fiscal Year	2016	2017	2018	2019	2020	Estimate 2021	Proposed 2022
DOD	71,421	49,197	52,386	54,691	62,438	63,350	62,800
NASA	13,253	10,704	11,755	10,698	14,801	13,226	14,565
DOE	15,217	14,896	17,482	18,271	19,476	19,312	21,452
HHS	32,243	34,222	36,942	38,511	44,455	43,494	51,232
NSF	6,010	5,938	6,327	6,586	6,800	7,408	8,173
USDA	2,657	2,585	2,618	3,026	2,989	2,965	3,609
Interior	973	953	885	958	1,043	1,024	1,339
DOT	927	904	1,043	1,071	1,094	1,033	1,221
EPA	516	497	492	489	516	524	585
DOC	1,681	1,794	2,029	1,959	1,953	2,122	2,743
DHS	582	724	725	668	532	590	627
VA	1,222	1,346	1,286	1,370	1,366	1,420	1,498
Other	1,600	1,529	1,795	1,836	1,163	1,330	1,416
<b>Total R&amp;D</b>	<b>148,302</b>	<b>125,289</b>	<b>135,765</b>	<b>140,134</b>	<b>158,626</b>	<b>157,798</b>	<b>171,260</b>

Source: 2016-2019 data from Congressional Research Service (LAST UPDATE: April 2020).  
2020-2022 data from Office of Management and Budget FY2022 President's Budget (LAST UPDATE: May 2021).



# FY 22 Projection



FY	Target	Prediction	Actual
2016	432.5	385.9	391.3
2017	454.2	410.2	387.0
2018	476.7	408.5	386.3
2019	500.8	386.7	421.8
2020	525.7	401.5	450.4
2021	462.8	416.3	485.5
2022	485.9	449.9	TBD



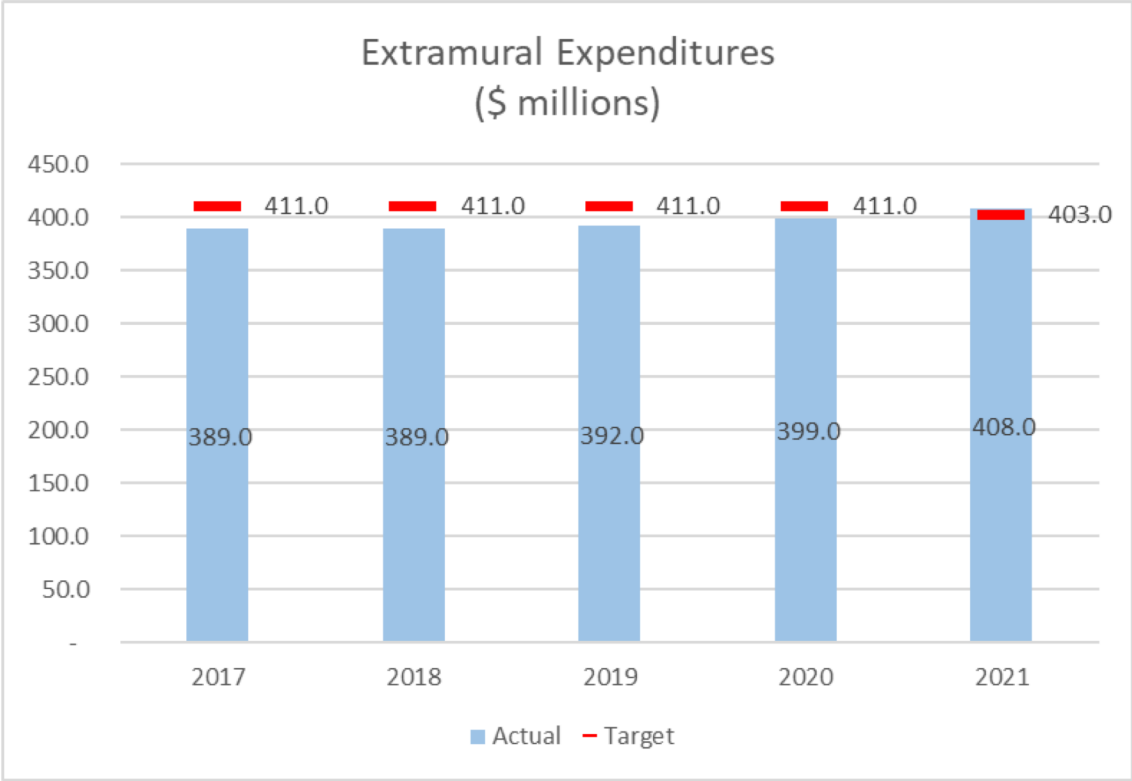


# Other Metrics

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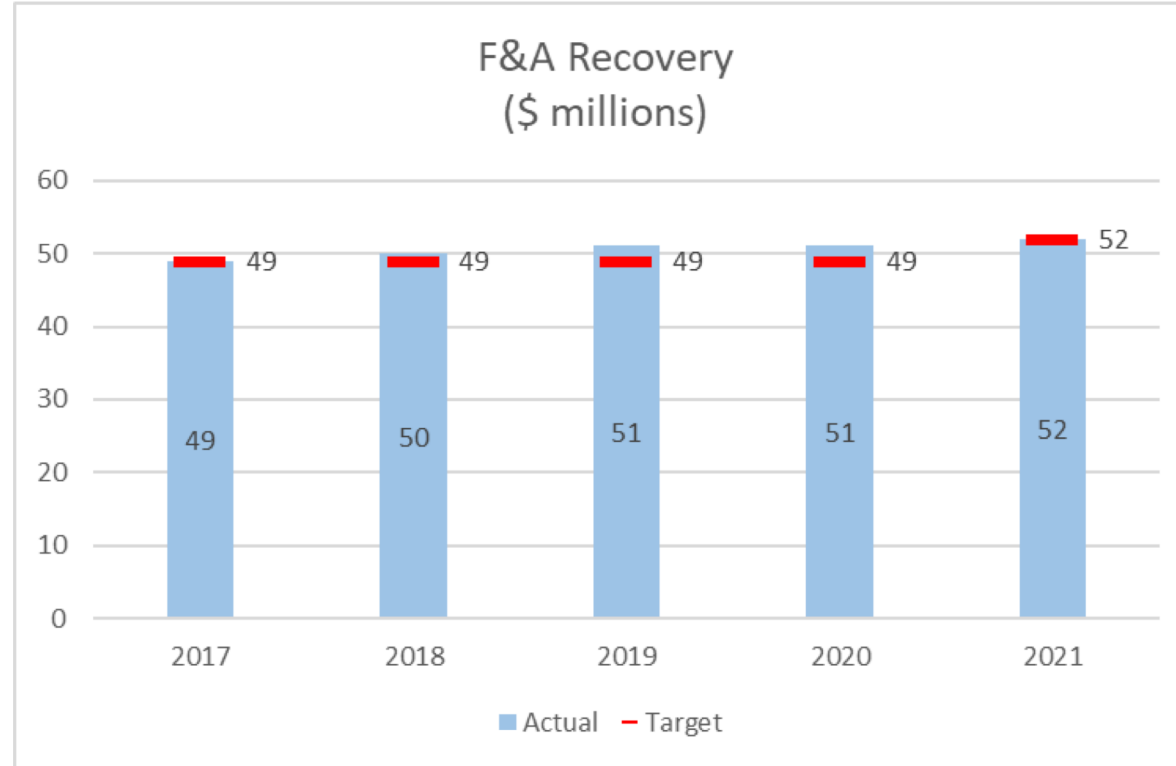
- Other Metrics
  - Extramural Expenditures
  - F&A Recovery
  - Active Licenses/Options
  - Royalties
  - Start-Ups Supported (NEW)
  - Innovation and Entrepreneurship Engagement (NEW)





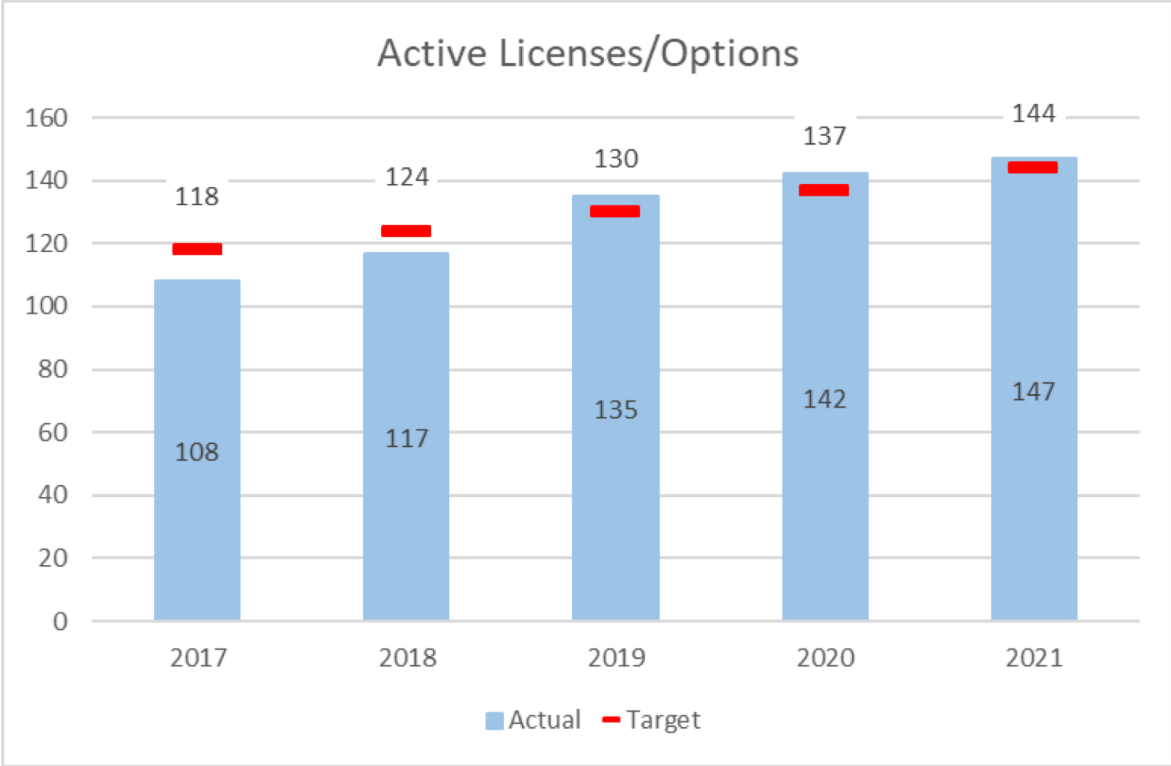
	FY 2019		FY 2020		FY 2021	
	Target	Actual	Target	Actual	Target	Actual
Extramural Expenditures (\$ m)	411	392	411	399	403	408





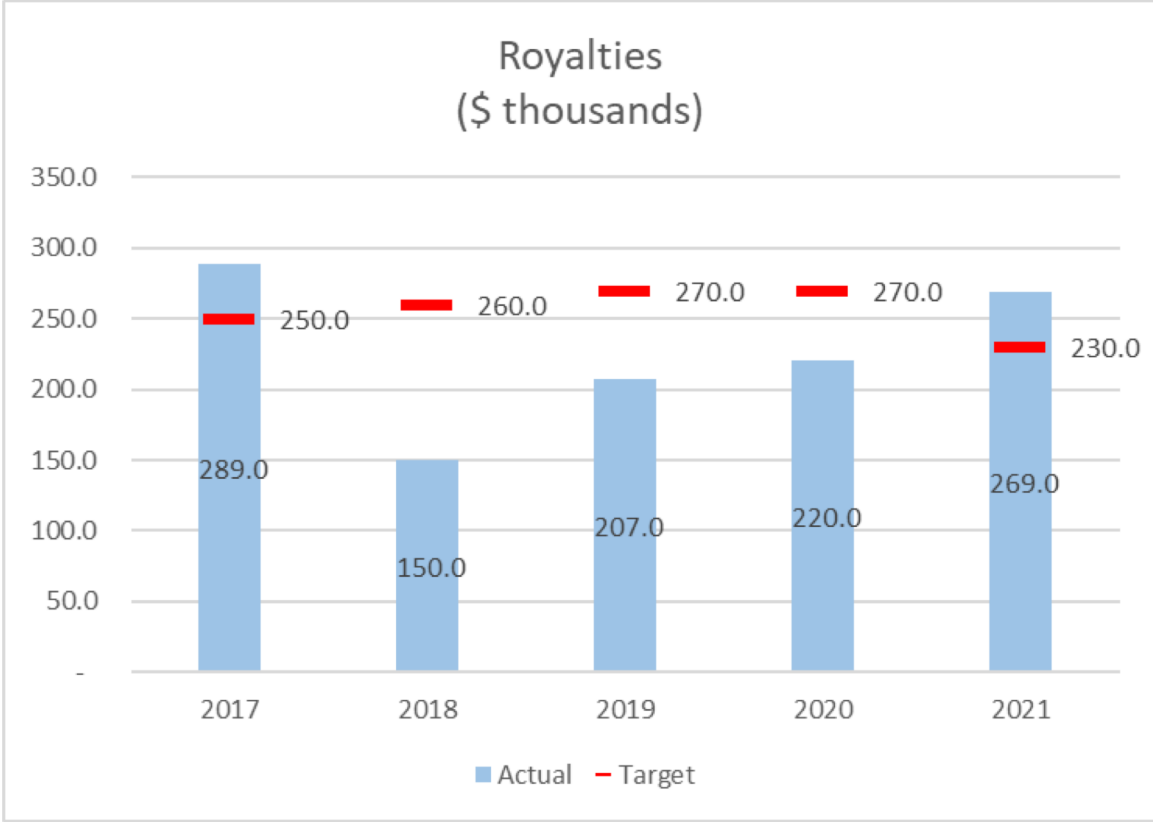
	FY 2019		FY 2020		FY 2021	
	Target	Actual	Target	Actual	Target	Actual
F&A Recovery (\$ millions)	49	51	49	51	52	52





	FY 2019		FY 2020		FY 2021	
	Target	Actual	Target	Actual	Target	Actual
Active Licenses/Options	130	135	130	142	144	147





	FY 2019		FY 2020		FY 2021	
	Target	Actual	Target	Actual	Target	Actual
Royalties (\$ thousands)	270	207	270	220	230	269



# New Metrics

Metric	Description	FY 21 Data
Start-Ups Supported	Number of instances UH provided support to student, faculty, alumni or affiliate companies that are registered businesses in the state or have licensed UH IP	131
Innovation & Entrepreneurship Engagement	Number of UH students, faculty and staff participating in UH innovation or entrepreneurship programs	309



## FY21 Q4 Extramural Awards Analysis Report

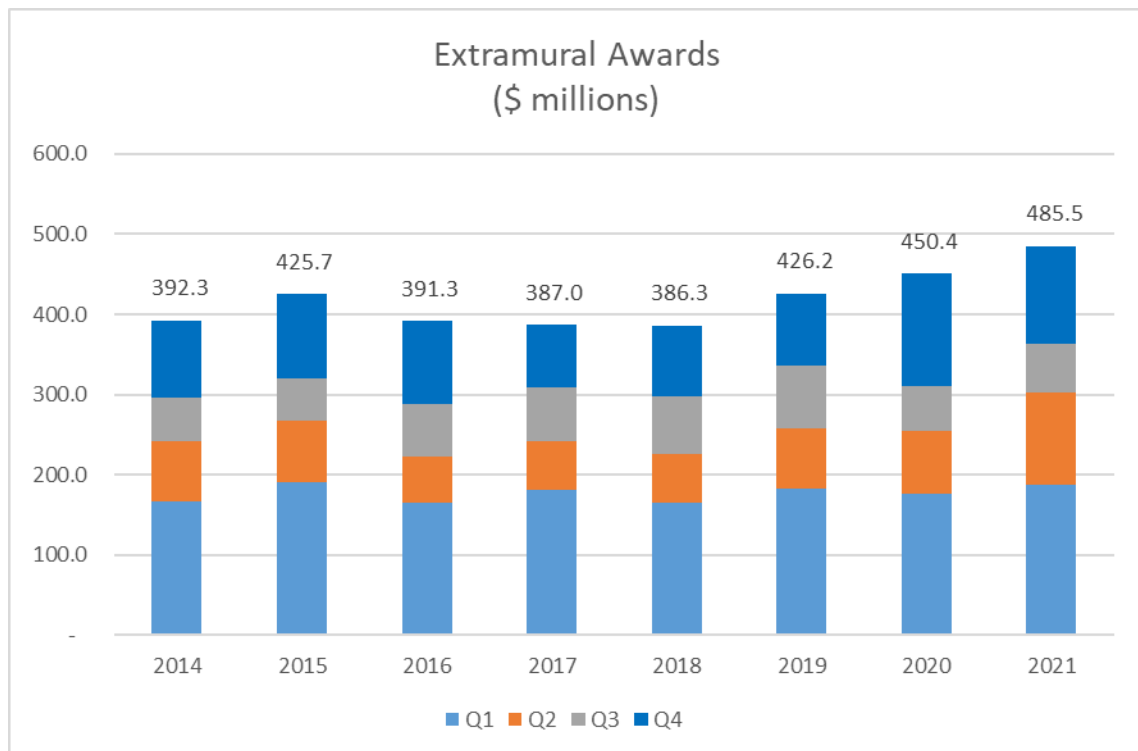
### I. Summary

The University of Hawai'i's (UH) extramural awards for Fiscal Year (FY) 21 Quarter (Q) 4 totaled \$139.5 million, which is 54.2% more than FY20 Q4. For the third year in a row, total awards were over \$400 million.

### II. Quarterly Performance Metrics

Extramural awards for FY21 Q4 were 54.2% more than FY20 Q4. See *IV. Award Trends by Campus* for an explanation of major increases or decreases that contributed to FY21 Q4 results.

<b>Quarterly Extramural Awards (\$ millions)</b>								
	2014	2015	2016	2017	2018	2019 <sup>1</sup>	2020	2021
Q1	166.5	191.1	165.8	181.8	164.5	182.2	176.1	188.3
Q2	74.7	77.0	56.9	59.5	62.0	76.2	79.1	114.6
Q3	55.4	52.8	66.2	67.1	71.0	77.3	55.7	60.7
Q4	95.7	104.8	102.4	78.6	88.8	90.5	139.5	121.9
<b>FY</b>	<b>392.3</b>	<b>425.7</b>	<b>391.3</b>	<b>387.0</b>	<b>386.3</b>	<b>426.2</b>	<b>450.4</b>	<b>485.5</b>



<sup>1</sup> Unlike prior fiscal years, FY 2019 does not include deobligations or corrections to previously reported amounts. If included, FY 2019 would be \$421.8 million.

### III. Significant Awards by Campus

During FY21 Q4, UH received 558 awards from 220 different sponsors. The following table reports the largest awards received this quarter by campus.

Campus	Sponsor Type	Sponsor	Project Title	Amount
Mānoa	Federal	National Science Foundation	R/V Kilo Moana Ship Operations CY18-23	8,690,683
Hilo	Federal	Small Business Administration	Small Business Development Centers	755,556
West O'ahu	Federal	National Science Foundation	Pukoa Kani Aina	499,799
Hawai'i CC	Federal	National Science Foundation	Mobile Controlled Environment Agriculture Technician Education	300,000
Honolulu CC	State & Local	Department of Labor & Industrial Relation	Honolulu Community College – Summer Engineering Academy	48,823
Kapi'olani CC	State and Local	Department of Health	Training Stipends MICT FY 2021-2022	240,000
Kaua'i CC	Non-profit	UH Foundation	Lumina Adult Promise Kauai CC	12,960
Leeward CC	State & Local	Department of Human Services, Benefits, Employment & Support Services	Provide Vocational Skills Training for First-To-Work Participants Attending Leeward Community College	212,488
Maui College	State & Local	Department of Human Services	CWS Shaka	238,028
Windward CC	Non-profit	UH Foundation	HCF Omidyar Family Childcare Provider Workforce Development	91,567
UH System <sup>2</sup>	Federal	Department of Defense	University of Hawaii Pacific Disaster Center (UoH PDC) Cooperative Agreement	5,036,615

### IV. Award Trends by Campus

The following table summarizes the awards received this quarter by campus.

**Q4 Award Amounts by Location**  
\$ millions

Campus	2018	2019	2020	2021	2021-20 Change <sup>3</sup>
Mānoa	74.5	71.0	103.1	100.9	-2.1%
Hilo	2.9	4.3	5.1	4.0	-20.9%
West O'ahu	0.3	2.5	0.3	0.7	186.2%
Hawai'i CC	0.0	0.0	0.0	0.3	1784.3%
Honolulu CC	0.3	0.1	0.1	0.0	-38.1%
Kapi'olani CC	1.0	0.7	0.3	0.6	86.7%

<sup>2</sup> UH System represents units under Vice Presidents that receive extramural funding. Examples include the P20 and Gear Up grants under the VP for Academic Affairs; Maui High Performance Computing Center and Pacific Disaster Center contracts under the VP for Information Technology; Applied Research Laboratory task orders under the VP for Research and Innovation; and the Pacific Business Center Program under the VP for Community Colleges.

<sup>3</sup> The percent change over the prior fiscal year is calculated using the actual figures not the rounded figures.



Kaua'i CC	0.0	0.0	0.0	0.0	-607.8%
Leeward CC	0.2	0.5	0.1	0.5	383.5%
Maui College	0.2	1.9	0.8	0.7	-19.3%
Windward CC	0.1	0.9	0.0	0.2	1213.4%
UH System	9.3	8.6	29.7	14.0	-52.9%
TOTAL	88.8	90.5	139.5	121.9	-12.6%

Major dollar increases and decreases are attributed as follows:

UH Mānoa decrease:

- Unlike FY 20 Q4, which received a boost from the Simons Foundation awards, there were no comparable large awards in FY 21 Q4.

UH Hilo decrease:

- Unlike FY 20 Q4, where there was a \$1.2 million Hawai'i Department of Transportation award, there were no comparable large awards in FY 21 Q4.

UH System decrease:

- Unlike FY 20 Q4, where there was a \$10.0 million UH Foundation award and an \$8.0 million Department of Education award, there were no comparable large awards in FY 21 Q4.

## V. Analysis

### **Annual**

In FY20, federal awards declined and awards from Hawai'i – Government Agencies, Hawai'i Non-Profit Organizations, and Mainland-Non-Profit Organizations increased.

In FY 21, underscoring the cyclical nature of funding, awards declined in Hawai'i – Government Agencies, Hawai'i Non-Profit Organizations, and Mainland-Non-Profit Organizations and federal awards increased.

Some major federal awards that contributed to the increase are:

Department of Agriculture

- Eight (8) awards totaling \$5.9 million to UH Mānoa

Department of Defense

- An award of \$4.0 million to UH Mānoa
- Two (2) awards totaling \$13.8 million to UH System

Department of Education

- Seven (7) awards totaling \$1.6 million to UH Hilo
- An award of \$13.4 million to UH System

Department of Health and Human Services

- Seven (7) awards totaling \$7.6 million to UH System

National Science Foundation

- An award totaling \$3.1 million to UH Mānoa

<b>Sponsor Type</b>	<b>FY20</b>	<b>FY21</b>	<b>Change</b>
DA-Dept of Agriculture	10,787,963	18,959,135	8,171,172
DHHS-Dept of Health and Human Services	48,876,217	62,602,750	13,726,533
DOC-Dept of Commerce	22,488,575	24,553,870	2,065,295
DOD-Department of Defense	44,780,906	63,947,139	19,166,233
DOE-Dept of Energy	4,535,358	2,849,966	(1,685,392)
DOI-Dept of Interior	5,777,494	7,674,144	1,896,650
DOT-Dept of Transportation	200,000	200,000	-
ED-Dept of Education	37,408,690	53,510,948	16,102,258
Federal Agencies	7,900,103	7,408,023	(492,080)
National Aeronautics and Space Administration	25,444,136	19,287,603	(6,156,533)
National Science Foundation	45,356,073	52,878,091	7,522,018
<b>Federal total</b>	<b>253,555,515</b>	<b>313,871,669</b>	<b>60,316,154</b>
Foreign	6,604,921	11,327,252	4,722,331
Hawaii- Business and Other	5,601,377	7,572,360	1,970,983
Hawaii- Dept of Education	13,971,439	3,988,446	(9,982,993)
Hawaii- Government Agencies	88,827,235	83,122,450	(5,704,785)
Hawaii- Health Organizations	13,238,347	7,920,609	(5,317,738)
Hawaii- Non-Profit Organizations	30,652,147	26,038,426	(4,613,721)
Mainland- Business and Other	5,952,383	6,890,171	937,788
Mainland- Health Organizations	442,816	860,927	418,111
Mainland- Non-Profit Organizations	18,899,232	12,662,232	(6,237,000)
US Colleges and Universities	12,693,837	11,274,384	(1,419,453)
<b>Non-federal total</b>	<b>196,883,734</b>	<b>171,657,257</b>	<b>(25,226,477)</b>
<b>Total</b>	<b>450,439,249</b>	<b>485,528,926</b>	<b>35,089,677</b>

### Federal R&D Budget and FY22 Outlook

Total R&D by Agency, FY 2016-2022							
(budget authority in millions of dollars; actuals except where noted)							
Fiscal Year	2016	2017	2018	2019	2020	Estimate 2021	Proposed 2022
DOD	71,421	49,197	52,386	54,691	62,438	63,350	62,800
NASA	13,253	10,704	11,755	10,698	14,801	13,226	14,565
DOE	15,217	14,896	17,482	18,271	19,476	19,312	21,452
HHS	32,243	34,222	36,942	38,511	44,455	43,494	51,232
NSF	6,010	5,938	6,327	6,586	6,800	7,408	8,173
USDA	2,657	2,585	2,618	3,026	2,989	2,965	3,609
Interior	973	953	885	958	1,043	1,024	1,339
DOT	927	904	1,043	1,071	1,094	1,033	1,221
EPA	516	497	492	489	516	524	585
DOC	1,681	1,794	2,029	1,959	1,953	2,122	2,743
DHS	582	724	725	668	532	590	627
VA	1,222	1,346	1,286	1,370	1,366	1,420	1,498
Other	1,600	1,529	1,795	1,836	1,163	1,330	1,416
<b>Total R&amp;D</b>	<b>148,302</b>	<b>125,289</b>	<b>135,765</b>	<b>140,134</b>	<b>158,626</b>	<b>157,798</b>	<b>171,260</b>

Source: 2016-2019 data from Congressional Research Service (LAST UPDATE: April 2020).  
2020-2022 data from Office of Management and Budget FY2022 President's Budget (LAST UPDATE: May 2021).

A new U.S. President made a federal R&D budget request that is larger than in previous years to a Congress that his party holds a majority. Thus, conditions are favorable for passage in the midst of the pandemic. Hopefully, UH will continue its upward trajectory in FY 22 in this environment.

## VI. Forecast vs. Actuals

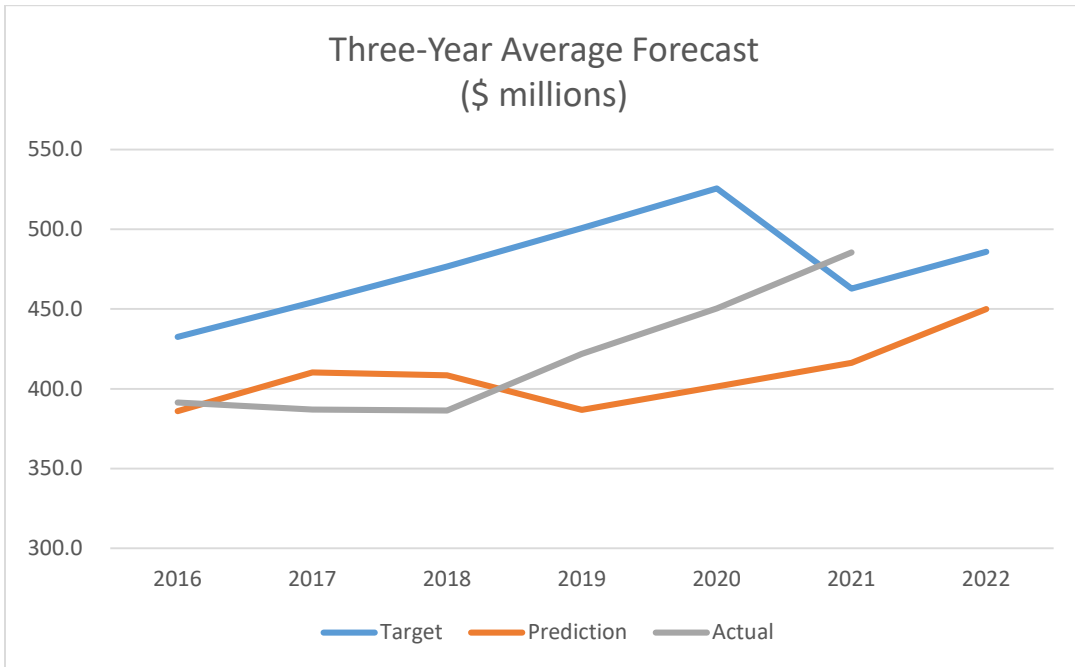
Results for FY21 Q4 were about \$25.5 million or 26.4% more than forecasted. Overall results were about \$69.2 million or 16.6% more than forecasted.

FY21	Forecast	Actual	Variance
Q1	183.1	188.3	2.8%
Q2	63.8	114.6	79.6%
Q3	73.0	60.7	-16.8%
Q4	96.4	121.9	26.4%
<b>Total</b>	<b>416.3</b>	<b>485.5</b>	<b>16.6%</b>

**FY22 Forecast**

Based on our model and excluding the effects of COVID-19 related funding, the FY22 forecast is \$449.9 million. The target for FY22 is \$485.9 million based on the FY15 – FY21 Strategic Directions methodology.

FY	Target	Prediction	Actual
2016	432.5	385.9	391.3
2017	454.2	410.2	387.0
2018	476.7	408.5	386.3
2019	500.8	386.7	426.2
2020	525.7	401.5	450.4
2021	552.0	416.3	485.5
2022	485.9	449.9	TBD



## Extramural Sponsor Awards Quarterly Summary

<b><u>Program Type</u></b>	<b>Apr 1 – Jun 30 2021</b>		<b>Apr 1 – Jun 30 2020</b>	
	<b><u>Count</u></b>	<b><u>Amount</u></b>	<b><u>Count</u></b>	<b><u>Amount</u></b>
Research	314	\$ 73,937,061	305	\$ 73,652,052
Non-Research	244	\$ 50,770,690	192	\$ 67,682,493
<b><u>Total</u></b>	<b><u>558</u></b>	<b><u>\$124,707,751</u></b>	<b><u>497</u></b>	<b><u>\$141,334,545</u></b>

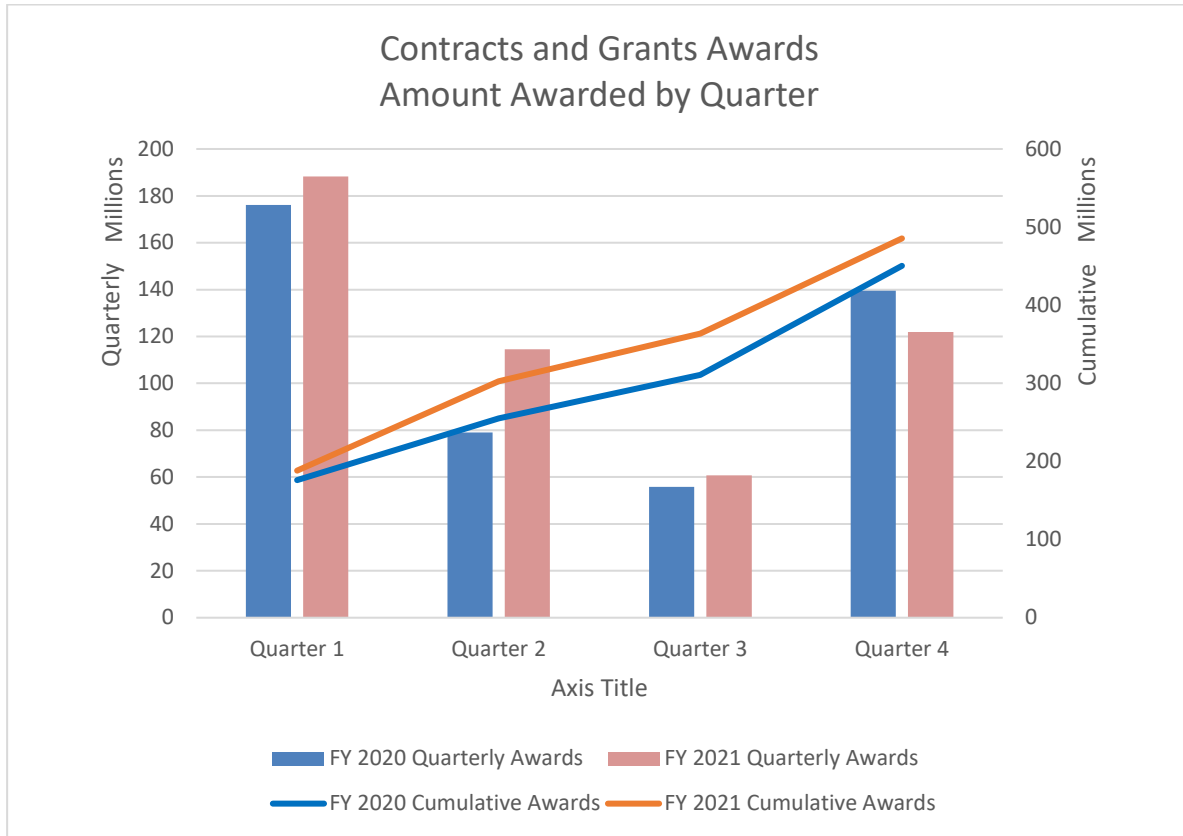
Note: The detailed award listing is available at:

<http://www.ors.hawaii.edu/index.php/bor-reports>

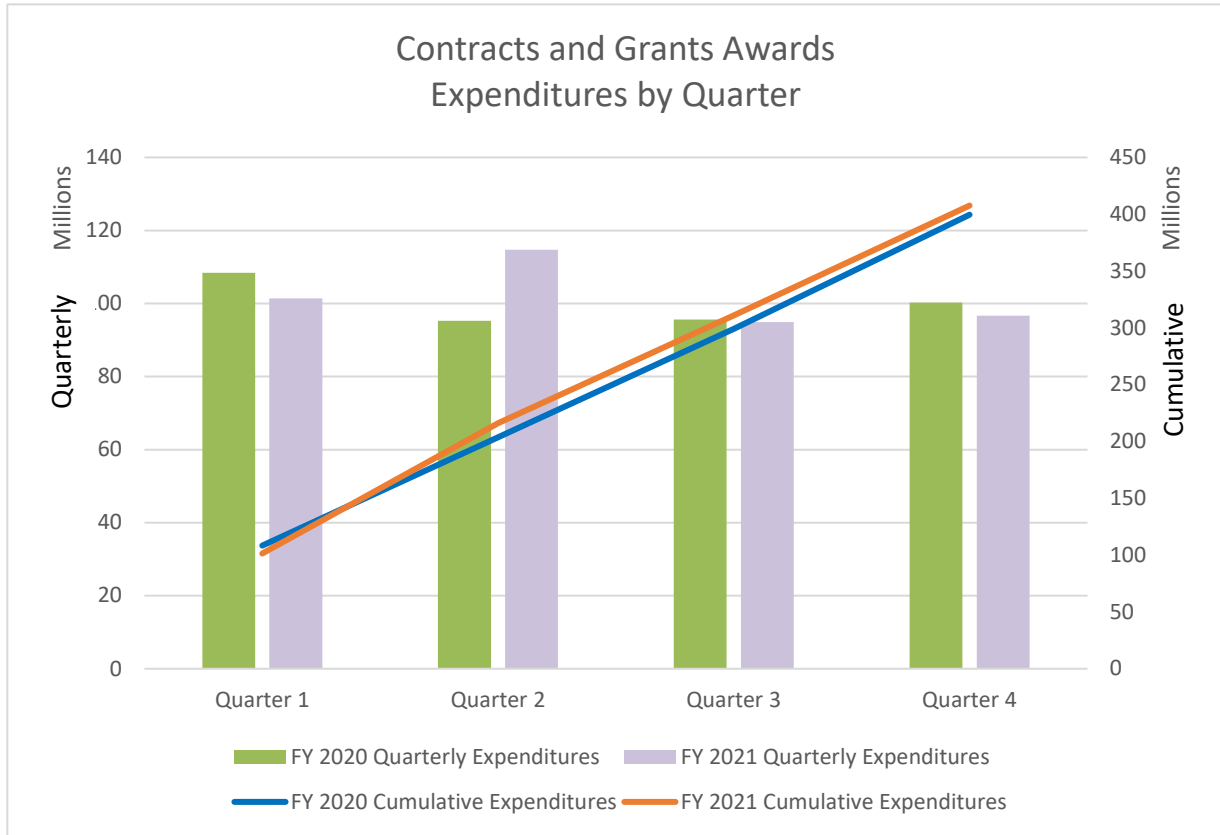
The FY 2020 year-to-date total was: \$450,439,249

The unofficial FY 2021 year-to-date total is: 1,963 awards totaling \$485,528,926.

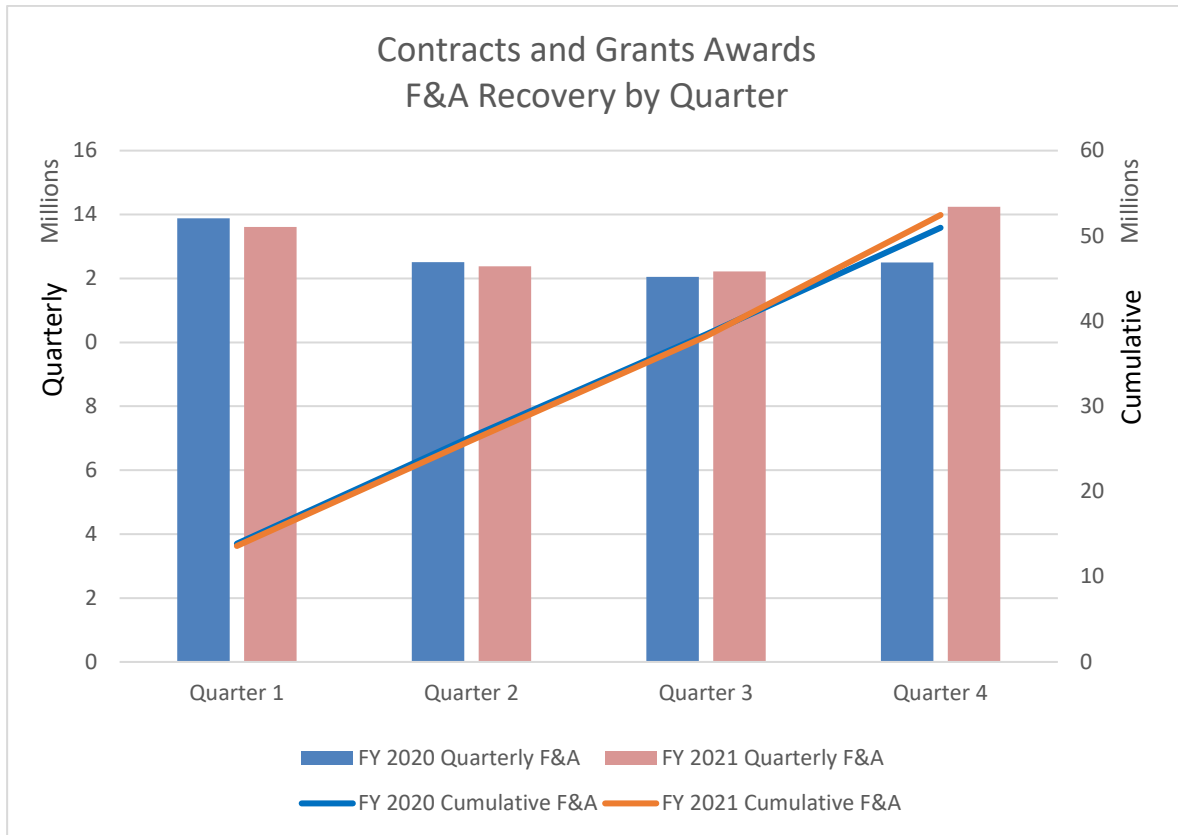
Contracts and Grants Awards  
As of Quarter Four – FY 2021



Contracts and Grants Expenditures  
As of Quarter Four – FY 2021



Contracts and Grants F&A Recovery  
As of Quarter Four – FY 2021

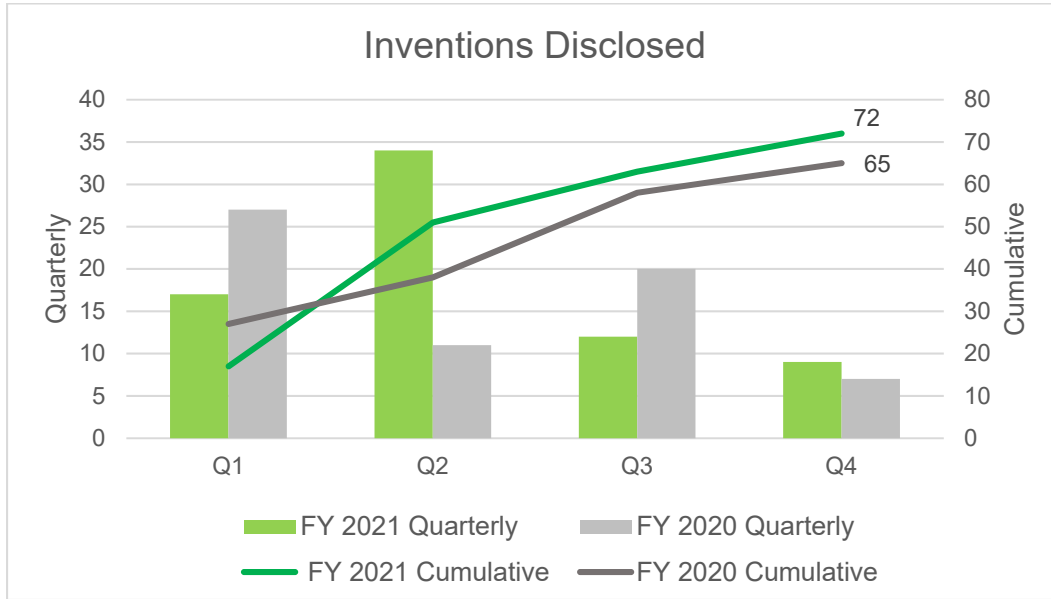




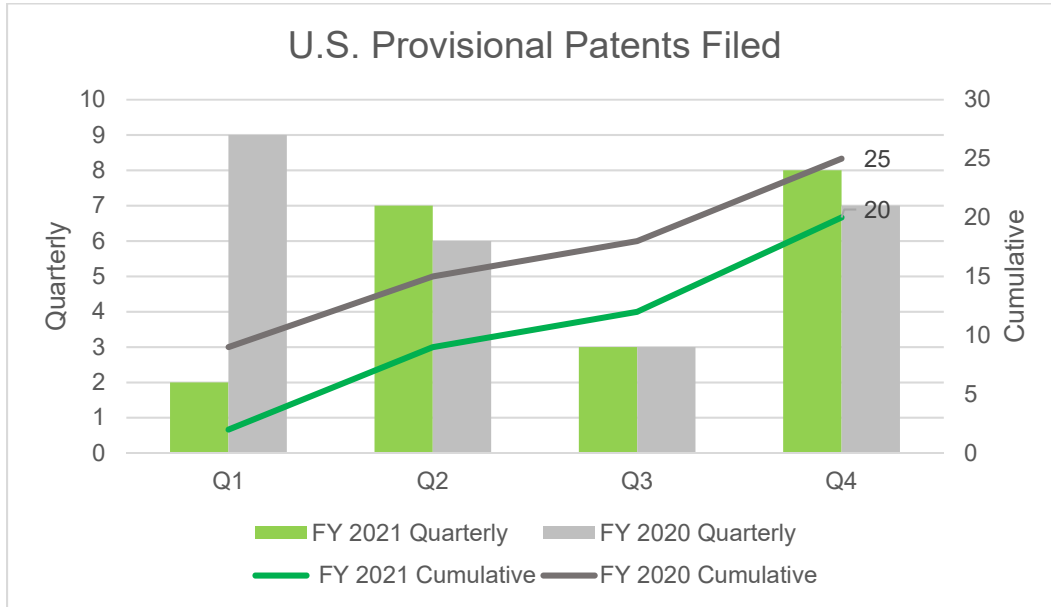
## OIC Research & Innovation Metrics FY 2021 – Fourth Quarter Summary

<u>Metric</u>	FY 2021	FY 2020
	<u>4/1/21 – 6/30/21</u>	<u>4/1/20 – 6/30/20</u>
Invention Disclosures	9	7
U.S. Provisional Patents Filed	8	7
U.S. Non-Provisional Patents Filed	3	4
U.S. Non-Provisional Patents Issued	1	3
License & Option Agreements Executed	4	8
Active License & Option Agreements	147	142
Royalty Revenue	\$22,382.14	\$51,062.97
Startup Support	22	0
Innovation & Entrepreneurship Engagement	103	N/A

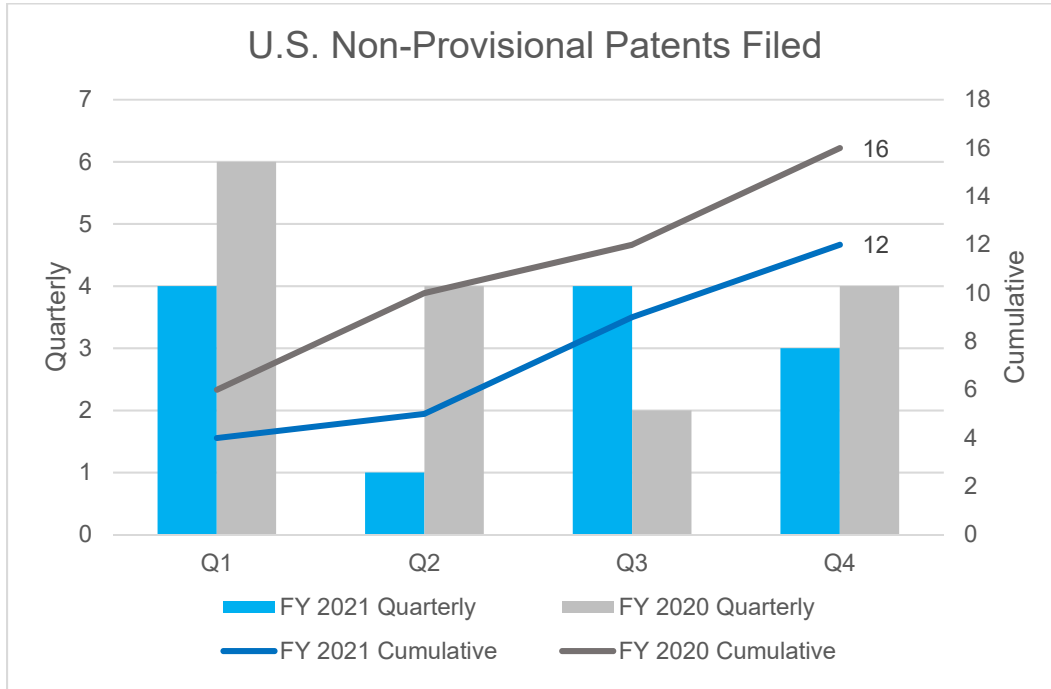
Invention Disclosures  
As of Quarter Four – FY 2021



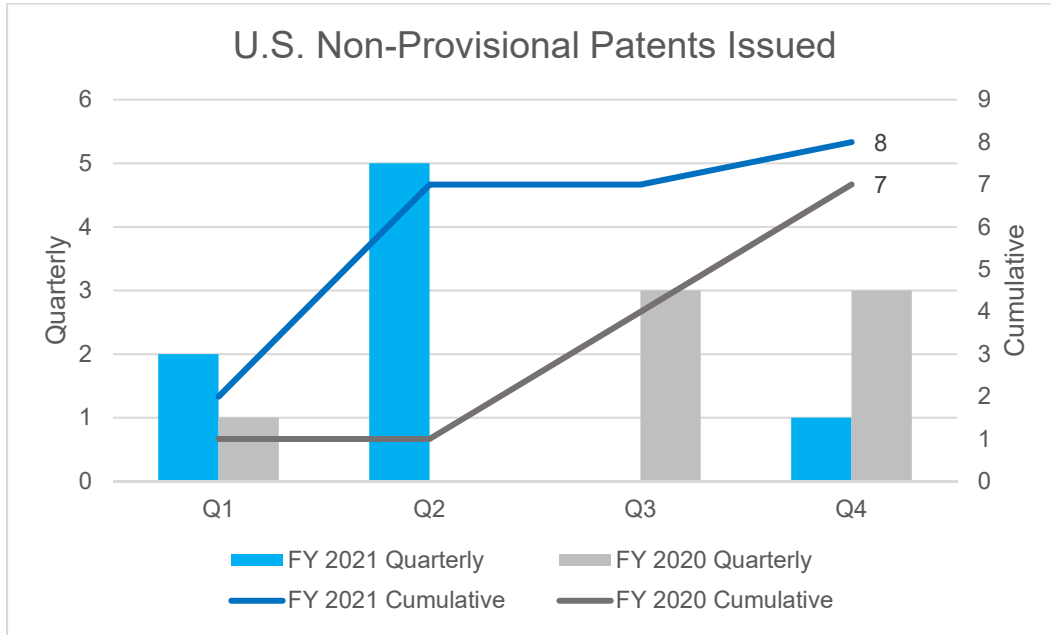
U.S. Provisional Patents Filed  
As of Quarter Four – FY 2021



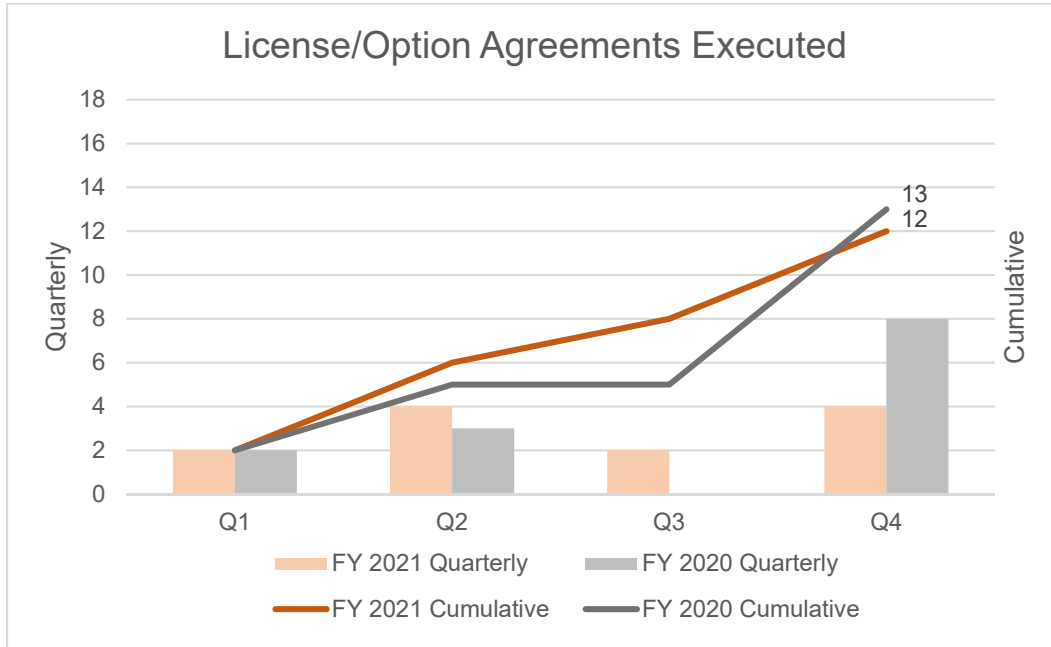
**U.S. Non-Provisional Patents Filed  
As of Quarter Four – FY 2021**



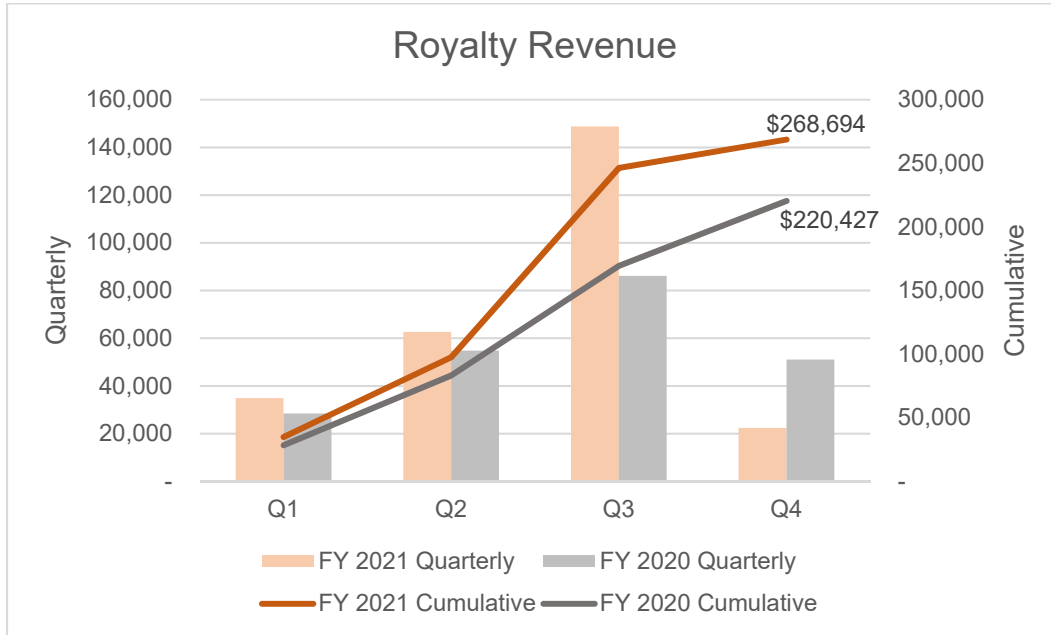
U.S. Non-Provisional Patents Issued  
As of Quarter Four – FY 2021



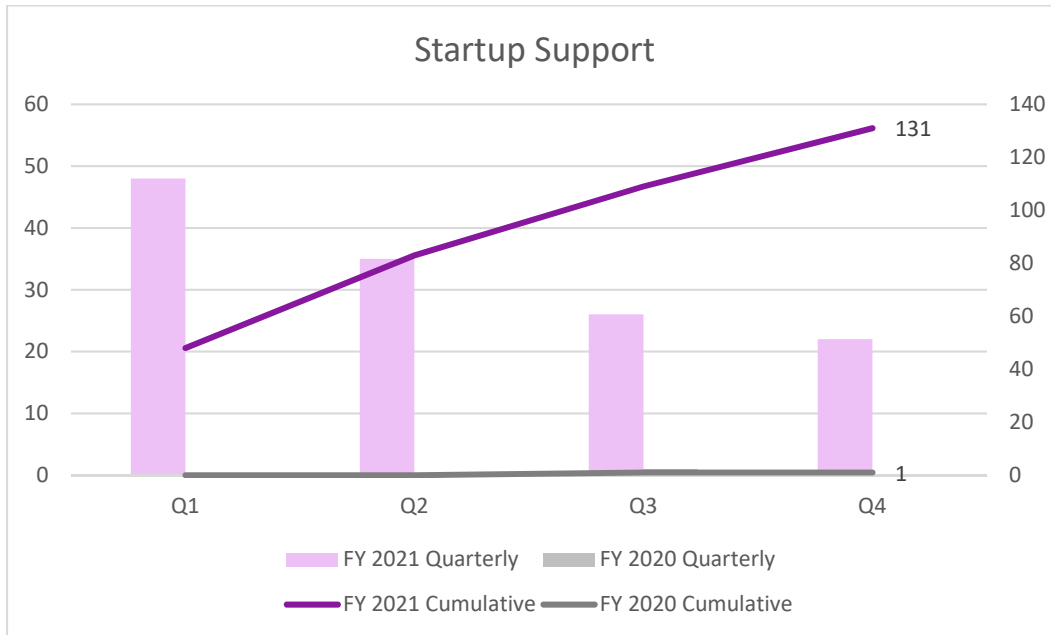
License/Option Agreements  
As of Quarter Four – FY 2021



## Royalty Revenue As of Quarter Four – FY 2021

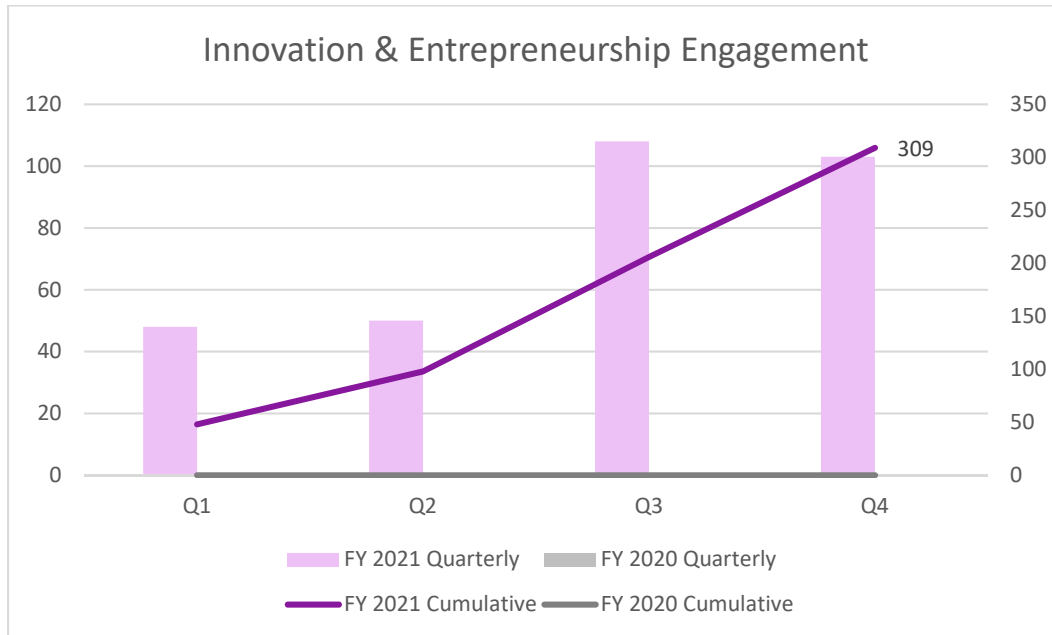


### Startup Support As of Quarter Four – FY 2021

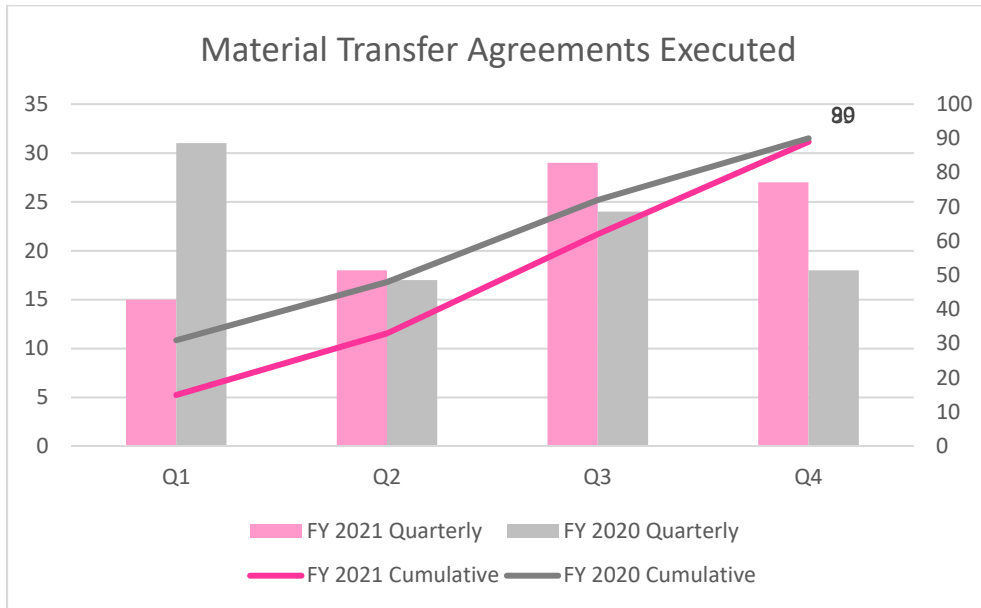




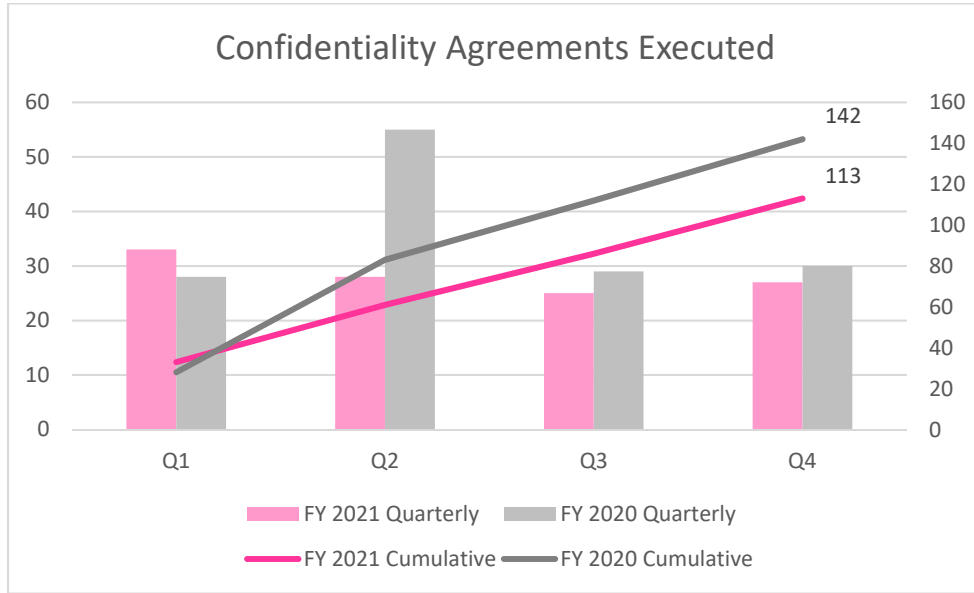
## Innovation and Entrepreneurship Engagement As of Quarter Four – FY 2021



**Material Transfer Agreements Executed  
As of Quarter Four – FY 2021**



### Confidentiality Agreements Executed As of Quarter Four – FY 2021



FY 2021 Monthly Report of Awards to Date as of June 30, 2021							
Summary By Campus							
Campus	FY 2020		FY 2021		\$ Change	% Change	
	Award Count	Award Amount	Award Count	Award Amount			
Hawai'i Community College	14	1,775,648	11	1,939,388	163,740	9.2%	
Honolulu Community College	10	1,855,996	12	1,822,177	(33,819)	-1.8%	
Kapi'olani Community College	15	2,991,758	24	3,504,496	512,738	17.1%	
Kaua'i Community College	11	1,265,530	6	1,116,840	(148,690)	-11.7%	
Leeward Community College	6	1,564,863	10	1,695,026	130,163	8.3%	
University of Hawai'i Maui College	32	14,989,592	39	12,604,643	(2,384,949)	-15.9%	
Windward Community College	15	4,611,585	21	5,684,114	1,072,529	23.3%	
<b>Subtotal Community Colleges and UH Maui College</b>	<b>103</b>	<b>29,054,972</b>	<b>123</b>	<b>28,366,684</b>	<b>(688,288)</b>	<b>-2.4%</b>	
University of Hawai'i at Hilo	107	14,330,883	115	16,015,285	1,684,402	11.8%	
University of Hawai'i at Manoa	1,567	343,126,099	1,603	357,864,608	14,738,509	4.3%	
University of Hawai'i at West O'ahu	16	2,896,311	22	3,100,245	203,934	7.0%	
University of Hawai'i System	86	67,190,094	100	86,743,175	19,553,081	29.1%	
<b>Grand Total</b>	<b>1,879</b>	<b>456,598,359</b>	<b>1,963</b>	<b>492,089,997</b>	<b>35,491,638</b>	<b>7.8%</b>	
FY 2021 Monthly Report of Awards to Date as of June 30, 2021							
Campus Details							
Campus	FY 2020		FY 2021		\$ Change	% Change	
	Award Count	Award Amount	Award Count	Award Amount			
<b>Hawai'i Community College</b>	<b>14</b>	<b>1,775,648</b>	<b>11</b>	<b>1,939,388</b>	<b>163,740</b>	<b>9.2%</b>	
<b>Chancellor, Hawaii Community College</b>	<b>14</b>	<b>1,775,648</b>	<b>11</b>	<b>1,939,388</b>	<b>163,740</b>	<b>9.2%</b>	
Academic Affairs (Hawaii CC)	1	75,000	-	-	(75,000)	-100.0%	
Chancellor, Hawaii Community College	5	1,280,596	5	1,559,663	279,067	21.8%	
Liberal Arts and Public Services	1	23,205	1	23,205	-	0.0%	
Math and Natural Sciences (Hawaii CC)	-	-	1	18,000	18,000	100.0%	
Office of Continuing Education & Training	3	182,985	1	75,000	(107,985)	-59.0%	
UH Center at West Hawai'i	4	213,862	3	263,520	49,658	23.2%	
<b>Honolulu Community College</b>	<b>10</b>	<b>1,855,996</b>	<b>12</b>	<b>1,822,177</b>	<b>(33,819)</b>	<b>-1.8%</b>	
<b>Chancellor, Honolulu Community College</b>	<b>10</b>	<b>1,855,996</b>	<b>12</b>	<b>1,822,177</b>	<b>(33,819)</b>	<b>-1.8%</b>	
Academic Affairs (Honolulu CC)	2	577,252	-	-	(577,252)	-100.0%	
Chancellor, Honolulu Community College	1	264,867	2	322,960	58,093	21.9%	
Early Childhood (Honolulu CC)	1	40,000	1	40,000	-	0.0%	
Pacific Center for Advanced Technology Training	3	168,824	2	123,300	(45,524)	-27.0%	
Transportation and Trades Programs	-	-	3	55,214	55,214	100.0%	
University College	3	805,053	4	1,280,703	475,650	59.1%	
<b>Kapi'olani Community College</b>	<b>15</b>	<b>2,991,758</b>	<b>24</b>	<b>3,504,496</b>	<b>512,738</b>	<b>17.1%</b>	
<b>Chancellor, Kapiolani Community College</b>	<b>15</b>	<b>2,991,758</b>	<b>24</b>	<b>3,504,496</b>	<b>512,738</b>	<b>17.1%</b>	
Academic Affairs (KCC)	1	123,330	1	178,100	54,770	44.4%	
Chancellor, Kapiolani Community College	3	1,508,155	4	1,368,252	(139,903)	-9.3%	
Continuing Education / Non-Credit Program	1	30,000	2	129,897	99,897	333.0%	
Culinary Arts (KCC)	2	108,968	1	13,520	(95,448)	-87.6%	
Emergency Medical Services	2	440,000	3	629,480	189,480	43.1%	
Health Academic Program	-	-	3	66,000	66,000	100.0%	
Health Sciences	4	136,870	6	318,210	181,340	132.5%	
Office for Institutional Effectiveness	-	-	2	117,976	117,976	100.0%	
Student Support Services	2	644,435	2	683,061	38,626	6.0%	
<b>Kaua'i Community College</b>	<b>11</b>	<b>1,265,530</b>	<b>6</b>	<b>1,116,840</b>	<b>(148,690)</b>	<b>-11.7%</b>	
<b>Chancellor, Kauai Community College</b>	<b>11</b>	<b>1,265,530</b>	<b>6</b>	<b>1,116,840</b>	<b>(148,690)</b>	<b>-11.7%</b>	
Chancellor, Kauai Community College	10	1,225,530	6	1,116,840	(108,690)	-8.9%	
Continuing Education and Training (Kauai CC)	1	40,000	-	-	(40,000)	-100.0%	
<b>Leeward Community College</b>	<b>6</b>	<b>1,564,863</b>	<b>10</b>	<b>1,695,026</b>	<b>130,163</b>	<b>8.3%</b>	
<b>Chancellor, Leeward Community College</b>	<b>6</b>	<b>1,564,863</b>	<b>10</b>	<b>1,695,026</b>	<b>130,163</b>	<b>8.3%</b>	
Academic Affairs (Leeward CC)	1	351,359	1	399,376	48,017	13.7%	
Arts and Sciences	1	434,664	2	472,299	37,635	8.7%	
Chancellor, Leeward Community College	2	180,000	1	80,000	(100,000)	-55.6%	
Continuing Education and Workforce Dev	1	250,000	3	489,976	239,976	96.0%	
Drama and Theatre (Leeward CC)	-	-	1	2,375	2,375	100.0%	
Education (Leeward CC)	-	-	2	251,000	251,000	100.0%	
Social Science (Leeward CC)	1	348,840	-	-	(348,840)	-100.0%	
<b>University of Hawai'i at Hilo</b>	<b>107</b>	<b>14,330,883</b>	<b>115</b>	<b>16,015,285</b>	<b>1,684,402</b>	<b>11.8%</b>	
<b>Chancellor, UH Hilo</b>	<b>2</b>	<b>1,260,827</b>	<b>2</b>	<b>1,216,522</b>	<b>(44,305)</b>	<b>-3.5%</b>	
Chancellor, UH Hilo	2	1,260,827	2	1,216,522	(44,305)	-3.5%	
<b>College of Agriculture, Forestry and Natural Resource Mgt</b>	<b>9</b>	<b>914,014</b>	<b>12</b>	<b>1,406,421</b>	<b>492,407</b>	<b>53.9%</b>	
College of Agriculture, Forestry and Natural Resource Mgt	4	338,601	6	343,595	4,994	1.5%	
Pacific Aquaculture and Coastal Resources Ctr	5	575,413	6	1,062,826	487,413	84.7%	
<b>College of Arts and Sciences</b>	<b>19</b>	<b>2,519,495</b>	<b>10</b>	<b>1,520,968</b>	<b>(998,527)</b>	<b>-39.6%</b>	
Anthropology (UH Hilo)	2	1,201,601	-	-	(1,201,601)	-100.0%	
College of Arts and Sciences	3	462,431	4	1,081,515	619,084	133.9%	
Geography (UH Hilo)	8	574,153	6	439,453	(134,700)	-23.5%	
Humanities Division	1	11,209	-	-	(11,209)	-100.0%	
Political Science (UH Hilo)	1	28,000	-	-	(28,000)	-100.0%	
Social Sciences Division	4	242,101	-	-	(242,101)	-100.0%	
<b>College of Business and Economics</b>	<b>3</b>	<b>163,900</b>	<b>1</b>	<b>76,956</b>	<b>(86,944)</b>	<b>-53.0%</b>	
College of Business and Economics	3	163,900	1	76,956	(86,944)	-53.0%	
<b>College of Continuing Education and Community Svc</b>	<b>1</b>	<b>40,000</b>	<b>-</b>	<b>-</b>	<b>(40,000)</b>	<b>-100.0%</b>	
College of Continuing Education and Community Svc	1	40,000	-	-	(40,000)	-100.0%	
<b>College of Natural and Health Sciences</b>	<b>23</b>	<b>1,198,217</b>	<b>24</b>	<b>2,223,433</b>	<b>1,025,216</b>	<b>85.6%</b>	
Biology (UH Hilo)	2	89,041	2	74,523	(14,518)	-16.3%	

Campus	FY 2020		FY 2021		\$ Change	% Change
	Award Count	Award Amount	Award Count	Award Amount		
Chemistry (UH Hilo)	2	20,386	-	-	(20,386)	-100.0%
College of Natural and Health Sciences	8	494,018	8	577,319	83,301	16.9%
Computer Science (UH Hilo)	1	104,876	1	105,669	793	0.8%
Kinesiology and Exercise Sciences	3	95,097	1	106,462	11,365	12.0%
Marine Science	1	20,000	5	445,171	425,171	2125.9%
Mathematics (UH Hilo)	1	118,807	1	16,800	(102,007)	-85.9%
Physics and Astronomy	-	-	2	315,968	315,968	100.0%
School of Nursing	1	1,000	-	-	(1,000)	-100.0%
Tropical Conservation Biology and Environmental Science	4	254,992	4	581,521	326,529	128.1%
<b>College of Pharmacy</b>	<b>9</b>	<b>300,289</b>	<b>14</b>	<b>657,665</b>	<b>357,376</b>	<b>119.0%</b>
College of Pharmacy	5	217,772	8	204,790	(12,982)	-6.0%
Pharmaceutical Sciences	3	54,322	2	176,931	122,609	225.7%
Pharmacy Practice	1	28,195	3	230,880	202,685	718.9%
Research	-	-	1	45,064	45,064	100.0%
<b>Hawaii Small Business Development Center</b>	<b>4</b>	<b>2,460,982</b>	<b>3</b>	<b>875,556</b>	<b>(1,585,426)</b>	<b>-64.4%</b>
Hawaii Small Business Development Center	4	2,460,982	3	875,556	(1,585,426)	-64.4%
<b>Imiloa Astronomy Center Of Hawaii</b>	<b>4</b>	<b>541,000</b>	<b>6</b>	<b>988,641</b>	<b>447,641</b>	<b>82.7%</b>
Imiloa Astronomy Center Of Hawaii	4	541,000	6	988,641	447,641	82.7%
<b>Ka Haka'Ula O Ke'Elikolani-UHH</b>	<b>4</b>	<b>2,078,461</b>	<b>6</b>	<b>1,805,097</b>	<b>(273,364)</b>	<b>-13.2%</b>
Hale Kuamo'o Center	3	828,461	1	950,000	121,539	14.7%
Ka Haka'Ula O Ke'Elikolani-UHH	1	1,250,000	5	855,097	(394,903)	-31.6%
<b>Vice Chancellor for Administrative Affairs</b>	<b>2</b>	<b>4,375</b>	<b>2</b>	<b>22,500</b>	<b>18,125</b>	<b>414.3%</b>
Vice Chancellor for Administrative Affairs	2	4,375	2	22,500	18,125	414.3%
<b>Vice Chancellor for Research</b>	<b>18</b>	<b>1,236,819</b>	<b>23</b>	<b>2,246,051</b>	<b>1,009,232</b>	<b>81.6%</b>
Vice Chancellor for Research	18	1,236,819	23	2,246,051	1,009,232	81.6%
<b>Vice Chancellor for Student Affairs</b>	<b>9</b>	<b>1,612,504</b>	<b>12</b>	<b>2,975,475</b>	<b>1,362,971</b>	<b>84.5%</b>
Center For Gifted And Talented Native Hawaiian Children	1	630,588	-	-	(630,588)	-100.0%
Student Affairs - Kipuka	-	-	1	630,588	630,588	100.0%
Upward Bound	-	-	5	1,199,403	1,199,403	100.0%
Vice Chancellor for Student Affairs	8	981,916	6	1,145,484	163,568	16.7%
<b>University of Hawai'i at Manoa</b>	<b>1,567</b>	<b>343,126,099</b>	<b>1,603</b>	<b>357,864,608</b>	<b>14,738,509</b>	<b>4.3%</b>
<b>Chancellor, UH Manoa</b>	<b>1</b>	<b>2,500</b>	<b>-</b>	<b>-</b>	<b>(2,500)</b>	<b>-100.0%</b>
Chancellor, UH Manoa	1	2,500	-	-	(2,500)	-100.0%
<b>College of Arts and Humanities</b>	<b>19</b>	<b>535,375</b>	<b>16</b>	<b>759,976</b>	<b>224,601</b>	<b>42.0%</b>
Academy for Creative Media (Manoa)	1	19,800	-	-	(19,800)	-100.0%
American Studies	-	-	1	350,000	350,000	100.0%
Art and Art History	2	17,000	-	-	(17,000)	-100.0%
College of Arts and Humanities	-	-	2	86,893	86,893	100.0%
History (UH Manoa)	3	101,693	3	49,020	(52,673)	-51.8%
Music (UH Manoa)	3	22,600	4	46,013	23,413	103.6%
Philosophy (UH Manoa)	3	25,000	-	-	(25,000)	-100.0%
Religion (UH Manoa)	2	15,369	-	-	(15,369)	-100.0%
Theatre and Dance	2	44,343	3	17,703	(26,640)	-60.1%
UHM Uehiro Academy for Philosophy and Ethics in Education	3	289,570	3	210,347	(79,223)	-27.4%
<b>College of Education</b>	<b>58</b>	<b>15,287,772</b>	<b>71</b>	<b>22,939,255</b>	<b>7,651,483</b>	<b>50.0%</b>
Center on Disability Studies/University Affiliated Pgms	26	7,528,452	31	13,157,827	5,629,375	74.8%
College of Education	6	2,678,117	4	1,989,942	(688,175)	-25.7%
Curriculum Research and Development Group	7	1,712,827	14	3,165,555	1,452,728	84.8%
Department of Curriculum Studies	4	1,300,044	3	736,926	(563,118)	-43.3%
Department of Educational Foundations	-	-	1	15,000	15,000	100.0%
Department of Kinesiology and Rehabilitation Science	4	925,900	5	401,134	(524,766)	-56.7%
Department of Special Education	5	336,768	3	354,502	17,734	5.3%
Institute for Teacher Education	6	805,664	10	3,118,369	2,312,705	287.1%
<b>College of Engineering</b>	<b>56</b>	<b>17,014,542</b>	<b>46</b>	<b>7,029,321</b>	<b>(9,985,221)</b>	<b>-58.7%</b>
Civil and Environmental Engineering	19	9,805,273	15	2,102,114	(7,703,159)	-78.6%
College of Engineering	4	1,883,633	2	669,888	(1,213,745)	-64.4%
Electrical Engineering	15	2,906,857	7	1,856,730	(1,050,127)	-36.1%
Hawaii Center for Advanced Communications	1	100,032	3	77,562	(22,470)	-22.5%
Mechanical Engineering	17	2,318,747	19	2,323,027	4,280	0.2%
<b>College of Language, Linguistics and Literature</b>	<b>21</b>	<b>2,530,712</b>	<b>23</b>	<b>3,249,903</b>	<b>719,191</b>	<b>28.4%</b>
Center for Language and Technology	2	1,005,907	3	1,186,333	180,426	17.9%
Department of East Asian Languages and Literature	5	1,144,982	12	1,873,533	728,551	63.6%
Department of English	1	10,000	2	92,331	82,331	823.3%
Department of Linguistics	9	357,823	2	32,258	(325,565)	-91.0%
Department of Second Language Studies	3	6,000	2	53,368	47,368	789.5%
Dept of Languages and Literatures of Europe and the Americas	1	6,000	2	12,080	6,080	101.3%
<b>College of Natural Sciences</b>	<b>255</b>	<b>40,521,255</b>	<b>243</b>	<b>34,319,851</b>	<b>(6,201,404)</b>	<b>-15.3%</b>
Department of Biology (Biology Program)	9	1,088,950	8	1,558,807	469,857	43.1%
Department of Botany	179	27,605,471	149	21,801,367	(5,804,104)	-21.0%
Department of Chemistry	9	1,625,421	10	1,933,800	308,379	19.0%
Department of Mathematics	6	775,826	9	936,435	160,609	20.7%
Department of Microbiology	1	176,875	3	1,324,489	1,147,614	648.8%
Department of Physics and Astronomy	36	5,605,875	31	4,160,076	(1,445,799)	-25.8%
Information and Computer Studies	15	3,642,837	13	773,793	(2,869,044)	-78.8%
Pacific Cooperative Studies Unit	-	-	20	1,831,084	1,831,084	100.0%
<b>College of Social Sciences</b>	<b>87</b>	<b>17,811,908</b>	<b>101</b>	<b>21,472,756</b>	<b>3,660,848</b>	<b>20.6%</b>
College of Social Sciences	6	284,721	5	421,514	136,793	48.0%
Department of Anthropology	4	259,565	4	148,714	(110,851)	-42.7%
Economics (UH Manoa)	3	190,559	3	95,145	(95,414)	-50.1%

Campus	FY 2020		FY 2021		\$ Change	% Change
	Award Count	Award Amount	Award Count	Award Amount		
Ethnic Studies	1	40,000	2	100,547	60,547	151.4%
Geography (UH Manoa)	7	641,409	5	295,020	(346,389)	-54.0%
Political Science (UH Manoa)	1	79,354	2	110,999	31,645	39.9%
Psychology (UH Manoa)	19	2,278,547	17	3,062,655	784,108	34.4%
Public Administration	-	-	2	15,700	15,700	100.0%
School of Communications	3	52,105	5	616,297	564,192	1082.8%
Social Science Research Institute	36	6,918,689	49	11,273,461	4,354,772	62.9%
Urban and Regional Planning	7	7,066,959	6	5,318,802	(1,748,157)	-24.7%
Womens Studies	-	-	1	13,902	13,902	100.0%
<b>College of Tropical Agriculture and Human Resources</b>	<b>167</b>	<b>21,159,046</b>	<b>169</b>	<b>25,307,062</b>	<b>4,148,016</b>	<b>19.6%</b>
Agricultural Diagnostic Service Center	1	155,197	2	201,906	46,709	30.1%
Center on the Family	13	3,768,175	7	663,165	(3,105,010)	-82.4%
College of Tropical Agriculture and Human Resources	4	615,863	4	615,863	-	0.0%
Cooperative Extension	1	300,000	5	696,170	396,170	132.1%
Family and Consumer Sciences	2	230,000	-	-	(230,000)	-100.0%
Hawaii County	10	1,121,603	19	1,616,209	494,606	44.1%
Human Nutrition, Food and Animal Sciences	15	1,542,497	11	1,835,271	292,774	19.0%
Kauai County	1	7,800	-	-	(7,800)	-100.0%
Maui County	4	346,767	7	481,126	134,359	38.7%
Molecular Biosciences and Bioengineering	2	495,000	10	1,489,939	994,939	201.0%
Natural Resources and Environmental Mgt (NREM)	24	1,643,449	27	2,092,583	449,134	27.3%
Oahu County	5	1,367,404	7	869,269	(498,135)	-36.4%
Office of The Assoc Dean for Academic and Student Affairs	15	2,442,258	11	3,310,995	868,737	35.6%
Plant and Environmental Protection Sciences	49	5,191,636	41	8,354,952	3,163,316	60.9%
Tropical Plant and Soil Science	21	1,931,397	18	3,079,614	1,148,217	59.5%
<b>Hawai'i inuiakea School of Hawaiian Knowledge</b>	<b>5</b>	<b>1,813,078</b>	<b>6</b>	<b>1,075,675</b>	<b>(737,403)</b>	<b>-40.7%</b>
Hawai'i inuiakea School of Hawaiian Knowledge	3	1,041,157	1	120,750	(920,407)	-88.4%
Kamakakuokalani Center for Hawaiian Studies	1	70,000	4	255,800	185,800	265.4%
Kawaihuelani Center for Hawaiian Language	1	701,921	1	699,125	(2,796)	-0.4%
<b>Institute for Astronomy</b>	<b>99</b>	<b>26,620,487</b>	<b>80</b>	<b>18,534,829</b>	<b>(8,085,658)</b>	<b>-30.4%</b>
Institute for Astronomy	99	26,620,487	80	18,534,829	(8,085,658)	-30.4%
<b>John A. Burns School of Medicine</b>	<b>189</b>	<b>46,908,497</b>	<b>203</b>	<b>63,683,362</b>	<b>16,774,865</b>	<b>35.8%</b>
Associate Dean for Academic Affairs	13	2,247,494	14	2,309,086	61,592	2.7%
Department of Anatomy, Biochemistry, and Physiology	8	2,783,472	25	5,236,672	2,453,200	88.1%
Department of Cell and Molecular Biology	15	4,114,724	5	743,045	(3,371,679)	-81.9%
Department of Family Medicine and Community Health	11	1,091,843	16	3,309,252	2,217,409	203.1%
Department of Geriatric Medicine	7	928,257	10	2,176,551	1,248,294	134.5%
Department of Medicine	16	2,895,838	25	3,942,943	1,047,105	36.2%
Department of Native Hawaiian Health	14	2,708,150	5	795,581	(1,912,569)	-70.6%
Department of Obstetrics, Gynecology and Women's Health	13	4,058,088	16	4,669,915	611,827	15.1%
Department of Pediatrics	16	3,615,838	14	4,323,077	707,239	19.6%
Department of Psychiatry	16	10,840,455	6	4,193,442	(6,647,013)	-61.3%
Department of Quantitative Health Sciences	8	2,844,732	8	3,223,823	379,091	13.3%
Department of Surgery	10	1,912,479	10	936,308	(976,171)	-51.0%
Department of Tropical Medicine, Medical Micro and Pharm	32	4,834,575	29	7,803,025	2,968,450	61.4%
John A. Burns School of Medicine	9	1,332,552	18	19,194,522	17,861,970	1340.4%
Native Hawaiian Center of Excellence	1	700,000	1	700,000	-	0.0%
Office of Biostatistics & Quantitative Health Sciences	-	-	1	126,120	126,120	100.0%
<b>Lyon Arboretum</b>	<b>8</b>	<b>1,100,497</b>	<b>5</b>	<b>558,614</b>	<b>(541,883)</b>	<b>-49.2%</b>
Lyon Arboretum	8	1,100,497	5	558,614	(541,883)	-49.2%
<b>Outreach College</b>	<b>5</b>	<b>121,258</b>	<b>5</b>	<b>151,296</b>	<b>30,038</b>	<b>24.8%</b>
Community Programs	3	97,000	3	85,000	(12,000)	-12.4%
Outreach College	2	24,258	2	66,296	42,038	173.3%
<b>School of Architecture</b>	<b>1</b>	<b>188,831</b>	<b>2</b>	<b>218,102</b>	<b>29,271</b>	<b>15.5%</b>
School of Architecture	1	188,831	2	218,102	29,271	15.5%
<b>School of Nursing and Dental Hygiene</b>	<b>6</b>	<b>650,012</b>	<b>15</b>	<b>1,247,425</b>	<b>597,413</b>	<b>91.9%</b>
Department of Nursing	6	650,012	11	805,896	155,884	24.0%
Hawaii State Center for Nursing	-	-	2	78,729	78,729	100.0%
School of Nursing and Dental Hygiene	-	-	2	362,800	362,800	100.0%
<b>School of Ocean and Earth Science and Technology</b>	<b>382</b>	<b>100,241,352</b>	<b>386</b>	<b>99,875,035</b>	<b>(366,317)</b>	<b>-0.4%</b>
Center for Microbial Oceanography, Research and Edu (C-MORE)	11	13,148,085	11	1,718,806	(11,429,279)	-86.9%
Department of Atmospheric Sciences	9	1,473,042	13	2,287,153	814,111	55.3%
Department of Ocean and Resources Engineering	9	1,144,798	12	2,724,235	1,579,437	138.0%
Department of Oceanography	38	9,438,314	45	11,255,495	1,817,181	19.3%
Earth Sciences	26	2,508,217	25	7,467,676	4,959,459	197.7%
Hawaii Institute of Geophysics and Planetology (HIGP)	70	9,377,792	66	8,208,245	(1,169,547)	-12.5%
Hawaii Institute of Marine Biology (HIMB)	46	6,481,738	44	6,787,419	305,681	4.7%
Hawaii Natural Energy Institute (HNEI)	20	8,496,080	17	11,970,477	3,474,397	40.9%
International Pacific Research Center (IPRC)	14	2,886,544	7	874,048	(2,012,496)	-69.7%
Joint Institute for Marine and Atmospheric Research (JIMAR)	51	16,489,449	44	14,253,236	(2,236,213)	-13.6%
Pacific Biosciences Research Center	44	7,777,146	46	7,964,087	186,941	2.4%
School of Ocean and Earth Science and Technology	10	12,654,335	8	14,257,404	1,603,069	12.7%
Sea Grant College Program	30	7,411,697	45	7,544,302	132,605	1.8%
University Marine Center/Ship Operations	4	954,115	3	2,562,452	1,608,337	168.6%
<b>School of Pacific and Asian Studies</b>	<b>17</b>	<b>2,005,647</b>	<b>17</b>	<b>1,497,981</b>	<b>(507,666)</b>	<b>-25.3%</b>
Center for Chinese Studies	-	-	1	90,000	90,000	100.0%
Center for Japanese Studies	5	413,000	5	605,183	192,183	46.5%
Center for Korean Studies	4	200,146	4	115,756	(84,390)	-42.2%
Center for Philippine Studies	2	98,674	-	-	(98,674)	-100.0%

Campus	FY 2020		FY 2021		\$ Change	% Change
	Award Count	Award Amount	Award Count	Award Amount		
Center for Southeast Asian Studies	2	627,000	1	118,703	(508,297)	-81.1%
School of Pacific and Asian Studies	4	666,827	6	568,339	(98,488)	-14.8%
<b>Shidler College of Business</b>	<b>1</b>	<b>114,880</b>	<b>1</b>	<b>24,500</b>	<b>(90,380)</b>	<b>-78.7%</b>
Department of Information Technology Management	1	114,880	1	24,500	(90,380)	-78.7%
<b>Thompson School of Social Work &amp; Public Health</b>	<b>37</b>	<b>6,977,003</b>	<b>57</b>	<b>17,866,190</b>	<b>10,889,187</b>	<b>156.1%</b>
Center on Aging	3	121,930	16	6,297,917	6,175,987	5065.2%
Office of Public Health Studies	22	4,818,384	28	4,814,992	(3,392)	-0.1%
Thompson School of Social Work & Public Health	12	2,036,689	13	6,753,281	4,716,592	231.6%
<b>University of Hawaii Cancer Center</b>	<b>81</b>	<b>30,472,290</b>	<b>80</b>	<b>26,023,989</b>	<b>(4,448,301)</b>	<b>-14.6%</b>
Cancer Biology	21	2,481,586	21	2,759,336	277,750	11.2%
Cancer Epidemiology	39	11,931,304	41	10,573,446	(1,357,858)	-11.4%
Cancer Prevention in the Pacific	4	973,772	4	646,695	(327,077)	-33.6%
Translational and Clinical Research	2	1,880,866	3	1,400,538	(480,328)	-25.5%
University of Hawaii Cancer Center	15	13,204,762	11	10,643,974	(2,560,788)	-19.4%
<b>Vice Chancellor, Academic Affairs</b>	<b>13</b>	<b>1,645,862</b>	<b>21</b>	<b>2,019,732</b>	<b>373,870</b>	<b>22.7%</b>
Graduate Education	1	779,000	2	1,063,917	284,917	36.6%
International & Exch Prog	1	63,775	1	52,806	(10,969)	-17.2%
Library (UH Manoa)	6	276,475	8	268,672	(7,803)	-2.8%
Service Learning	1	25,717	-	-	(25,717)	-100.0%
UH Press	-	-	2	25,500	25,500	100.0%
Undergraduate Education	3	467,645	4	512,279	44,634	9.5%
Vice Chancellor, Academic Affairs	1	33,250	4	96,558	63,308	190.4%
<b>Vice Chancellor, Research</b>	<b>1</b>	<b>75,000</b>	<b>1</b>	<b>17,279</b>	<b>(57,721)</b>	<b>-77.0%</b>
Vice Chancellor, Research	1	75,000	1	17,279	(57,721)	-77.0%
<b>Vice Chancellor, Students</b>	<b>17</b>	<b>5,219,593</b>	<b>17</b>	<b>6,562,941</b>	<b>1,343,348</b>	<b>25.7%</b>
Health & Wellness	1	20,000	-	-	(20,000)	-100.0%
Student Equity Excel & Diversity	15	5,174,593	13	4,858,305	(316,288)	-6.1%
Women's Center	1	25,000	4	1,704,636	1,679,636	6718.5%
<b>Water Resources Research Center</b>	<b>11</b>	<b>677,921</b>	<b>12</b>	<b>1,715,198</b>	<b>1,037,277</b>	<b>153.0%</b>
Water Resources Research Center	11	677,921	12	1,715,198	1,037,277	153.0%
<b>William S. Richardson School of Law</b>	<b>30</b>	<b>3,430,781</b>	<b>26</b>	<b>1,714,336</b>	<b>(1,716,445)</b>	<b>-50.0%</b>
William S. Richardson School of Law	30	3,430,781	26	1,714,336	(1,716,445)	-50.0%
<b>University of Hawai'i at West O'ahu</b>	<b>16</b>	<b>2,896,311</b>	<b>22</b>	<b>3,100,245</b>	<b>203,934</b>	<b>7.0%</b>
<b>Chancellor, UH West Oahu</b>	<b>16</b>	<b>2,896,311</b>	<b>22</b>	<b>3,100,245</b>	<b>203,934</b>	<b>7.0%</b>
Chancellor, UH West Oahu	6	1,413,322	8	1,543,799	130,477	9.2%
Distance Learning Office	-	-	1	16,346	16,346	100.0%
Division of Business	-	-	2	185,088	185,088	100.0%
Division of Education	3	203,020	1	100,000	(103,020)	-50.7%
Division of Humanities	1	35,000	-	-	(35,000)	-100.0%
Division of Mathematics, Natural and Health Sciences	-	-	2	53,500	53,500	100.0%
Division of Public Administration	1	99,969	-	-	(99,969)	-100.0%
Division of Social Sciences	1	100,000	2	306,512	206,512	206.5%
'Ulu'ulu Giugni Archives	-	-	2	140,000	140,000	100.0%
Vice Chancellor for Academic Affairs (UH WO)	-	-	1	110,000	110,000	100.0%
Vice Chancellor for Student Affairs	4	1,045,000	3	645,000	(400,000)	-38.3%
<b>University of Hawai'i Maui College</b>	<b>32</b>	<b>14,989,592</b>	<b>39</b>	<b>12,604,643</b>	<b>(2,384,949)</b>	<b>-15.9%</b>
<b>Chancellor, UH Maui College</b>	<b>32</b>	<b>14,989,592</b>	<b>39</b>	<b>12,604,643</b>	<b>(2,384,949)</b>	<b>-15.9%</b>
Academic Affairs (UH Maui College)	1	2,000,000	-	-	(2,000,000)	-100.0%
Allied Health Department	1	35,000	1	57,000	22,000	62.9%
Chancellor, UH Maui College	27	5,477,825	37	12,472,643	6,994,818	127.7%
Continuing Education and Training (UH Maui College)	2	558,759	-	-	(558,759)	-100.0%
Cooperative Education (UH Maui College)	-	-	1	75,000	75,000	100.0%
Human Services (UH Maui College)	1	6,918,008	-	-	(6,918,008)	-100.0%
<b>University of Hawai'i System</b>	<b>86</b>	<b>67,190,094</b>	<b>100</b>	<b>86,743,175</b>	<b>19,553,081</b>	<b>29.1%</b>
<b>Office of the Vice President for Community Colleges</b>	<b>9</b>	<b>13,324,533</b>	<b>11</b>	<b>19,175,798</b>	<b>5,851,265</b>	<b>43.9%</b>
Office of the Vice President for Community Colleges	9	13,324,533	11	19,175,798	5,851,265	43.9%
<b>Office of the Vice President for Research and Innovation</b>	<b>40</b>	<b>23,128,353</b>	<b>50</b>	<b>32,380,527</b>	<b>9,252,174</b>	<b>40.0%</b>
Applied Research Laboratory	33	13,221,387	42	23,912,224	10,690,837	80.9%
Office of Strategic Health Initiatives	1	2,515,498	-	-	(2,515,498)	-100.0%
Office of the Vice President for Research and Innovation	5	7,387,396	7	8,457,600	1,070,204	14.5%
STEM Pre-Academy	1	4,072	1	10,703	6,631	162.8%
<b>Office of the VP for Academic Planning and Policy</b>	<b>14</b>	<b>13,701,436</b>	<b>11</b>	<b>6,471,983</b>	<b>(7,229,453)</b>	<b>-52.8%</b>
Hawai'i P-20 Partnerships for Education Office	11	13,604,341	11	6,471,983	(7,132,358)	-52.4%
Office of the VP for Academic Planning and Policy	3	97,095	-	-	(97,095)	-100.0%
<b>Office of the VP for Information Tech/Chief Info Officer</b>	<b>19</b>	<b>16,823,133</b>	<b>25</b>	<b>28,537,133</b>	<b>11,714,000</b>	<b>69.6%</b>
Office of the VP for Information Tech/Chief Info Officer	9	6,910,828	16	14,819,989	7,909,161	114.4%
Pacific Disaster Center	10	9,912,305	9	13,717,144	3,804,839	38.4%
<b>President, University of Hawaii System</b>	<b>2</b>	<b>142,739</b>	<b>2</b>	<b>160,933</b>	<b>18,194</b>	<b>12.7%</b>
President, University of Hawaii System	2	142,739	2	160,933	18,194	12.7%
<b>VP For Administration</b>	<b>2</b>	<b>69,900</b>	<b>1</b>	<b>16,801</b>	<b>(53,099)</b>	<b>-76.0%</b>
VP For Administration	2	69,900	1	16,801	(53,099)	-76.0%
<b>Windward Community College</b>	<b>15</b>	<b>4,611,585</b>	<b>21</b>	<b>5,684,114</b>	<b>1,072,529</b>	<b>23.3%</b>
<b>Chancellor, Windward Community College</b>	<b>15</b>	<b>4,611,585</b>	<b>21</b>	<b>5,684,114</b>	<b>1,072,529</b>	<b>23.3%</b>
Academic Affairs (Windward CC)	1	835,205	1	851,053	15,848	1.9%
Chancellor, Windward Community College	13	3,616,380	19	4,741,494	1,125,114	31.1%
Continuing and Community Education	1	160,000	1	91,567	(68,433)	-42.8%
<b>Grand Total</b>	<b>1,879</b>	<b>456,598,359</b>	<b>1,963</b>	<b>492,089,997</b>	<b>35,491,638</b>	<b>7.8%</b>

# 2021 Annual Report Extramural Awards & Expenditures

for the period of July 1, 2020 through June 30, 2021





The Hawai'i Institute of Marine Biology (HIMB) is a global hub for cutting-edge science and technology aimed at understanding and conserving tropical marine and coastal ecosystems. This exciting work takes place on the island of Moku o Lo'e, surrounded by 60 acres of coral reefs that are part of a Hawai'i State marine refuge. HIMB faculty are leading experts in tropical marine biology research and education, advancing the informed stewardship of Hawai'i's marine and coastal biodiversity.

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Dear Colleagues:

Over the last year and a half, we have been faced with unprecedented challenges brought on by the COVID-19 pandemic. Despite having almost every aspect of our personal and work lives disrupted by the virus, our dedicated and hard-working faculty, staff and graduate students have remained focused and resilient. Their tireless efforts have kept the University of Hawai'i (UH) research enterprise moving full speed ahead and on the right trajectory -- positively contributing to the well-being of our institution, state, nation and beyond.

It is with a great sense of pride that I announce that for the third consecutive year, UH has exceeded the \$400 million mark in extramural funding with a near-record total of \$485.5 million to close FY2021. This year's total represents a \$35.1 million or 7.8 percent increase over FY 2020 and is just \$3.1 million shy of UH's best extramural funding year total of \$488.6 million in 2011.

Our flagship University of Hawai'i at Mānoa (UH Mānoa) campus topped the extramural award amounts this year with \$352.6 million, while the UH System brought in \$85.6 million, UH Community Colleges totaled \$28.35 million, and the University of Hawai'i at Hilo received \$15.97 million. Here are a few funding highlights from around our ten-campus UH System:

- The Office of the Vice President for Community Colleges was awarded \$13.37 million from the U.S. Department of Education for a three-year project to help train 3,560 displaced, new and underemployed workers for in-demand living-wage jobs in the healthcare, skilled trades and technology sectors.
- The National Institutes of Health awarded \$6.6 million to the John A. Burns School of Medicine's IDeA Networks for Biomedical Research Excellence IV-Hawai'i Statewide Research and Education Partnership (INBRE IV-HISREP). HISREP serves as a catalyst for the advancement of the research scientist pipeline to help elevate the biomedical research community to make new and important health discoveries in the state.
- The Commonwealth of the Northern Mariana Islands funded two separate awards totaling \$5.3 million for UH Mānoa's Social Sciences Research Institute to assist with improvements to the commonwealth's Medicaid and Medicare services, including claims processing, data storage, analysis and reporting.
- The National Science Foundation awarded \$4.5 million to the School of Ocean and Earth Sciences and Technology (SOEST) to extend its venerable Hawai'i Ocean Time-series into its fourth decade of sustained observations of ocean ecosystem variability.
- SOEST was awarded \$4.0 million by the Office of Naval Research to establish the Climate Resilience Initiative at UH Mānoa, with the first phase focusing on sea level rise monitoring and partnership building among key stakeholders.
- The National Institutes of Health awarded \$3.8 million to the University of Hawai'i Cancer Center to continue its important Multiethnic Cohort Study.

There are still many challenges that lie ahead for all of us, but I am confident in the abilities and resourcefulness of our UH research team to help get us through. Thank you again for making the UH research enterprise a large part of your DNA.

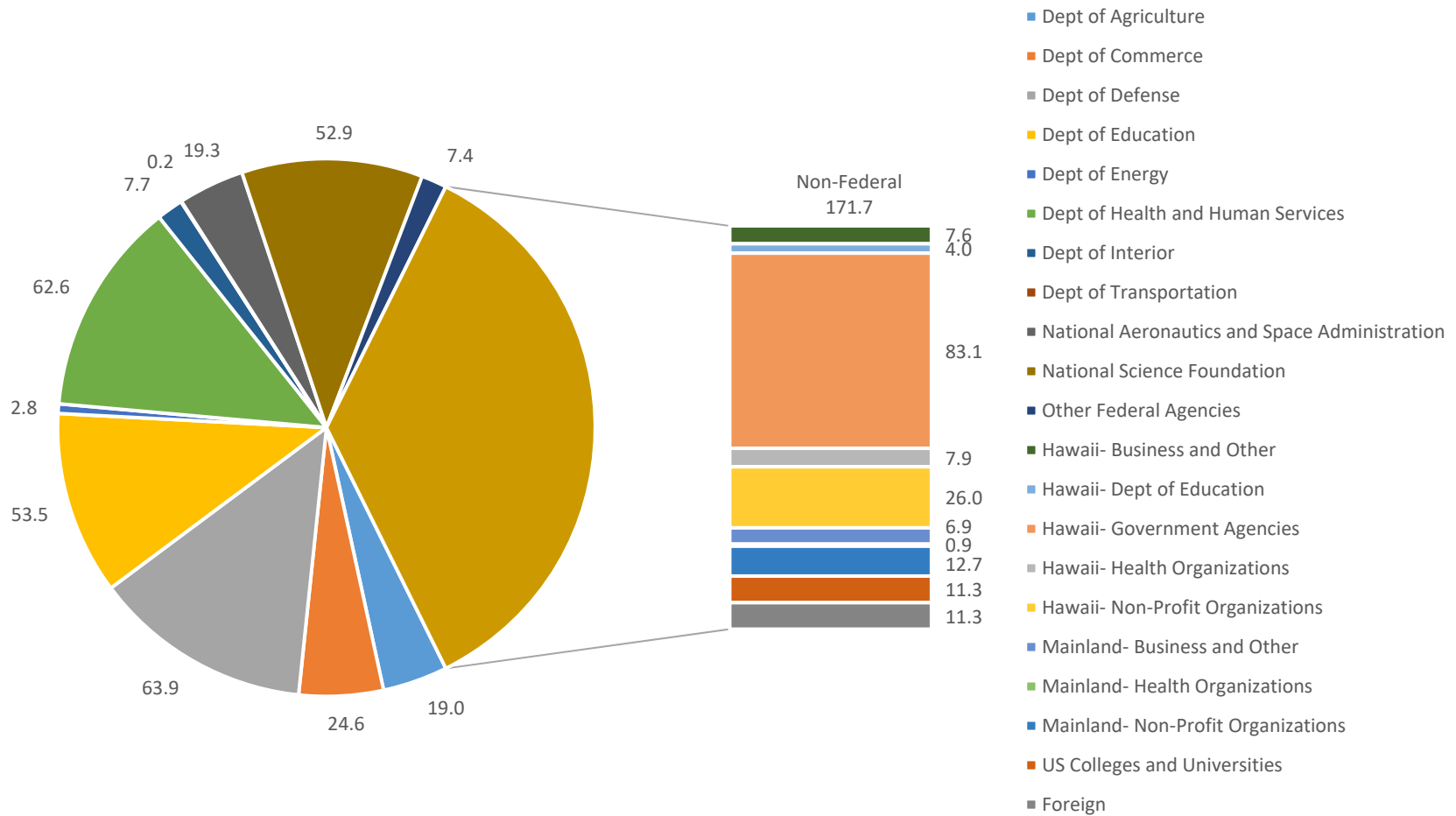
Sincerely,



Vassilis L. Syrmos

Vice President for Research and Innovation

**Chart 1: Awards by Sponsor**  
(in millions)

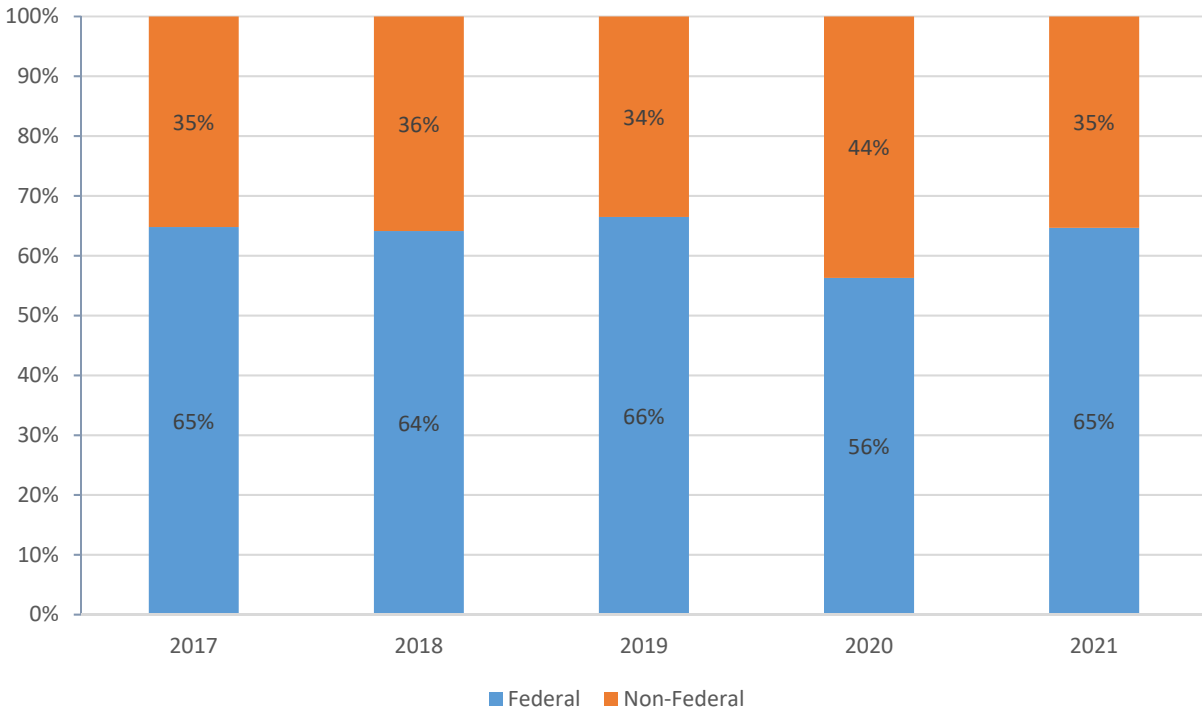


Institutional Awards received from Federal COVID-19 Higher Education Emergency Relief Funding (HEERF) acts and related expenditures are reported separately from extramural awards and extramural expenditures in this report. The HEERF award totals can be found in Chart 4: Total Federal CARES Act Awards by Campus and Figure 4: Summary of Federal CARES Act Awards; HEERF expenditures are presented in Chart 12: Total Federal CARES Act Expenditures by Campus and Figure 12: Summary of Federal CARES Act Expenditures.

**Figure 1: Contract and Grant Awards Summary by Sponsor Type**

<b>Sponsor Type</b>	<b>Award Count</b>	<b>Amount Awarded</b>
Dept of Agriculture	63	18,959,135
Dept of Commerce	82	24,553,870
Dept of Defense	87	63,947,139
Dept of Education	85	53,510,948
Dept of Energy	9	2,849,966
Dept of Health and Human Services	116	62,602,750
Dept of Interior	61	7,674,144
Dept of Transportation	1	200,000
National Aeronautics and Space Administration	67	19,287,603
National Science Foundation	105	52,878,091
Other Federal Agencies	15	7,408,023
Hawaii- Business and Other	79	7,572,360
Hawaii- Dept of Education	24	3,988,446
Hawaii- Government Agencies	397	83,122,450
Hawaii- Health Organizations	29	7,920,609
Hawaii- Non-Profit Organizations	329	26,038,426
Mainland- Business and Other	102	6,890,171
Mainland- Health Organizations	18	860,927
Mainland- Non-Profit Organizations	111	12,662,232
US Colleges and Universities	138	11,274,384
Foreign	45	11,327,252
<b>Grand Total</b>	<b>1,963</b>	<b>485,528,926</b>

**Chart 2: Breakdown of Federal and Non-Federal Awards  
Five Year Comparison**

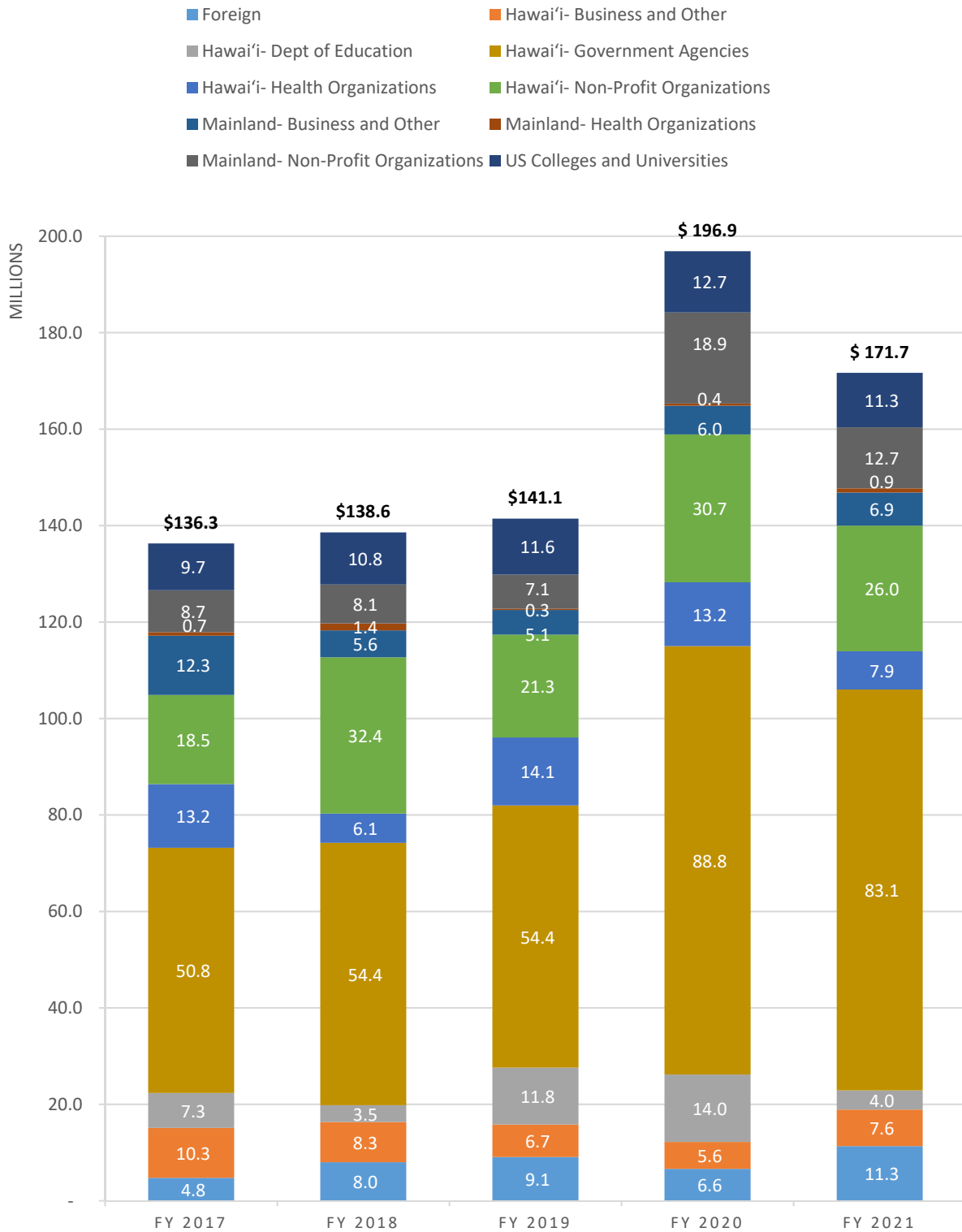


**Figure 2: Summary of Federal and Non-Federal Awards**

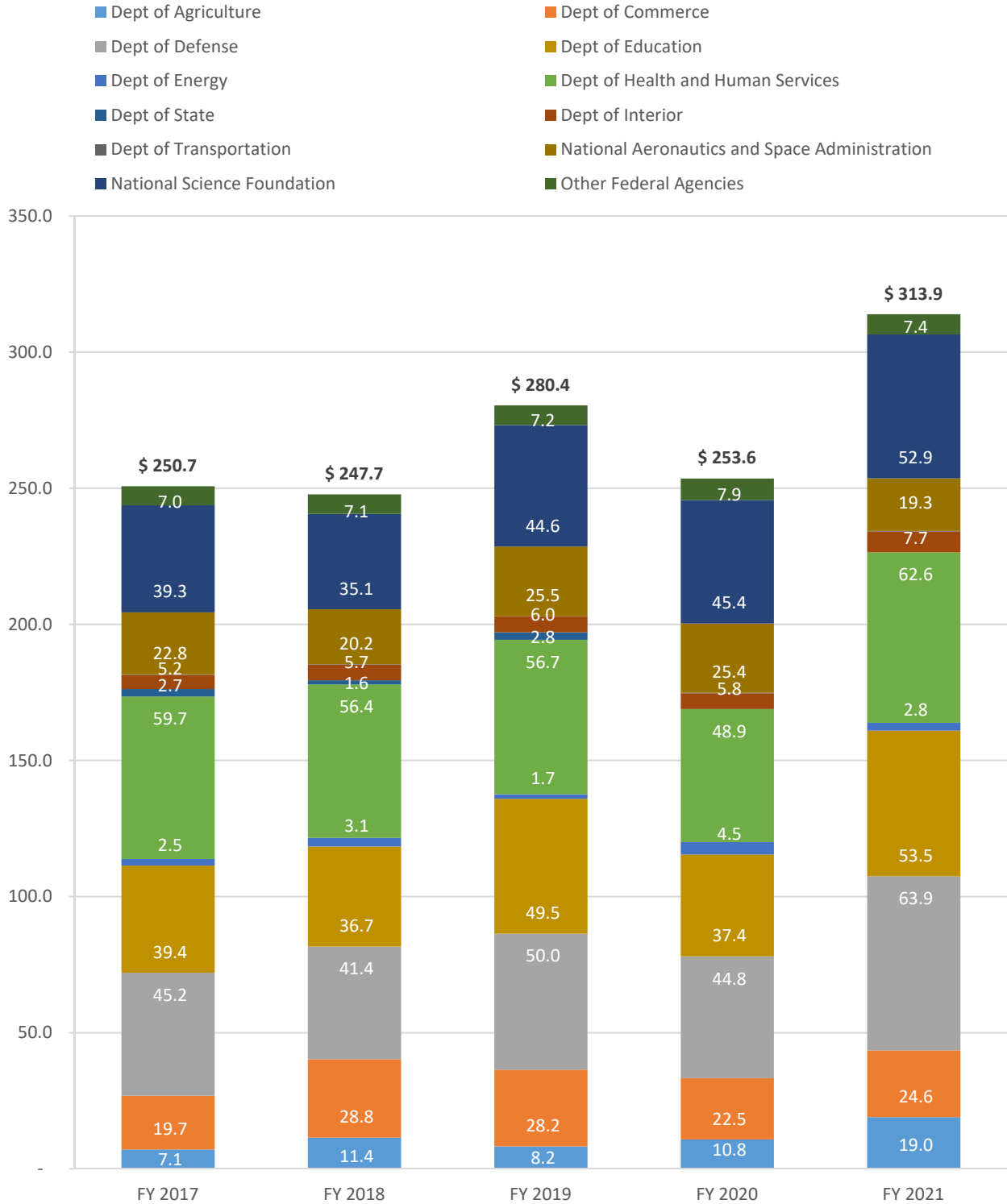
Source of Funding	FY 2017 Amount Awarded	FY 2018 Amount Awarded	FY 2019 Amount Awarded	FY 2020 Amount Awarded	FY 2021 Amount Awarded
Federal	250,727,105	247,741,514	280,412,092	253,555,515	313,871,669
Non-Federal	136,274,600	138,570,189	141,440,068	196,883,734	171,657,257
<b>Total</b>	<b>387,001,705</b>	<b>386,311,703</b>	<b>421,852,160</b>	<b>450,439,249</b>	<b>485,528,926</b>

### Chart 3a: Non-Federal Awards by Fiscal Year Five Year Comparison

(in millions)



### Chart 3b: Federal Awards by Fiscal Year Five Year Comparison (in millions)





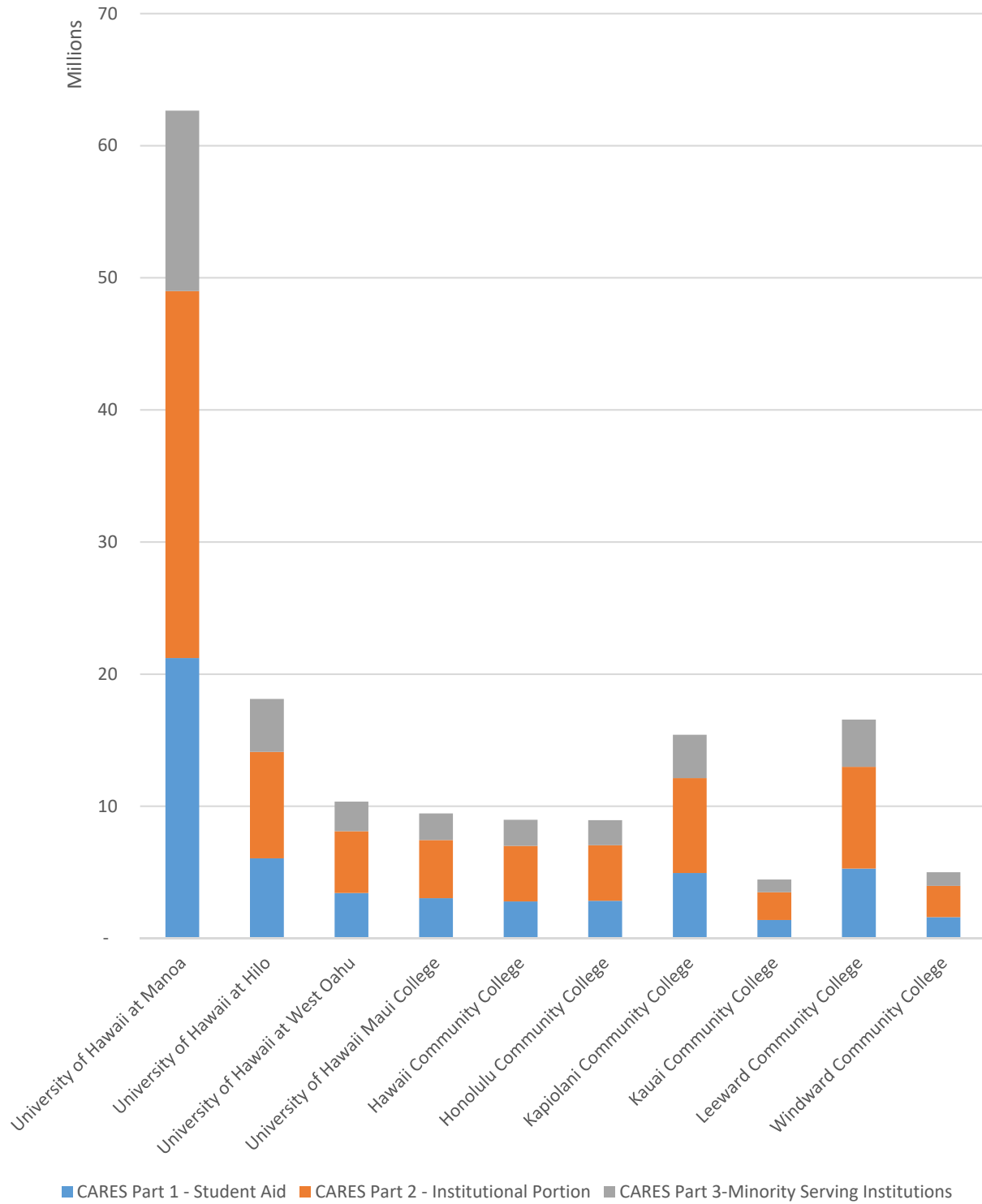
**Figure 3: Total Contract and Grant Awards Received  
Five Year Comparison**

Source of Funding		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021	
		Amount Awarded	% of Total	Amount Awarded	% of Total	Amount Awarded	% of Total	Amount Awarded	% of Total	Amount Awarded	% of Total
Federal	Dept of Agriculture	7,104,681	2%	11,433,935	3%	8,222,884	2%	10,787,963	2%	18,959,135	4%
	Dept of Commerce	19,746,151	5%	28,794,795	7%	28,181,538	7%	22,488,575	5%	24,553,870	5%
	Dept of Defense	45,153,420	12%	41,426,235	11%	49,966,996	12%	44,780,906	10%	63,947,139	13%
	Dept of Education	39,355,136	10%	36,737,371	10%	49,540,646	12%	37,408,690	8%	53,510,948	11%
	Dept of Energy	2,454,683	1%	3,145,417	1%	1,658,015	0%	4,535,358	1%	2,849,966	1%
	Dept of Health and Human Services	59,662,559	15%	56,358,106	15%	56,714,095	13%	48,876,217	11%	62,602,750	13%
	Dept of State	2,741,488	1%	1,550,000	0%	2,775,000	1%		0%		0%
	Dept of Interior	5,240,402	1%	5,737,236	1%	5,952,633	1%	5,777,494	1%	7,674,144	2%
	Dept of Transportation	138,907	0%	164,625	0%	-	0%	200,000	0%	200,000	0%
	National Aeronautics and Space Administration	22,811,204	6%	20,167,908	5%	25,529,759	6%	25,444,136	6%	19,287,603	4%
	National Science Foundation	39,285,739	10%	35,078,731	9%	44,634,050	11%	45,356,073	10%	52,878,091	11%
Other Federal Agencies	7,032,735	2%	7,147,155	2%	7,236,476	2%	7,900,103	2%	7,408,023	2%	
<b>Federal Total</b>	<b>250,727,105</b>	<b>65%</b>	<b>247,741,514</b>	<b>64%</b>	<b>280,412,092</b>	<b>66%</b>	<b>253,555,515</b>	<b>56%</b>	<b>313,871,669</b>	<b>65%</b>	
Non-Federal	Foreign	4,755,142	1%	7,984,175	2%	9,075,877	2%	6,604,921	1%	11,327,252	2%
	Hawaii- Business and Other	10,338,044	3%	8,321,278	2%	6,734,322	2%	5,601,377	1%	7,572,360	2%
	Hawaii- Dept of Education	7,260,253	2%	3,513,321	1%	11,796,600	3%	13,971,439	3%	3,988,446	1%
	Hawaii- Government Agencies	50,826,152	13%	54,395,732	14%	54,354,585	13%	88,827,235	20%	83,122,450	17%
	Hawaii- Health Organizations	13,215,267	3%	6,067,920	2%	14,101,752	3%	13,238,347	3%	7,920,609	2%
	Hawaii- Non-Profit Organizations	18,483,113	5%	32,407,127	8%	21,301,837	5%	30,652,147	7%	26,038,426	5%
	Mainland- Business and Other	12,276,122	3%	5,572,124	1%	5,129,155	1%	5,952,383	1%	6,890,171	1%
	Mainland- Health Organizations	737,744	0%	1,443,529	0%	262,863	0%	442,816	0%	860,927	0%
	Mainland- Non-Profit Organizations	8,685,769	2%	8,065,294	2%	7,064,790	2%	18,899,232	4%	12,662,232	3%
	US Colleges and Universities	9,696,994	3%	10,799,689	3%	11,618,287	3%	12,693,837	3%	11,274,384	2%
<b>Non-Federal Total</b>	<b>136,274,600</b>	<b>35%</b>	<b>138,570,189</b>	<b>36%</b>	<b>141,440,068</b>	<b>34%</b>	<b>196,883,734</b>	<b>44%</b>	<b>171,657,257</b>	<b>35%</b>	
<b>Grand Total</b>	<b>387,001,705</b>	<b>100%</b>	<b>386,311,703</b>	<b>100%</b>	<b>421,852,160</b>	<b>100%</b>	<b>450,439,249</b>	<b>100%</b>	<b>485,528,926</b>	<b>100%</b>	

**Figure 3a: COVID-19 Related Contract and Grant Awards Received**

<b>Source of Funds</b>	<b>FY 2020</b>	<b>% of Total</b>	<b>FY 2021</b>	<b>% of Total</b>
Department of Commerce	\$ 259,259.00	8%	\$ 3,100,000.00	10%
Department of Education		0%	\$ 13,370,383.00	45%
Department of Health and Human Services	\$ 150,000.00	5%	\$ 220,027.00	1%
Foreign		0%	\$ 10,000.00	0%
Hawaii- Business and Other	\$ 118,500.00	4%	\$ 608,696.00	2%
Hawaii- Government Agencies	\$ 2,515,498.00	79%	\$ 11,806,040.00	39%
Hawaii- Non-Profit Organizations		0%	\$ 680,118.00	2%
Mainland- Non-Profit Organizations		0%	\$ 29,500.00	0%
National Science Foundation	\$ 151,956.00	5%	\$ 199,023.00	1%
<b>GRAND TOTAL</b>	<b>\$ 3,195,213.00</b>	<b>100%</b>	<b>\$ 30,023,787.00</b>	<b>100%</b>

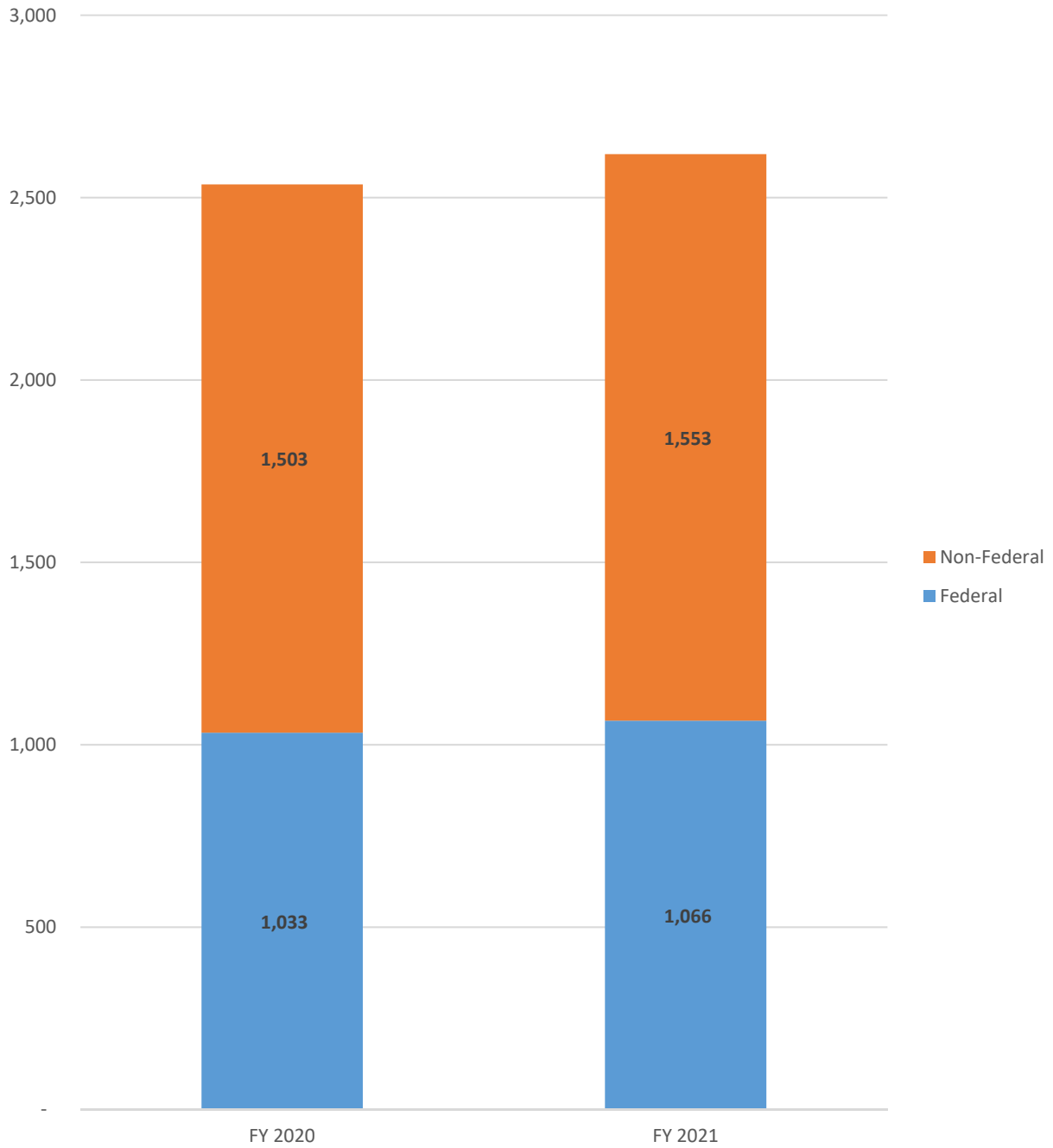
**Chart 4: Total Federal CARES Act Awards by Campus**  
(in millions)



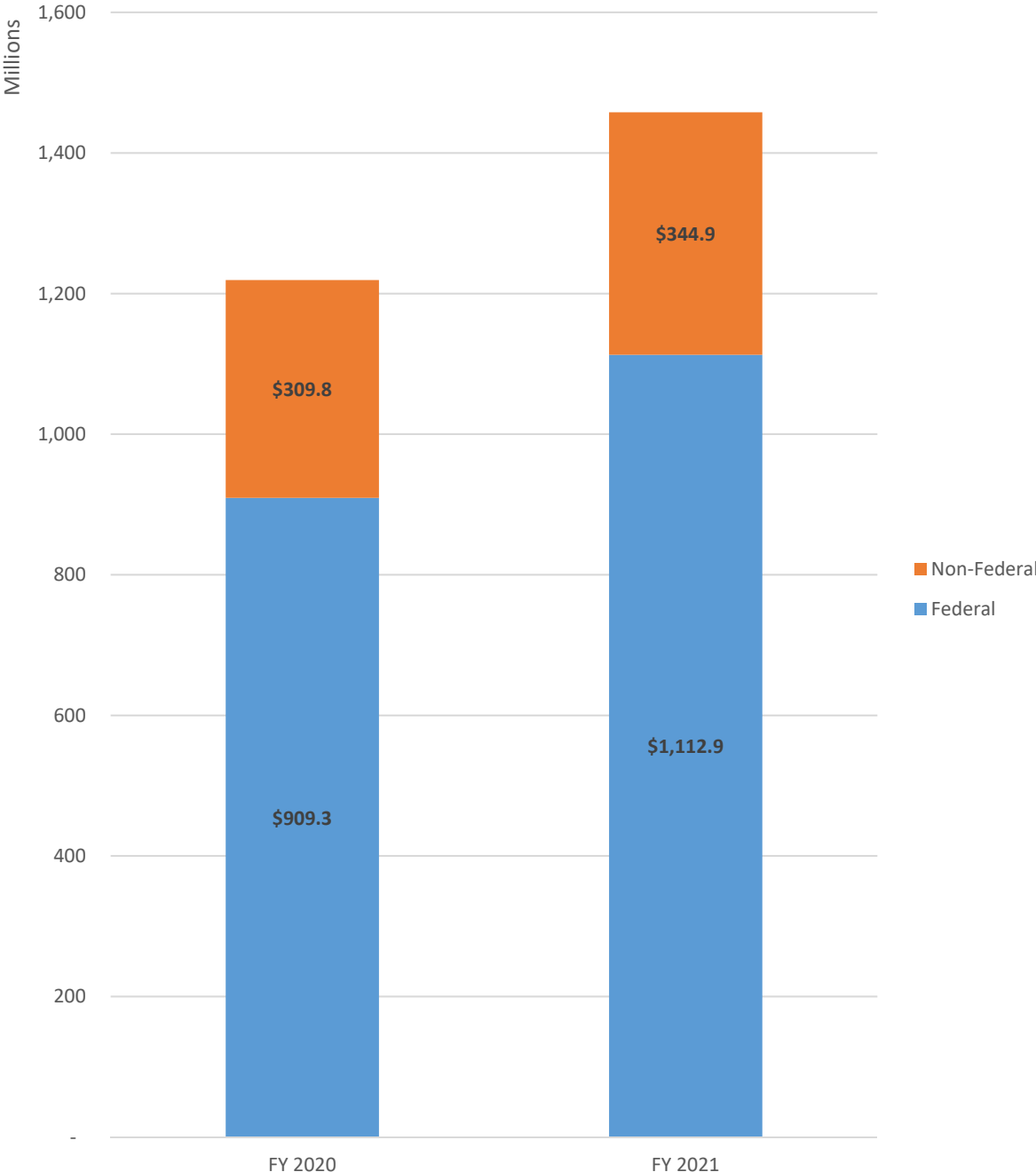
**Figure 4: Summary of Federal CARES Act Awards**

Campus	CARES Part 1 Student Aid	CARES Part 2 Institutional Portion	CARES Part 3 Minority Serving Institutions	Total CARES Awards
University of Hawaii at Manoa	21,210,251	27,785,104	13,654,400	62,649,755
University of Hawaii at Hilo	6,057,067	8,053,132	4,007,203	18,117,402
University of Hawaii at West Oahu	3,429,515	4,675,342	2,239,015	10,343,872
University of Hawaii Maui College	3,033,379	4,406,516	2,013,945	9,453,840
Hawaii Community College	2,786,367	4,213,141	1,967,841	8,967,349
Honolulu Community College	2,835,554	4,211,054	1,891,206	8,937,814
Kapiolani Community College	4,943,484	7,178,810	3,285,000	15,407,294
Kauai Community College	1,384,503	2,101,279	968,591	4,454,373
Leeward Community College	5,279,205	7,695,704	3,577,196	16,552,105
Windward Community College	1,599,401	2,367,058	1,037,423	5,003,882
<b>Grand Total</b>	<b>52,558,726</b>	<b>72,687,140</b>	<b>34,641,820</b>	<b>159,887,686</b>

**Chart 5: Number of Proposals Submitted  
Prior Year Comparison**



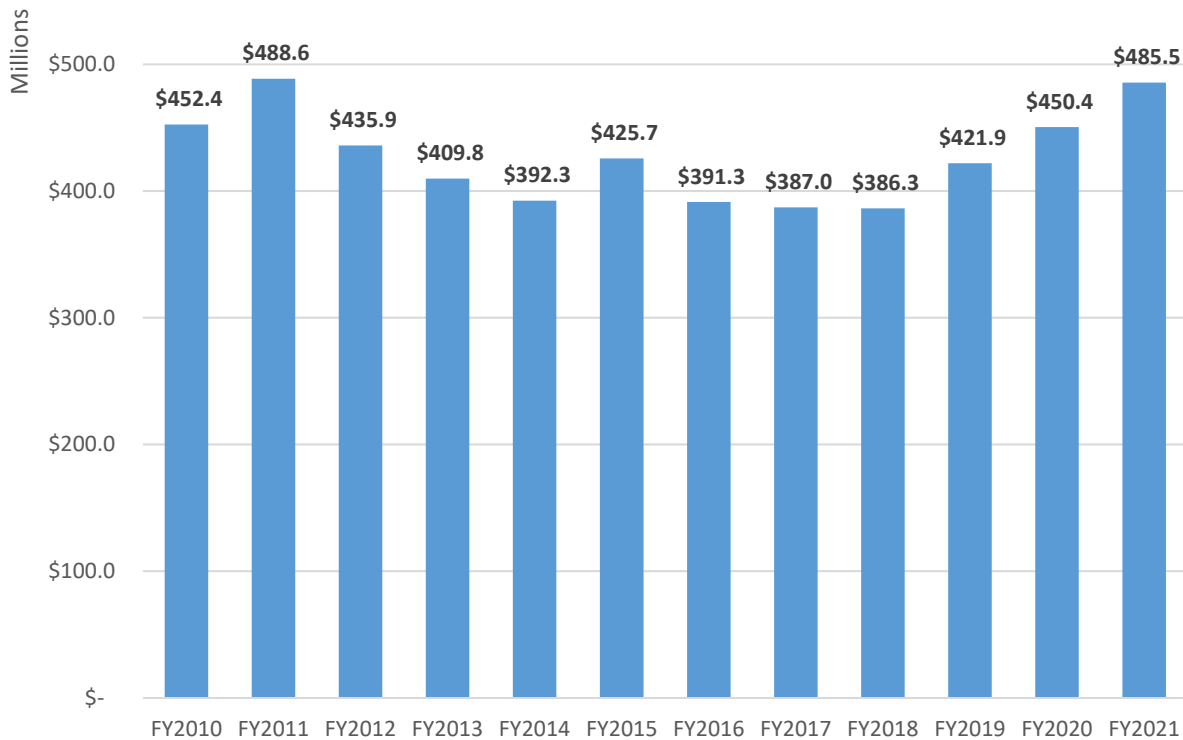
**Chart 6: Total Dollar Amount of Proposals Submitted  
Prior Year Comparison**  
(in millions)



**Figure 5: Proposal Summary by Source of Funding  
Prior Year Comparison**

Source of Funding		FY 2020		FY 2021	
		Proposals Submitted	Requested Amount	Proposals Submitted	Requested Amount
Federal	Dept of Agriculture	108	33,974,063	108	48,308,131
	Dept of Commerce	92	106,312,563	90	132,329,719
	Dept of Defense	24	15,523,805	95	148,246,277
	Dept of Education	1	200,000	68	130,208,519
	Dept of Energy	167	275,435,801	14	15,706,273
	Dept of Health and Human Services	85	126,261,589	179	297,670,874
	Dept of the Interior	48	6,571,917	60	10,444,229
	Dept of State	71	71,788,659	1	594,518
	Dept of Transportation	3	4,007,645	1	100,000
	National Aeronautics and Space Administration	150	87,924,044	158	103,420,830
	National Science Foundation	237	164,167,996	245	210,349,751
	Other Federal Agencies	47	17,111,100	47	15,493,843
<b>Federal Total</b>		<b>1,033</b>	<b>909,279,182</b>	<b>1,066</b>	<b>1,112,872,964</b>
Non-Federal	Hawaii- Business and Other	76	6,256,298	86	12,685,554
	Hawaii- Dept of Education	31	15,037,755	31	6,160,017
	Hawaii- Government Agencies	428	106,208,435	421	97,189,993
	Hawaii- Health Organizations	37	13,127,890	34	13,974,447
	Hawaii- Non-Profit Organizations	398	35,555,666	392	35,631,729
	Mainland- Business and Other	92	26,172,215	117	39,578,967
	Mainland- Health Organizations	29	6,648,980	21	2,407,647
	Mainland- Non-Profit Organizations	147	35,873,066	152	35,814,908
	US Colleges and Universities	219	52,855,549	239	85,782,989
	Foreign	46	12,020,146	60	15,696,128
<b>Non-Federal Total</b>		<b>1,503</b>	<b>309,756,000</b>	<b>1,553</b>	<b>344,922,379</b>
<b>Grand Total</b>		<b>2,536</b>	<b>1,219,035,182</b>	<b>2,619</b>	<b>1,457,795,343</b>

**Chart 7: Total Contract and Grant Awards – 12 Year Comparison**  
(in millions)



**Figure 6: Total Contract and Grant Awards Summary  
12 Year Comparison**

Year	Total Awarded	% Change	Year	Total Awarded	% Change
FY2010	452,408,669	9%	FY 2016	391,334,528	-8%
FY2011	488,597,908	8%	FY 2017	387,001,705	-1%
FY2012	435,874,967	-11%	FY2018	386,311,703	0%
FY2013	409,783,318	-6%	FY2019	421,852,160	9%
FY2014	392,314,955	-4%	FY2020	450,439,249	7%
FY 2015	425,650,338	8%	FY2021	485,528,926	7.8%



**Figure 7: Top Individual Awards**

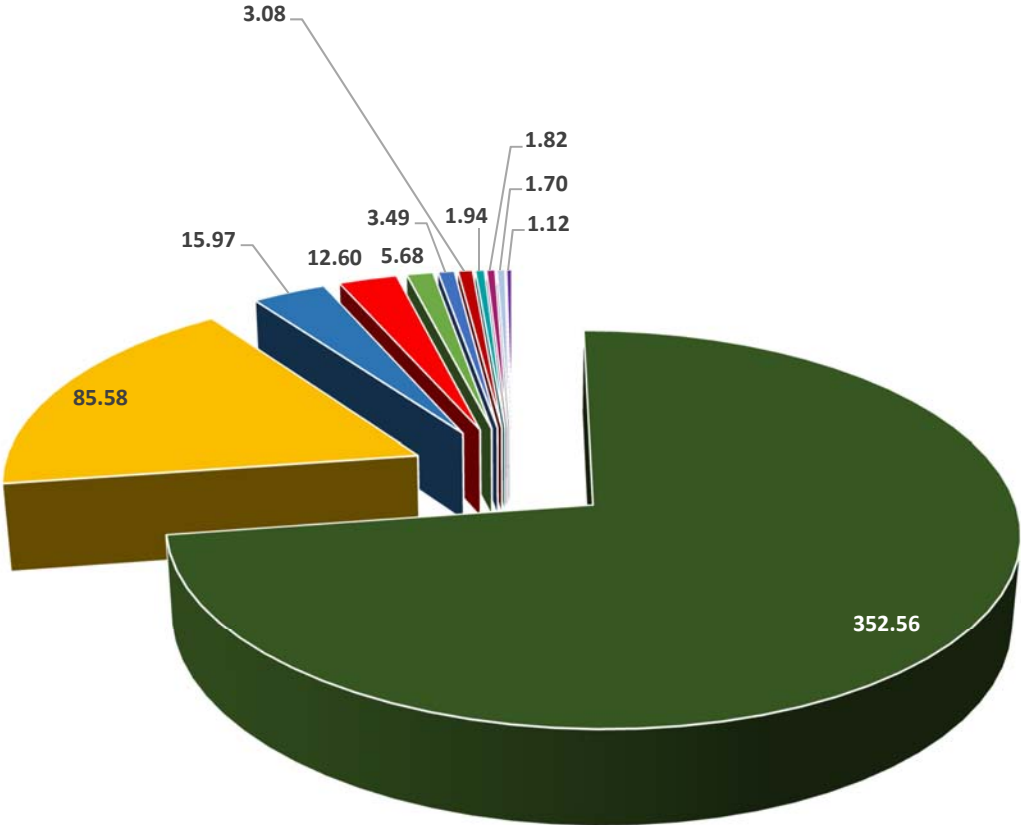
<b>Award Amount</b>	<b>PI Name</b>	<b>Department</b>	<b>Award Sponsor</b>	<b>Title</b>
13,629,144	David Lassner	Pacific Disaster Center	DEFENSE, DEPT-WASHINGTON HEADQUARTERS SVCS	University of Hawaii Pacific Disaster Center (UoH PDC) Cooperative Agreement
13,370,383	Tammi Jane Oyadomari-Chun	Office of the Vice President for Community Colleges	EDUCATION, DEPT-FED	Reimagining Workforce Preparation: Hana Career Pathways
11,926,081	Anita L Lopez	School of Ocean and Earth Science and Technology	NATIONAL SCIENCE FOUNDATION	R/V Kilo Moana Ship Operations CY18-23
9,753,633	David Lassner	Applied Research Laboratory	DEFENSE, DEPT-AIR FORCE RESEARCH LABORATORY	Vanguard Center's Unified UARC for Maui High Performance Computing Center Support (VaCUUMS)
8,370,045	Jerris Hedges	John A. Burns School of Medicine	HEALTH & HUMAN SVC, DEPT-NIH-FED NATL INST MIN HLTH & DISP	Ola HAWAII
6,750,000	Clifford Bersamira	Thompson School of Social Work & Public Health	HEALTH, DEPT-ALCOHOL & DRUG ABUSE DIV-HI	Substance Use Disorder Continuum of Care for Adults and Adolescents
6,600,554	Robert Nichols	John A. Burns School of Medicine	HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST GEN MED SCI	INBRE IV - Hawaii Statewide Research and Education Partnership (HiSREP)
6,161,333	John Rayner	Institute for Astronomy	NATIONAL AERONAUT & SPACE ADM	Operation of the Infrared Telescope Facility (IRTF) for NASA Headquarters
5,600,000	Garret Tadashi Yoshimi	Office of the VP for Information Tech/Chief Info Officer	Governor, Office of - State of Hawaii	Governor's Emergency Education Relief Fund (GEERF)
5,538,100	Vassilis Syrmos	Office of the Vice President for Research and Innovation	DEFENSE, DEPT- US ARMY CORPS OF ENGINEERS	Oahu and Makua Implementation of Endangered Species Management, US Army Garrison, Hawaii
5,530,000	Richard Rocheleau	Hawaii Natural Energy Institute (HNEI)	DEFENSE, DEPT-NAVY OFC OF NAVAL RSCH	Asia Pacific Research Initiative for Sustainable Energy Systems 2020 (APRISSES20)
5,000,000	Karl Eujung Kim	Urban and Regional Planning	HOMELAND SECURITY, DEPT-FEMA	National Disaster Preparedness Training Center

## Figure 8: Top Fifty Principal Investigators in Award Dollars

Rank	Investigator	Total Awarded	Unit
1	David Lassner	32,394,370	President, University of Hawaii System
2	Tammi Jane Oyadomari-Chun	17,199,478	Office of the Vice President for Community Colleges
3	Anita L Lopez	14,207,404	School of Ocean and Earth Science and Technology
4	Shaya Honarvar	9,789,404	College of Natural Sciences
5	Richard Rocheleau	9,600,000	School of Ocean and Earth Science and Technology
6	Lui Hokoana	9,404,675	Chancellor, UH Maui College
7	Jerris Hedges	8,728,545	John A. Burns School of Medicine
8	Douglas Scott Luther	6,962,152	School of Ocean and Earth Science and Technology
9	Clifford Morden	6,792,719	College of Natural Sciences
10	Robert Nichols	6,600,554	John A. Burns School of Medicine
11	David Duffy	6,290,632	College of Natural Sciences
12	John Rayner	6,161,333	Institute for Astronomy
13	Christina Higa	6,001,237	College of Social Sciences
14	Clifford Bersamira	6,000,000	Thompson School of Social Work & Public Health
15	Garret Tadashi Yoshimi	5,830,219	Office of the VP for Information Tech/Chief Info Officer
16	Victoria Y Fan	5,700,597	Thompson School of Social Work & Public Health
17	Vassilis Syrmos	5,653,100	Office of the Vice President for Research and Innovation
18	Michael Melzer	5,351,601	College of Tropical Agriculture and Human Resources
19	Karl Eujung Kim	5,314,302	College of Social Sciences
20	Stephen A Schatz	5,312,061	Office of the VP for Academic Planning and Policy
21	Darren Lerner	5,300,114	School of Ocean and Earth Science and Technology
22	Loic Le Marchand	5,035,157	University of Hawaii Cancer Center
23	Melissa Iwamoto	4,838,960	School of Ocean and Earth Science and Technology
24	Angelique E White	4,660,362	School of Ocean and Earth Science and Technology
25	Gwen Jacobs	4,602,818	Office of the VP for Information Tech/Chief Info Officer
26	Patrick Stephen Cross	4,376,615	School of Ocean and Earth Science and Technology
27	Charles Henry Fletcher	4,173,670	School of Ocean and Earth Science and Technology
28	Kenneth Chambers	3,700,000	Institute for Astronomy
29	Michael Hamnett	3,697,769	College of Social Sciences
30	Kelley Withy	3,618,532	John A. Burns School of Medicine
31	Neal Palafox	3,548,136	John A. Burns School of Medicine
32	Clifford Cary Martin	3,528,508	University of Hawaii Cancer Center
33	Vivek Nerurkar	3,091,288	John A. Burns School of Medicine
34	Ivica Zalud	3,059,354	John A. Burns School of Medicine
35	Margaret McFall-Ngai	3,026,127	School of Ocean and Earth Science and Technology
36	William Ward	2,856,701	John A. Burns School of Medicine
37	Anthony Guerrero	2,827,435	John A. Burns School of Medicine
38	Randall F Holcombe	2,716,340	University of Hawaii Cancer Center
39	Steven W Auerbach	2,704,500	Office of the Vice President for Research and Innovation
40	Benjamin Jones	2,701,173	Office of the Vice President for Research and Innovation
41	Ardis Eschenberg	2,619,590	Chancellor, Windward Community College
42	Elisabeth Jacqueline Dubuit	2,600,000	Chancellor, UH Maui College
43	Mariana Gerschenson	2,585,512	John A. Burns School of Medicine
44	Janel Yamamoto	2,574,875	College of Tropical Agriculture and Human Resources
45	James Ferguson	2,562,452	School of Ocean and Earth Science and Technology
46	Kenneth Kaneshiro	2,361,760	School of Ocean and Earth Science and Technology
47	Crawford R Drury	2,269,016	School of Ocean and Earth Science and Technology
48	Brad Nakamura	2,247,283	College of Social Sciences
49	Sharon Ziegler	2,206,051	Vice Chancellor for Research
50	Eric Folk	2,197,192	College of Education

**Chart 8: Contract and Grant Awards by Campus**

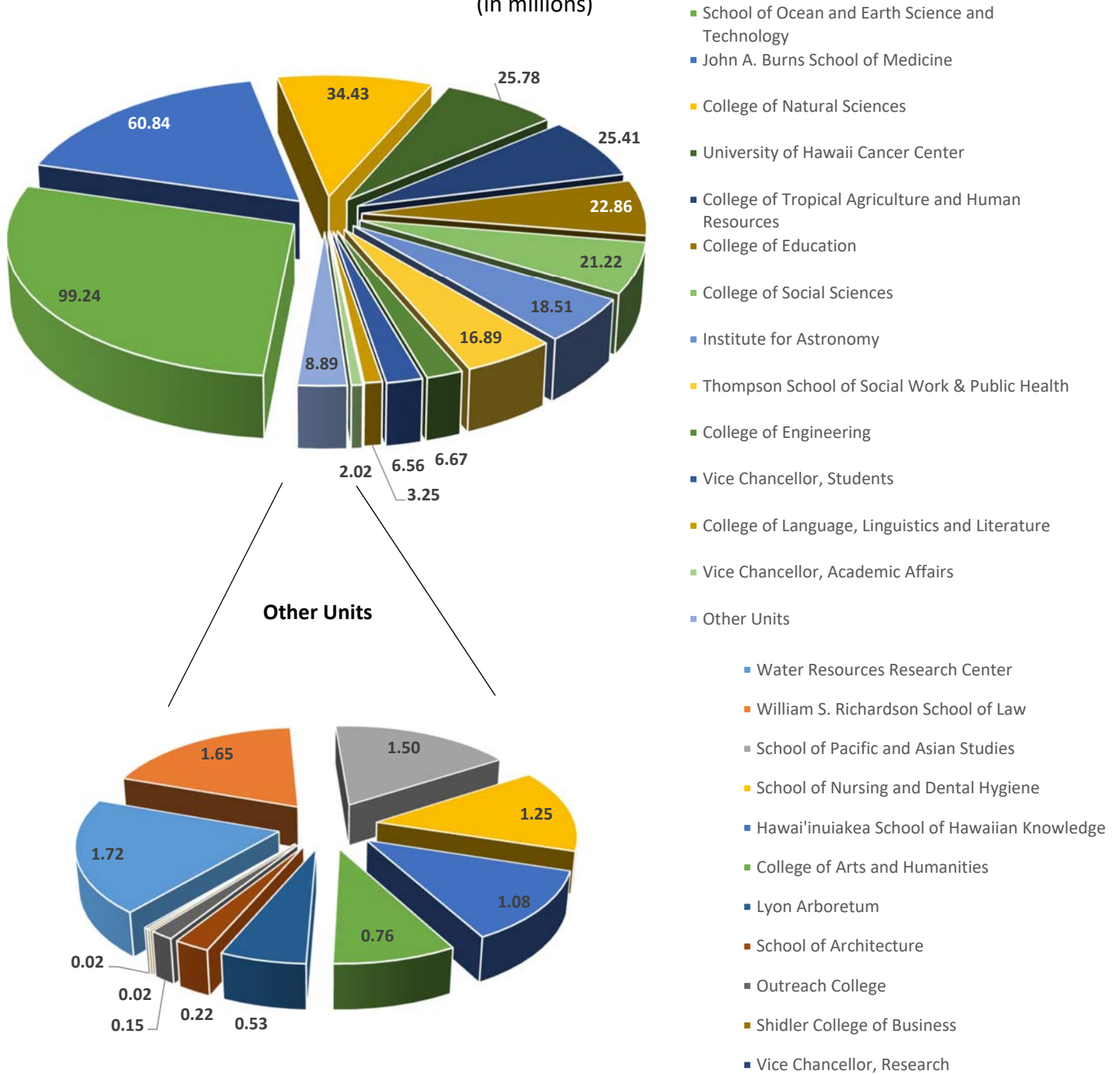
(in millions)



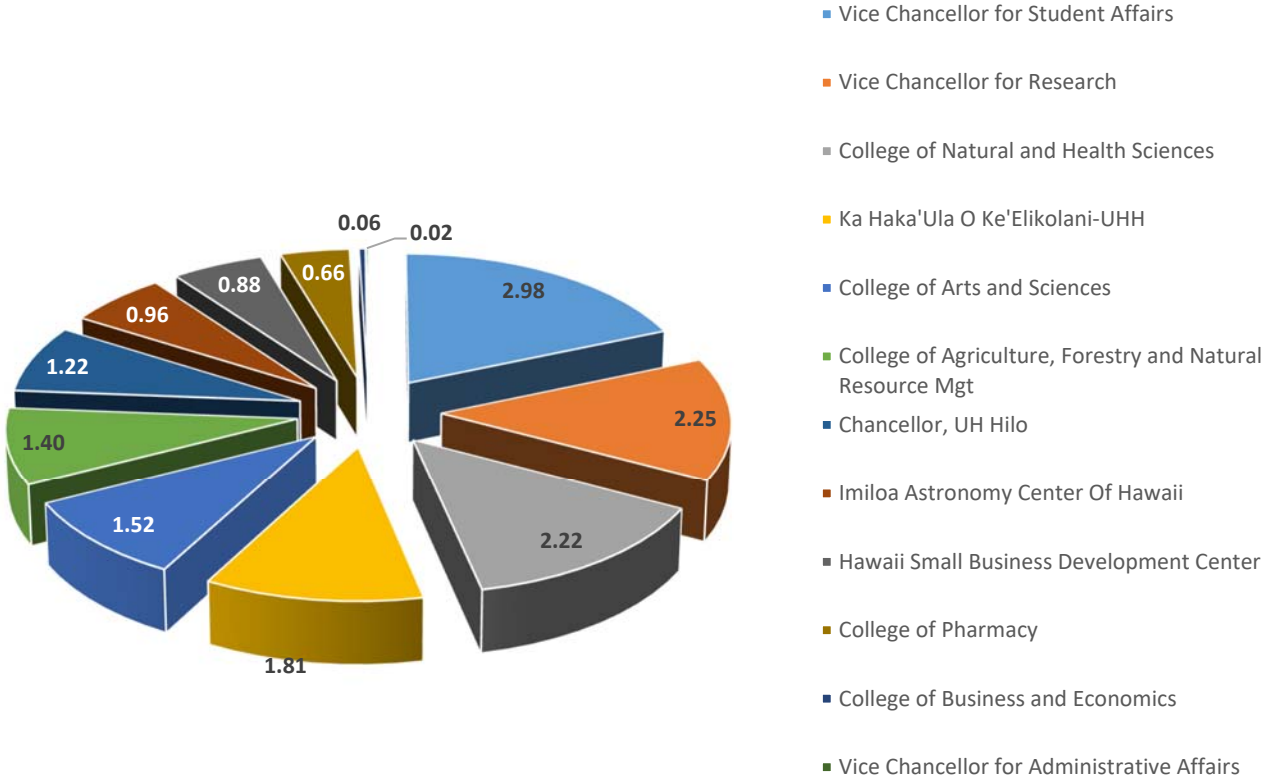
- University of Hawai'i at Manoa
- University of Hawai'i System
- University of Hawai'i Maui College
- University of Hawai'i at Hilo
- Windward Community College
- Kapi'olani Community College
- University of Hawai'i at West O'ahu
- Honolulu Community College
- Hawai'i Community College
- Leeward Community College
- Kaua'i Community College

### Chart 9: UH Manoa - Contract and Grant Awards by College/Department

(in millions)



**Chart 10: UH Hilo - Contract and Grant Awards by College/Department**  
(in millions)



**Figure 9: Contract and Grant Awards Summary by Campus**

<b>Campus</b>	<b>Award Amount</b>	<b>Award Count</b>	<b>% of Total</b>
Hawai'i Community College	1,938,010	11	0.6%
Honolulu Community College	1,822,177	12	0.6%
Kapi'olani Community College	3,487,491	24	1.2%
Kaua'i Community College	1,116,840	6	0.3%
Leeward Community College	1,695,026	10	0.5%
University of Hawai'i at Hilo	15,965,040	115	5.9%
University of Hawai'i at Manoa	352,556,694	1,603	81.7%
University of Hawai'i at West O'ahu	3,078,823	22	1.1%
University of Hawai'i Maui College	12,604,643	39	2.0%
University of Hawai'i System	85,580,068	100	5.1%
Windward Community College	5,684,114	21	1.1%
<b>Grand Total</b>	<b>485,528,926</b>	<b>1,963</b>	<b>100.0%</b>

**Figure 10a: UH Manoa - Contract and Grant Awards Summary  
by College/Department**

UH Manoa College/Department	Award Amount	Award Count	% of Total
<b>College of Arts and Humanities</b>	<b>759,976</b>	<b>16</b>	<b>1.00%</b>
History (UH Manoa)	49,020	3	0.19%
Music (UH Manoa)	46,013	4	0.25%
Theatre and Dance	17,703	3	0.19%
UHM Uehiro Academy for Philosophy and Ethics in Education	210,347	3	0.19%
College of Arts and Humanities	86,893	2	0.12%
American Studies	350,000	1	0.06%
<b>College of Education</b>	<b>22,861,804</b>	<b>71</b>	<b>4.43%</b>
Center on Disability Studies/University Affiliated Pgms	13,157,630	31	1.93%
College of Education	1,989,942	4	0.25%
Curriculum Research and Development Group	3,088,301	14	0.87%
Department of Curriculum Studies	736,926	3	0.19%
Department of Educational Foundations	15,000	1	0.06%
Department of Kinesiology and Rehabilitation Science	401,134	5	0.31%
Department of Special Education	354,502	3	0.19%
Institute for Teacher Education	3,118,369	10	0.62%
<b>College of Engineering</b>	<b>6,666,931</b>	<b>46</b>	<b>2.87%</b>
Civil and Environmental Engineering	1,839,969	15	0.94%
College of Engineering	669,888	2	0.12%
Electrical Engineering	1,856,657	7	0.44%
Mechanical Engineering	2,222,855	19	1.19%
Hawaii Center for Advanced Communications	77,562	3	0.19%
<b>College of Language, Linguistics and Literature</b>	<b>3,249,379</b>	<b>23</b>	<b>1.43%</b>
Center for Language and Technology	1,186,333	3	0.19%
Department of East Asian Languages and Literature	1,873,533	12	0.75%
Department of English	92,331	2	0.12%
Department of Linguistics	31,734	2	0.12%
Department of Second Language Studies	53,368	2	0.12%
Dept of Languages and Literatures of Europe and the Americas	12,080	2	0.12%
<b>College of Natural Sciences</b>	<b>34,430,078</b>	<b>243</b>	<b>15.16%</b>
Department of Biology (Biology Program)	1,558,807	8	0.50%
Department of Botany	21,622,285	149	9.30%
Department of Chemistry	2,233,017	10	0.62%
Department of Mathematics	936,435	9	0.56%
Department of Microbiology	1,324,489	3	0.19%
Department of Physics and Astronomy	4,150,168	31	1.93%
Information and Computer Sciences	773,793	13	0.81%
Pacific Cooperative Studies Unit	1,831,084	20	1.25%
<b>College of Social Sciences</b>	<b>21,223,378</b>	<b>101</b>	<b>6.30%</b>
College of Social Sciences	421,514	5	0.31%

Department of Anthropology	148,714	4	0.25%
Economics (UH Manoa)	95,145	3	0.19%
Geography (UH Manoa)	295,020	5	0.31%
Psychology (UH Manoa)	2,955,530	17	1.06%
School of Communications	616,297	5	0.31%
Social Science Research Institute	11,131,208	49	3.06%
Urban and Regional Planning	5,318,802	6	0.37%
Ethnic Studies	100,547	2	0.12%
Political Science (UH Manoa)	110,999	2	0.12%
Public Administration	15,700	2	0.12%
Womens Studies	13,902	1	0.06%
<b>College of Tropical Agriculture and Human Resources</b>	<b>25,405,328</b>	<b>169</b>	<b>10.54%</b>
Agricultural Diagnostic Service Center	201,906	2	0.12%
Center on the Family	663,165	7	0.44%
College of Tropical Agriculture and Human Resources	615,863	4	0.25%
Cooperative Extension	696,170	5	0.31%
Family and Consumer Sciences	(20,000)	0	0.00%
Hawaii County	1,609,368	19	1.19%
Human Nutrition, Food and Animal Sciences	1,835,271	11	0.69%
Maui County	481,126	7	0.44%
Molecular Biosciences and Bioengineering	1,489,939	10	0.62%
Natural Resources and Environmental Mgt (NREM)	2,076,637	27	1.68%
Oahu County	869,269	7	0.44%
Office of The Assoc Dean for Academic and Student Affairs	3,453,820	11	0.69%
Plant and Environmental Protection Sciences	8,353,180	41	2.56%
Tropical Plant and Soil Science	3,079,614	18	1.12%
<b>Hawai'inuiakea School of Hawaiian Knowledge</b>	<b>1,075,675</b>	<b>6</b>	<b>0.37%</b>
Hawai'inuiakea School of Hawaiian Knowledge	120,750	1	0.06%
Kamakakuokalani Center for Hawaiian Studies	255,800	4	0.25%
Kawaihuelani Center for Hawaiian Language	699,125	1	0.06%
<b>Institute for Astronomy</b>	<b>18,509,182</b>	<b>80</b>	<b>4.99%</b>
Institute for Astronomy	18,509,182	80	4.99%
<b>John A. Burns School of Medicine</b>	<b>60,836,598</b>	<b>203</b>	<b>12.66%</b>
Associate Dean for Academic Affairs	2,309,086	14	0.87%
Department of Anatomy, Biochemistry, and Physiology	5,128,232	25	1.56%
Department of Cell and Molecular Biology	730,963	5	0.31%
Department of Family Medicine and Community Health	3,309,252	16	1.00%
Department of Geriatric Medicine	2,176,551	10	0.62%
Department of Medicine	3,942,943	25	1.56%
Department of Native Hawaiian Health	795,581	5	0.31%
Department of Obstetrics, Gynecology and Women's Health	4,669,915	16	1.00%
Department of Pediatrics	4,203,930	14	0.87%
Department of Psychiatry	4,165,340	6	0.37%
Department of Surgery	698,222	10	0.62%
Department of Tropical Medicine, Medical Micro and Pharm	6,326,219	29	1.81%
John A. Burns School of Medicine	18,330,421	18	1.12%



Native Hawaiian Center of Excellence	700,000	1	0.06%
Department of Quantitative Health Sciences	3,223,823	8	0.50%
Office of Biostatistics & Quantitative Health Sciences	126,120	1	0.06%
<b>Lyon Arboretum</b>	<b>528,112</b>	<b>5</b>	<b>0.31%</b>
Lyon Arboretum	528,112	5	0.31%
<b>Outreach College</b>	<b>151,296</b>	<b>5</b>	<b>0.31%</b>
Community Programs	85,000	3	0.19%
Outreach College	66,296	2	0.12%
<b>School of Architecture</b>	<b>218,102</b>	<b>2</b>	<b>0.12%</b>
School of Architecture	218,102	2	0.12%
<b>School of Nursing and Dental Hygiene</b>	<b>1,247,224</b>	<b>15</b>	<b>0.94%</b>
Department of Nursing	805,695	11	0.69%
School of Nursing and Dental Hygiene	362,800	2	0.12%
Hawaii State Center for Nursing	78,729	2	0.12%
<b>School of Ocean and Earth Science and Technology</b>	<b>99,240,489</b>	<b>386</b>	<b>24.08%</b>
Center for Microbial Oceanography, Research and Edu (C-MORE)	1,718,806	11	0.69%
Department of Atmospheric Sciences	2,287,153	13	0.81%
Department of Ocean and Resources Engineering	2,724,235	12	0.75%
Department of Oceanography	11,216,430	45	2.81%
Hawaii Institute of Geophysics and Planetology (HIGP)	7,647,856	66	4.12%
Hawaii Institute of Marine Biology (HIMB)	6,753,548	44	2.74%
Hawaii Natural Energy Institute (HNEI)	11,970,477	17	1.06%
International Pacific Research Center (IPRC)	874,048	7	0.44%
Joint Institute for Marine and Atmospheric Research (JIMAR)	14,253,236	44	2.74%
Pacific Biosciences Research Center	7,964,087	46	2.87%
School of Ocean and Earth Science and Technology	14,257,404	8	0.50%
Sea Grant College Program	7,544,255	45	2.81%
University Marine Center/Ship Operations	2,562,452	3	0.19%
Earth Sciences	7,466,502	25	1.56%
<b>School of Pacific and Asian Studies</b>	<b>1,497,981</b>	<b>17</b>	<b>1.06%</b>
Center for Japanese Studies	605,183	5	0.31%
Center for Korean Studies	115,756	4	0.25%
Center for Southeast Asian Studies	118,703	1	0.06%
School of Pacific and Asian Studies	568,339	6	0.37%
Center for Chinese Studies	90,000	1	0.06%
<b>University of Hawaii Cancer Center</b>	<b>25,778,578</b>	<b>80</b>	<b>4.99%</b>
Cancer Biology	2,715,326	21	1.31%
Cancer Epidemiology	10,382,168	41	2.56%
Cancer Prevention in the Pacific	646,695	4	0.25%
Translational and Clinical Research	1,400,538	3	0.19%
University of Hawaii Cancer Center	10,633,851	11	0.69%
<b>Vice Chancellor, Academic Affairs</b>	<b>2,019,732</b>	<b>21</b>	<b>1.31%</b>
Graduate Education	1,063,917	2	0.12%
International & Exch Prog	52,806	1	0.06%
Library (UH Manoa)	268,672	8	0.50%

Undergraduate Education	512,279	4	0.25%
Vice Chancellor, Academic Affairs	96,558	4	0.25%
UH Press	25,500	2	0.12%
<b>Vice Chancellor, Research</b>	<b>17,279</b>	<b>1</b>	<b>0.06%</b>
Vice Chancellor, Research	17,279	1	0.06%
<b>Vice Chancellor, Students</b>	<b>6,557,941</b>	<b>17</b>	<b>1.06%</b>
Health & Wellness	(5,000)	0	0.00%
Student Equity Excel & Diversity	4,858,305	13	0.81%
Women's Center	1,704,636	4	0.25%
<b>Water Resources Research Center</b>	<b>1,715,198</b>	<b>12</b>	<b>0.75%</b>
Water Resources Research Center	1,715,198	12	0.75%
<b>William S. Richardson School of Law</b>	<b>1,654,261</b>	<b>26</b>	<b>1.62%</b>
William S. Richardson School of Law	1,654,261	26	1.62%
<b>Shidler College of Business</b>	<b>24,500</b>	<b>1</b>	<b>0.06%</b>
Pacific Asian Management Institute	24,500	1	0.06%
<b>Thompson School of Social Work &amp; Public Health</b>	<b>16,887,672</b>	<b>57</b>	<b>3.56%</b>
Center on Aging	6,297,917	16	1.00%
Dept of Public Health Sciences and Epidemiology	16,237	1	0.06%
Office of Public Health Studies	4,176,354	27	1.68%
Thompson School of Social Work & Public Health	6,397,164	13	0.81%
<b>Grand Total</b>	<b>352,556,694</b>	<b>1603</b>	<b>100.00%</b>

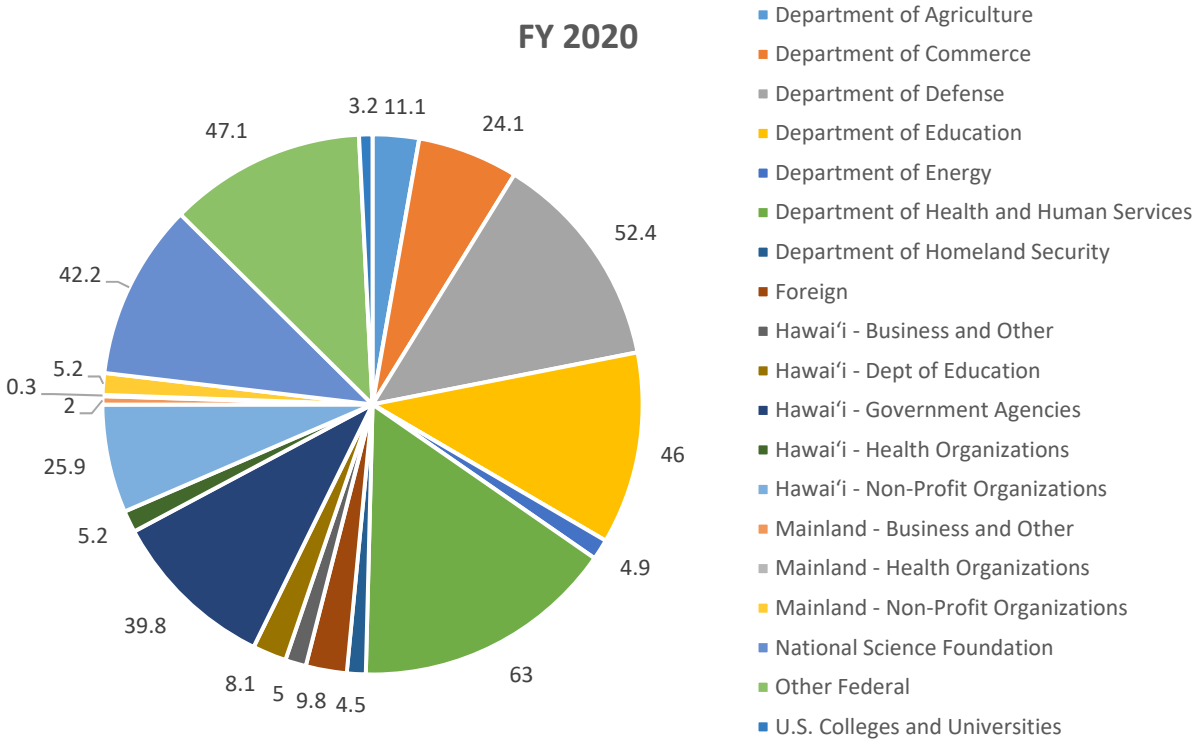
**Figure 10b: UH Hilo - Contract and Grant Awards Summary  
by College/Department**

<b>UH Hilo College/Department</b>	<b>Award Amount</b>	<b>Award Count</b>	<b>% of Total</b>
<b>Chancellor, UH Hilo</b>	<b>1,216,522</b>	<b>2</b>	<b>1.74%</b>
Chancellor, UH Hilo	1,216,522	2	1.74%
<b>College of Agriculture, Forestry and Natural Resource Mgt</b>	<b>1,402,821</b>	<b>12</b>	<b>10.43%</b>
College of Agriculture, Forestry and Natural Resource Mgt	343,595	6	5.22%
Pacific Aquaculture and Coastal Resources Ctr	1,059,226	6	5.22%
<b>College of Arts and Sciences</b>	<b>1,520,968</b>	<b>10</b>	<b>8.70%</b>
College of Arts and Sciences	1,081,515	4	3.48%
Geography (UH Hilo)	439,453	6	5.22%
<b>College of Pharmacy</b>	<b>657,634</b>	<b>14</b>	<b>12.17%</b>
College of Pharmacy	204,759	8	6.96%
Pharmaceutical Sciences	176,931	2	1.74%
Pharmacy Practice	230,880	3	2.61%
Research	45,064	1	0.87%
<b>Hawaii Small Business Development Center</b>	<b>875,556</b>	<b>3</b>	<b>2.61%</b>
Hawaii Small Business Development Center	875,556	3	2.61%
<b>Imiloa Astronomy Center Of Hawaii</b>	<b>963,641</b>	<b>6</b>	<b>5.22%</b>
Imiloa Astronomy Center Of Hawaii	963,641	6	5.22%
<b>Ka Haka'Ula O Ke'Elilikolani-UHH</b>	<b>1,805,097</b>	<b>6</b>	<b>5.22%</b>
Hale Kuamo'o Center	950,000	1	0.87%
Ka Haka'Ula O Ke'Elilikolani-UHH	855,097	5	4.35%
<b>Vice Chancellor for Administrative Affairs</b>	<b>22,500</b>	<b>2</b>	<b>1.74%</b>
Vice Chancellor for Administrative Affairs	22,500	2	1.74%
<b>Vice Chancellor for Research</b>	<b>2,246,051</b>	<b>23</b>	<b>20.00%</b>
Vice Chancellor for Research	2,246,051	23	20.00%
<b>Vice Chancellor for Student Affairs</b>	<b>2,975,114</b>	<b>12</b>	<b>10.43%</b>
Vice Chancellor for Student Affairs	1,145,123	6	5.22%
Student Affairs - Kipuka	630,588	1	0.87%
Upward Bound	1,199,403	5	4.35%
<b>College of Business and Economics</b>	<b>61,903</b>	<b>1</b>	<b>0.87%</b>
College of Business and Economics	61,903	1	0.87%
<b>College of Natural and Health Sciences</b>	<b>2,217,233</b>	<b>24</b>	<b>20.87%</b>
Biology (UH Hilo)	74,523	2	1.74%
Marine Science	445,171	5	4.35%
Mathematics (UH Hilo)	16,800	1	0.87%
Physics and Astronomy	315,968	2	1.74%
Tropical Conservation Biology and Environmental Science	581,521	4	3.48%
College of Natural and Health Sciences	577,319	8	6.96%
Kinesiology and Exercise Sciences	100,262	1	0.87%
Computer Science (UH Hilo)	105,669	1	0.87%
<b>Grand Total</b>	<b>15,965,040</b>	<b>115</b>	<b>100.00%</b>

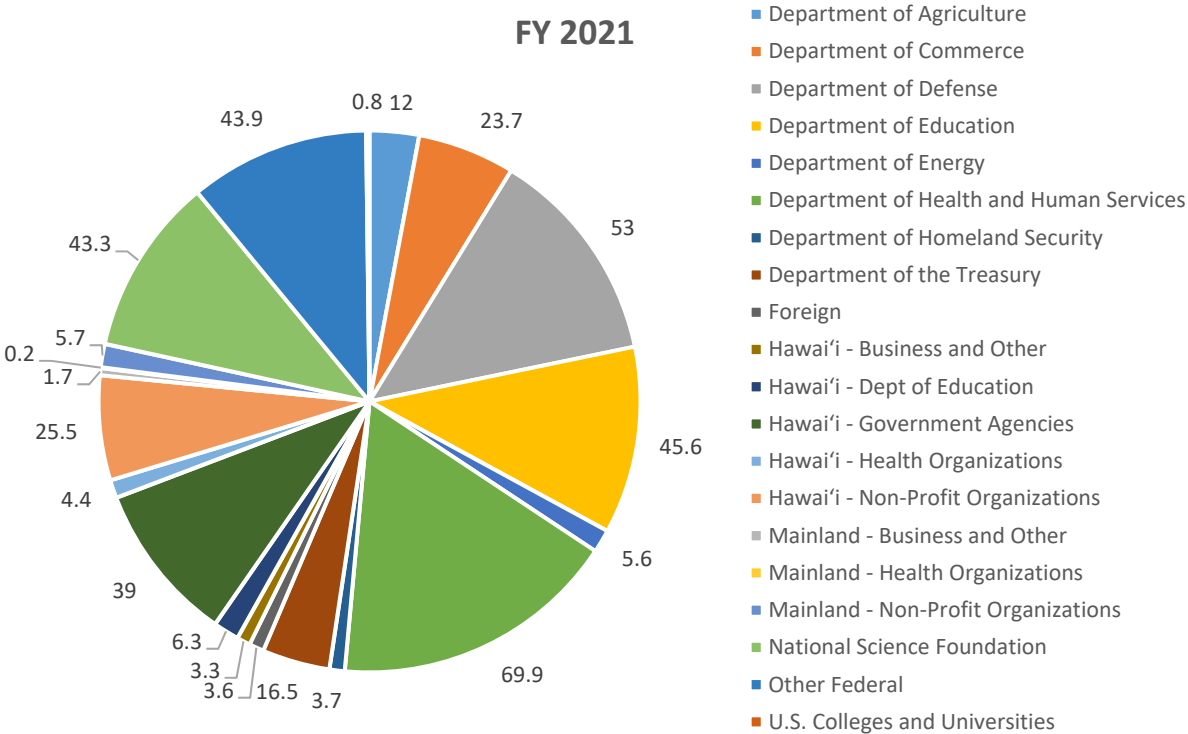
# Chart 11: Total Contract and Grant Expenditures by Source of Funds Prior Year Comparison

(in millions)

**FY 2020**



**FY 2021**



**Figure 11: Total Contract and Grant Expenditures by Source of Funds  
Prior Year Comparison**

Source of Funds	FY 2020	% of Total	FY 2021	% of Total
Department of Agriculture	\$ 11,052,370.54	3%	\$ 12,007,380.26	3%
Department of Commerce	\$ 24,064,658.42	6%	\$ 23,717,767.77	6%
Department of Defense	\$ 52,386,718.28	13%	\$ 52,986,579.54	13%
Department of Education	\$ 45,989,728.25	12%	\$ 45,623,786.65	11%
Department of Energy	\$ 4,878,196.45	1%	\$ 5,643,656.49	1%
Department of Health and Human Services	\$ 62,962,342.89	16%	\$ 69,922,552.81	17%
Department of Homeland Security	\$ 4,510,017.41	1%	\$ 3,668,742.59	1%
Department of the Treasury	\$ -	0%	\$ 16,473,618.90	4%
National Science Foundation	\$ 42,195,135.98	11%	\$ 43,266,160.11	11%
Other Federal	\$ 47,137,696.26	12%	\$ 43,863,303.07	11%
Foreign	\$ 9,766,378.16	2%	\$ 3,619,689.20	1%
Hawai'i - Business and Other	\$ 4,969,128.41	1%	\$ 3,270,485.89	1%
Hawai'i - Dept of Education	\$ 8,147,629.90	2%	\$ 6,273,653.82	2%
Hawai'i - Government Agencies	\$ 39,774,195.80	10%	\$ 39,008,797.95	10%
Hawai'i - Health Organizations	\$ 5,154,163.65	1%	\$ 4,353,712.07	1%
Hawai'i - Non-Profit Organizations	\$ 25,906,474.87	6%	\$ 25,504,277.39	6%
Mainland - Business and Other	\$ 2,009,083.18	1%	\$ 1,728,929.43	0%
Mainland - Health Organizations	\$ 260,431.53	0%	\$ 208,747.06	0%
Mainland - Non-Profit Organizations	\$ 5,198,581.17	1%	\$ 5,664,622.32	1%
U.S. Colleges and Universities	\$ 3,214,724.42	1%	\$ 826,999.35	0%
<b>GRAND TOTAL</b>	<b>\$ 399,577,655.57</b>	<b>100%</b>	<b>\$ 407,633,462.67</b>	<b>100%</b>

**Summary:**

- The largest source is the Department of Health and Human Services (17% of the total), followed by Department of Defense (13% of the total).
- UH Foundation award expenditures totaling \$15.6 million in FY 20 and \$16.8 million in FY 21 are included in Hawai'i - Non-Profit Organizations respectively.

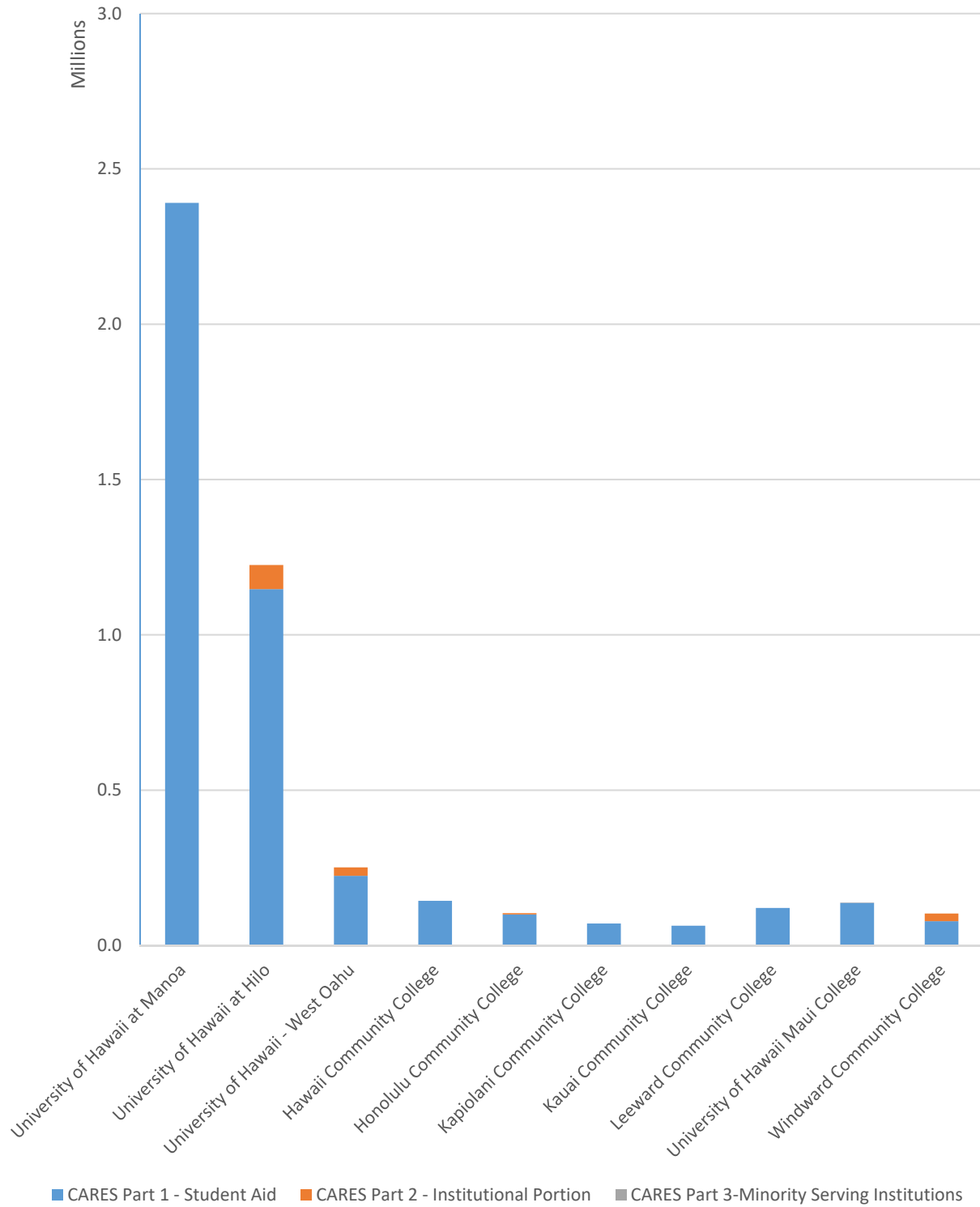
**Figure 11a COVID-19 Related Award Expenditures by Source of Funds**

Source of Funds	FY 2020	% of Total	FY 2021	% of Total
Department of Commerce	\$ 1,706,926.96	87%	\$ 2,822,286.49	16%
Department of Health and Human Services	\$ 214,779.82	11%	\$ 9,676,055.77	54%
Department of the Treasury	\$ -	0%	\$ 4,024,219.70	22%
National Science Foundation	\$ -	0%	\$ 163,680.41	1%
Other Federal	\$ -	0%	\$ 55,000.00	0%
Foreign	\$ -	0%	\$ 8,631.86	0%
Hawai'i - Business and Other	\$ -	0%	\$ 4,252.97	0%
Hawai'i - Government Agencies	\$ 36,426.48	2%	\$ 934,605.16	5%
Hawai'i - Non-Profit Organizations	\$ -	0%	\$ 323,716.97	2%
Mainland - Non-Profit Organizations	\$ -	0%	\$ 4,567.97	0%
<b>GRAND TOTAL</b>	<b>\$ 1,958,133.26</b>	<b>100%</b>	<b>\$ 18,017,017.30</b>	<b>100%</b>

**Summary:**

- These are expenditures on COVID-19 related awards that are included in the annual expenditure grand totals reported in Figure 10.

**Chart 12: Total Federal CARES Act Expenditures by Campus**  
(in millions)

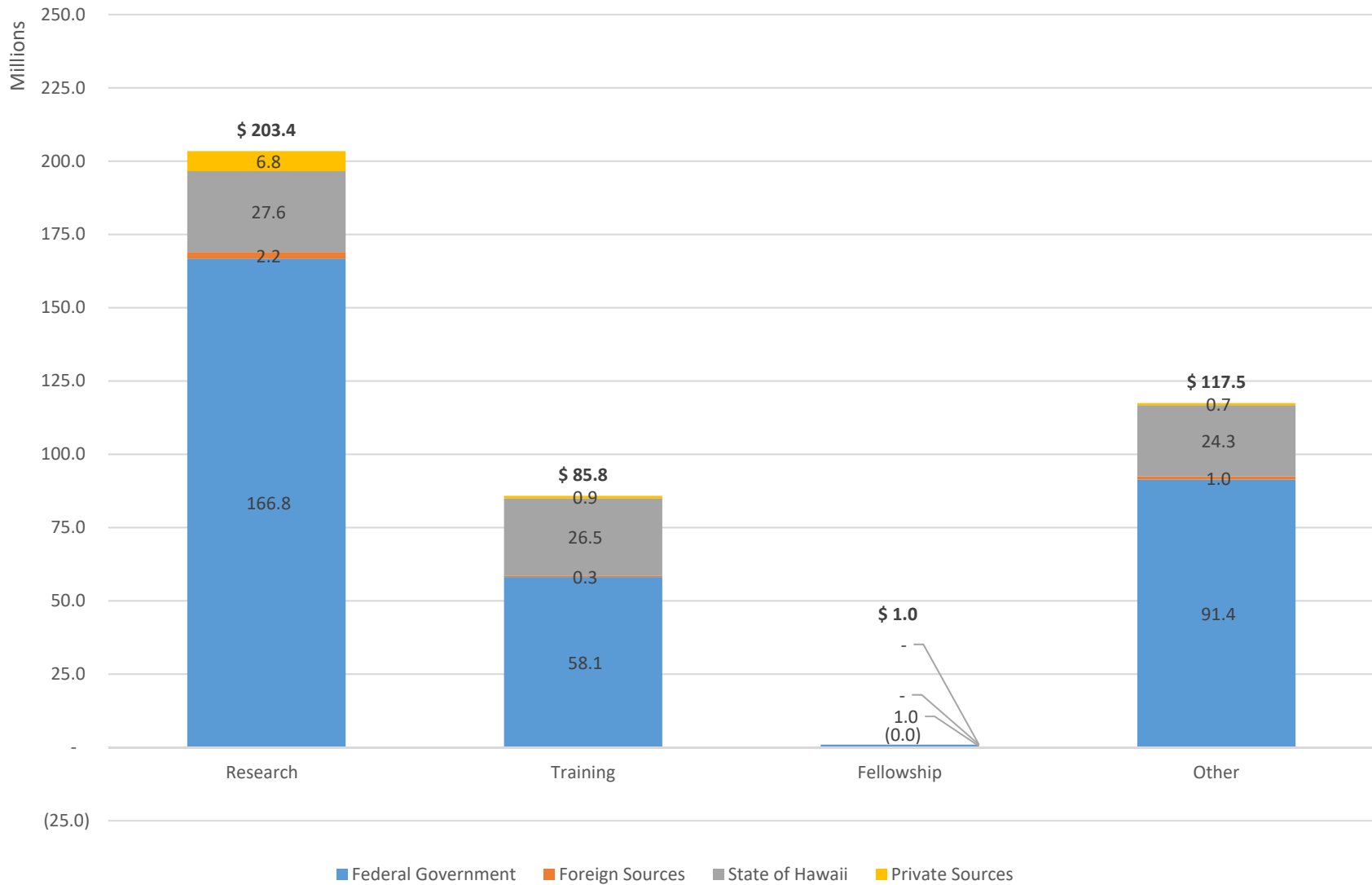


**Figure 12: Summary of Federal CARES Act Expenditures**

<b>Campus</b>	<b>CARES Part 1 Student Aid</b>	<b>CARES Part 2 Institutional Portion</b>	<b>CARES Part 3 Minority Serving Institutions</b>	<b>Total Expenditures</b>
University of Hawaii at Manoa	3,114,303	5,376,642	4,263,452	12,754,397
University of Hawaii at Hilo	1,847,676	1,797,836	1,333,606	4,979,118
University of Hawaii at West Oahu	1,171,000	490,887	636,635	2,298,522
University of Hawaii Maui College	784,554	582,795	398,705	1,766,054
Hawaii Community College	775,113	480,508	493,770	1,749,391
Honolulu Community College	583,794	292,498	608,957	1,485,249
Kapiolani Community College	1,432,171	966,191	1,765,002	4,163,365
Kauai Community College	275,942	254,994	373,608	904,544
Leeward Community College	1,203,345	1,079,891	1,273,384	3,556,620
Windward Community College	271,149	181,834	113,546	566,529
<b>Grand Total</b>	<b>11,459,047</b>	<b>11,504,076</b>	<b>11,260,665</b>	<b>34,223,788</b>



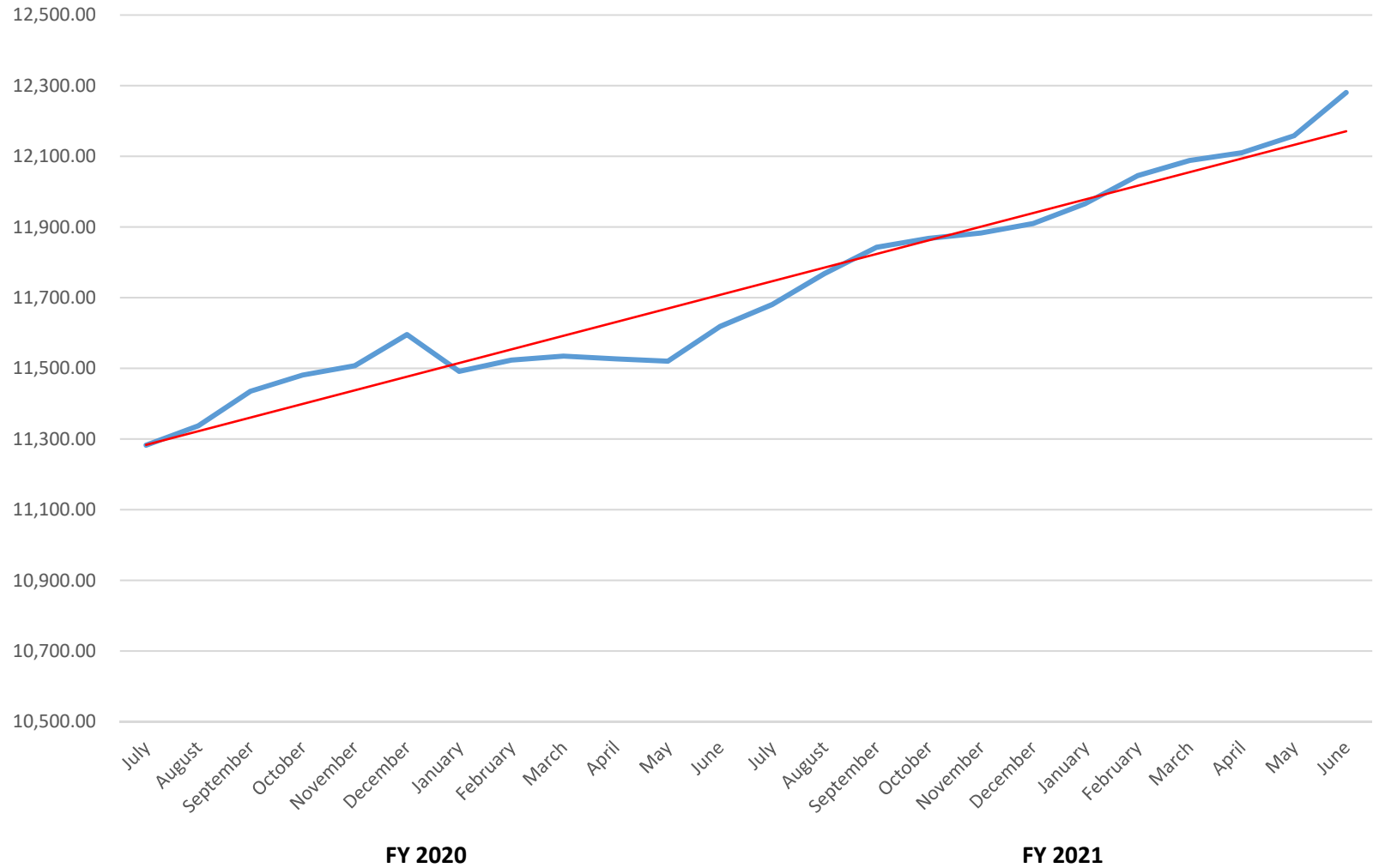
**Chart 13: Total Contract and Grant Expenditures by Program Type and Source of Funds**  
(in millions)



**Figure 13: Total Contract and Grant Expenditures by Program Type  
and Source of Funds**

Source of Funding		Research	Training	Fellowship	Other	Total	% of total
Federal Government	Department of Agriculture	8,335,241	2,881,648		790,491	12,007,380	3%
	Department of Commerce	17,211,611	224,879	98,906	6,182,372	23,717,768	6%
	Department of Defense - Air Force	8,250,800				8,250,800	2%
	Department of Defense - Army	1,901,105	1,969,688		6,164,577	10,035,370	2%
	Department of Defense - Navy	18,327,540	36,154		3,223,925	21,587,618	5%
	Department of Education	760,270	29,509,167		15,354,350	45,623,787	11%
	Department of Energy	5,608,143	13,948		21,566	5,643,656	1%
	Department of Health and Human Services	48,606,799	8,958,222		12,357,532	69,922,553	17%
	Department of Homeland Security	136,995	3,531,747			3,668,743	1%
	Department of Interior	7,877,683	94,741		1,918,730	9,891,155	2%
	Department of State	1,312,599	350,986		187,079	1,850,664	0%
	Department of the Treasury	58,597	3,351,257		13,063,765	16,473,619	4%
	Department of Transportation	1,937,121	6,904		454,589	2,398,614	1%
	Department of Veterans Affairs	17,078	84,946		44,730	146,754	0%
	Environmental Protection Agency	222,841	17,300		211,244	451,385	0%
	National Aeronautics and Space Administration	11,802,721	1,477,260		10,555,471	23,835,452	6%
	National Science Foundation	21,760,481	5,072,025	852,885	15,580,770	43,266,160	11%
	Other Department of Defense	12,560,800	237,240		314,751	13,112,791	3%
Other Federal	66,420	287,691		4,935,167	5,289,279	1%	
<b>Federal Government Total</b>		<b>166,754,846</b>	<b>58,105,803</b>	<b>951,791</b>	<b>91,361,108</b>	<b>317,173,548</b>	<b>78%</b>
Foreign Sources	Foreign Sources	2,239,446	346,229		1,034,014	3,619,689	1%
<b>Foreign Sources Total</b>		<b>2,239,446</b>	<b>346,229</b>	<b>-</b>	<b>1,034,014</b>	<b>3,619,689</b>	<b>1%</b>
State of Hawaii	Hawai'i - Business and Other	749,637	2,216,691	(411)	304,569	3,270,486	1%
	Hawai'i - Department of Education		6,438,654		(165,000)	6,273,654	2%
	Hawai'i - Government Agencies	20,708,235	6,321,241		11,979,323	39,008,798	10%
	Hawai'i - Health Organizations	497,659	2,594,226		1,261,827	4,353,712	1%
	Hawai'i - Non- Profit Organizations	5,628,385	8,940,082		10,935,810	25,504,277	6%
<b>State of Hawaii Total</b>		<b>27,583,915</b>	<b>26,510,894</b>	<b>(411)</b>	<b>24,316,528</b>	<b>78,410,927</b>	<b>19%</b>
Private Sources	Mainland - Business and Other	1,317,635	108,881		302,414	1,728,929	0%
	Mainland - Health Organizations	175,678	9,895		23,174	208,747	0%
	Mainland - Non-Profit Organizations	4,603,624	643,171		417,828	5,664,622	1%
	U.S. Colleges and Universities	734,605	91,629		765	826,999	0%
<b>Private Sources Total</b>		<b>6,831,541</b>	<b>853,576</b>	<b>-</b>	<b>744,181</b>	<b>8,429,298</b>	<b>2%</b>
<b>Grand Total</b>		<b>203,409,749</b>	<b>85,816,502</b>	<b>951,380</b>	<b>117,455,832</b>	<b>407,633,463</b>	<b>100%</b>

**Chart 14: Total FTE Paid from Contract and Grant Funds  
Prior Year Comparison**

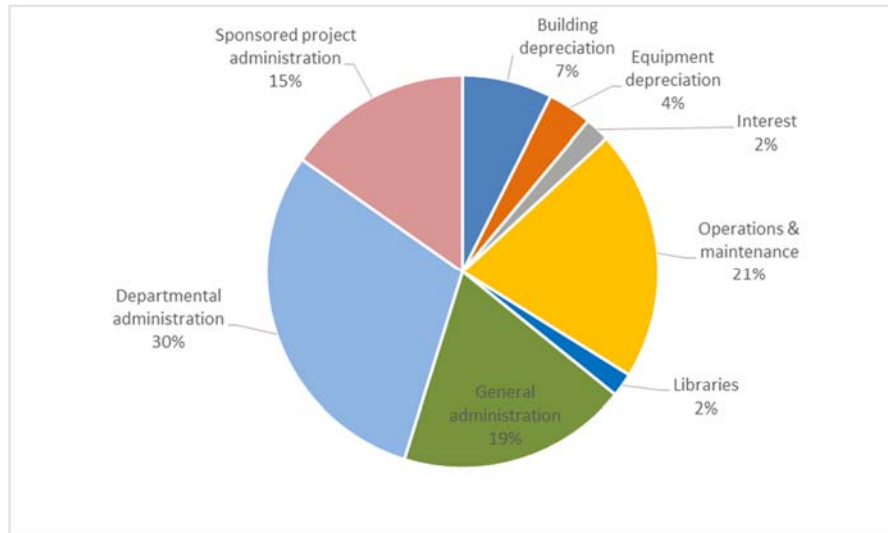


**Figure 14: Total FTE Paid from Contract and Grant Funds  
Prior Year Comparison**

<b>Month</b>	<b>Year to Date FY2020</b>	<b>Year to Date FY 2021</b>
July	11,282.66	11,680.65
August	11,337.40	11,768.01
September	11,435.31	11,842.75
<b>Monthly Average Q1</b>	<b>11,351.79</b>	<b>11,763.80</b>
October	11,481.19	11,867.78
November	11,507.42	11,883.26
December	11,595.62	11,910.06
<b>Monthly Average Q2</b>	<b>11,528.08</b>	<b>11,887.03</b>
January	11,491.55	11,966.16
February	11,523.52	12,044.83
March	11,534.63	12,088.00
<b>Monthly Average Q3</b>	<b>11,516.57</b>	<b>12,033.00</b>
April	11,526.88	12,110.12
May	11,520.29	12,158.29
June	11,618.74	12,280.61
<b>Monthly Average Q4</b>	<b>11,555.30</b>	<b>12,183.01</b>
<b>Monthly Average FY</b>	<b>11,487.93</b>	<b>11,966.71</b>
<b>Change (Number)</b>		<b>478.78</b>
<b>Change (Percent)</b>		<b>4.17%</b>

**Note: FTE includes University of Hawai'i and Research Corporation of the University of Hawai'i**

**Chart 15: Breakdown of Facilities and Administrative Costs by Major Category FY 2016 Base Year**



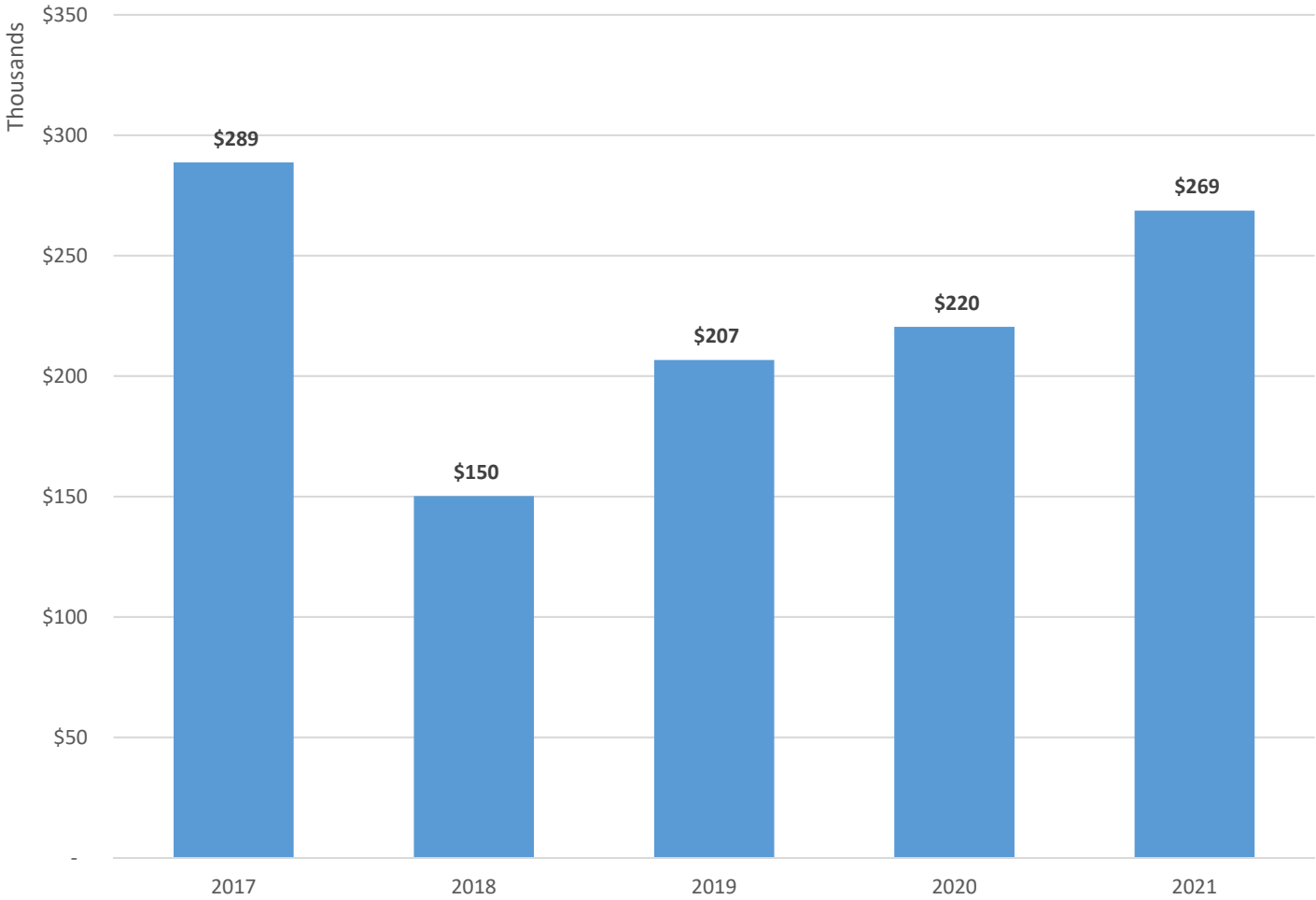
In a typical year, roughly a third of the University of Hawai‘i’s overhead for sponsored projects maintains its facilities for supporting sponsored activity and roughly two-thirds supports central and departmental sponsored activity administration. About 30% of the total F&A represents administration of sponsored activity with schools, colleges, and research units. These funds are used by deans and directors to support fiscal administrators and other staff who assist faculty with sponsored activity – including grant proposal preparation and budget management.

The pie chart represents the proportion of actual overhead costs during the UH’s last F&A base year (FY 2016). Thirty-four percent of the F&A funds represented costs of providing centralized research administration and compliance services, such as research accounting and analysis, human resources, payroll, purchasing, Office of Research Services, Human Studies, Institutional Animal Care, and Research Corporation of the University of Hawai‘i. Of the 36% spent on facilities, about 58% was spent on operations and maintenance of existing sponsored activity space, including paying for such costs as utilities, hazardous materials disposal, and janitorial services. The remainder paid for repairs and renovations of buildings, ‘debt service’ (interest), major equipment replacement, and support for the libraries.

The University of Hawai‘i received approximately \$53.0 million in F&A cost reimbursements in FY 2021. Each campus received 75% of the recovered F&A generated by its faculty through the Research and Training Revolving Fund (RTRF) allocation. The PI’s college or research unit at the University of Hawai‘i at Mānoa generally receives 50% of the recovered F&A costs. These funds are used at the discretion of the chancellors, deans and directors to support research and training in their units.

F&A cost reimbursements are related to UH expenditures. When the UH develops its biennial budget, it starts with an estimate of the total revenues available for that biennium, including state funding, tuition, F&A cost reimbursement, and interest and investment income. All these funding sources are combined to pay for the UH’s operating expenses, including F&A costs related to research and other sponsored agreements.

**Chart 16: Total Royalties Received from University Patents**  
**Five Year Comparison**  
(in thousands)



**Figure 15: Total Royalties Received from University Patents  
Five Year Comparison**

<b>Fiscal Year</b>	<b>Royalties</b>
2017	\$ 288,752
2018	\$ 150,172
2019	\$ 206,687
2020	\$ 220,427
2021	\$ 268,694
<b>Total Royalties</b>	<b>\$1,134,732</b>

## Appendix 1: Extramural Award Sponsors

### FEDERAL

#### DA-DEPT OF AGRICULTURE

AGRICULTURE, DEPT - ANIMAL AND PLANT  
HEALTH INSPECTION SERVICE

AGRICULTURE, DEPT, FOREST SVC-FED

AGRICULTURE, DEPT-AGRI RSCH SVC-FED

AGRICULTURE, DEPT-NATL INS FOOD AND  
AGRICULTURE

AGRICULTURE, DEPT-NATRL RES SVC-FED

#### DHHS-DEPT OF HEALTH AND HUMAN SERVICES

HEALTH & HUMAN SVC, DEPT-ADMIN FOR COMM  
LIVING

HEALTH & HUMAN SVC, DEPT-ADMIN ON AGING

HEALTH & HUMAN SVC, DEPT-CDC-NATL INST FOR  
OCCUPATIONAL SAFETY & HEALTH

HEALTH & HUMAN SVC, DEPT-CTR DIS CTRL-FED

HEALTH & HUMAN SVC, DEPT-HLTH CARE RES &  
QUALITY

HEALTH & HUMAN SVC, DEPT-HRSA-FED

HEALTH & HUMAN SVC, DEPT-HRSA-FED

MATERNAL & CHILD HLTH

HEALTH & HUMAN SVC, DEPT-HRSA-FED OFC  
RURAL HEALTH POL

HEALTH & HUMAN SVC, DEPT-NIH-FED

HEALTH & HUMAN SVC, DEPT-NIH-FED NATL  
CANCER INST

HEALTH & HUMAN SVC, DEPT-NIH-FED NATL  
HEART LUNG & BLD INST

HEALTH & HUMAN SVC, DEPT-NIH-FED NATL INST  
MIN HLTH & DISP

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST  
ALLERGY/INF DIS

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST  
DIAB DIG KIDN DIS

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST  
DRUG ABUSE

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST  
ENV HLTH SCI

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST  
GEN MED SCI

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST  
MENTAL HLTH

HEALTH & HUMAN SVC, DEPT-NIH-FOGARTY  
INTERNATIONAL CTR.

HEALTH & HUMAN SVC, DEPT-SUB ABUSE/MNTL  
HLTH SVC-FED

HEALTH & HUMAN SVC,DEPT-NIH-FED NTL INST  
CHLD HLTH&HUM DEV

HEALTH&HUMAN SVC,DEPT-NIH-FED NTL INST  
BIOMED IMG& BIOENGRG

#### DOC-DEPT OF COMMERCE

COMMERCE, DEPT-ECONOMIC DEV ADM-FED

COMMERCE, DEPT-FED

COMMERCE, DEPT-MINORITY BUSN DEV AGENCY-  
FED

COMMERCE, DEPT-NATL NOAA-FED

COMMERCE, DEPT-NATL NOAA-FED NATL OCEAN  
SVC

COMMERCE, DEPT-NATL NOAA-FED NATL  
WEATHER SVC

COMMERCE, DEPT-NATL NOAA-FED SEA GRANT  
COLL PGM

COMMERCE, DEPT-NOAA/NATL MARINE  
FISHERIES SVC

#### DOD-DEPARTMENT OF DEFENSE

DEFENSE, DEPT- US ARMY CORPS OF ENGINEERS

DEFENSE, DEPT. - NAVAL AIR WARFARE CENTER  
AIRCRAFT DIVISION

DEFENSE, DEPT-AIR FORCE OFC OF SCI RSCH

DEFENSE, DEPT-AIR FORCE RESEARCH  
LABORATORY

DEFENSE, DEPT-ARMY ENG RSCH & DEV CTR

DEFENSE, DEPT-ARMY MED RSCH ACQSTN  
(USAMRAA)

DEFENSE, DEPT-ARMY RESEARCH LABORATORY

DEFENSE, DEPT-DEFENSE LOGISTICS AGENCY

DEFENSE, DEPT-ENVIRONMENTAL SECURITY  
TECHNOLOGY CERTIFICATION PROGRAM

DEFENSE, DEPT-NATIONAL SECURITY AGY

DEFENSE, DEPT-NAVY

DEFENSE, DEPT-NAVY NAVAL FAC ENGRG  
COMMAND

DEFENSE, DEPT-NAVY NAVAL SEA SYS CMD

DEFENSE, DEPT-NAVY NAVAL SUPPLY SYSTEMS  
COMMAND

DEFENSE, DEPT-NAVY OFC OF NAVAL RSCH

DEFENSE, DEPT-NAVY US NAVAL OBSERVATORY

DEFENSE, DEPT-NAVY-NAVAL UNDERSEA  
WARFARE CENTER, DIVISION KEYPORT



DEFENSE, DEPT-THREAT REDUCTION AGCY  
DEFENSE, DEPT-UNITED STATES INDO-PACIFIC  
COMMAND  
DEFENSE, DEPT-WASHINGTON HEADQUARTERS  
SVCS  
U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT  
COMMAND

**DOE-DEPT OF ENERGY**

ENERGY, DEPT  
ENERGY, DEPT. OF - BASIC ENERGY SCIENCES  
ENERGY, DEPT. OF-LAWRENCE BERKELEY NATL  
LAB

**DOI-DEPT OF INTERIOR**

INTERIOR, DEPT-BUREAU LAND MGMT-FED  
INTERIOR, DEPT-FISH & WILDLIFE SVC  
INTERIOR, DEPT-NATIONAL PARK SVC  
INTERIOR, DEPT-UNITED STATES GEO SURVEY

**DOT-DEPT OF TRANSPORTATION**

TRANSPORTATION, DEPT-FED-FED AVIATION  
ADMIN

**ED-DEPT OF EDUCATION**

EDUCATION, DEPT-FED  
EDUCATION, DEPT-FED FULBRIGHT HAYS PGM  
EDUCATION, DEPT-FED INTL & FOREIGN LANG ED  
EDUCATION, DEPT-FED OFC OF ELEM & SEC EDU  
EDUCATION, DEPT-FED OFC OF POSTSEC ED  
EDUCATION, DEPT-FED OFC OF SPECIAL ED &  
REHAB SVCS  
EDUCATION, DEPT-FED REHAB SVCS ADMIN  
EDUCATION, DEPT-FED STUDENT SUPP SVCS PGM  
EDUCATION, DEPT-FED TALENT SEARCH PGM

**NATIONAL AERONAUTICS AND SPACE  
ADMINISTRATION**

NATIONAL AERONAUT & SPACE ADM  
NATL AERONAUTICS & SPACE ADM-GODDARD  
SPACE FLIGHT CTR

**NATIONAL SCIENCE FOUNDATION**

NATIONAL SCIENCE FOUNDATION

**OTHER FEDERAL AGENCIES**

DEFENSE, DEPT-NAVY-NATIONAL MARITIME  
INTELLIGENCE-INTEGRATION OFF  
HOMELAND SECURITY, DEPT-FEMA  
NATIONAL ENDOWMENT FOR THE HUMANITIES  
NATL ENDOWMENT FOR THE ARTS  
PEACE CORPS  
SMALL BUSINESS ADMINISTRATION

SOCIAL SECURITY ADMINISTRATION  
VETERANS AFFAIRS, DEPT-FED

**NON-FEDERAL**

**FOREIGN**

ACADEMY KOREAN STUDIES  
AMERICAN SAMOA COMMUNITY CANCER  
COALITION  
AMERICAN SAMOA POWER AUTHORITY  
AMERICAN SAMOA, GOVERNMENT  
CHUO UNIVERSITY  
COMMONWEALTH OF NO MARIANA ISLANDS  
COMPREHENSIVE NUCLEAR-TEST-BAN TREATY  
ORGANIZATION (CTBTO)  
DEPARTMENT OF DEFENCE (AUSTRALIA)-DEFENCE  
SCIENCE AND TECHNOLOGY  
ENGSOFT CO. LTD  
FEDERATED STATES MICRONESIA  
FREEDIVE PICTURES LIMITED  
GUAM, GOVERNMENT - PUBLIC HEALTH AND  
SOCIAL SERVICES  
GUAM, GOVERNMENT-GUAM HOMELAND  
SECURITY  
JAPAN AGENCY MARINE-EARTH SCIENCE AND  
TECHNOLOGY  
JAPAN FOUNDATION, LOS ANGELES  
KOREA FOUNDATION  
KOREA INSTITUTE OF OCEAN SCIENCE &  
TECHNOLOGY  
KOREA RESEARCH INSTITUTE OF SHIPS AND  
OCEAN ENGINEERING  
LEIDEN UNIVERSITY  
LONDON, UNIVERSITY OF  
MARINE AND ENVIRONMENTAL RESEARCH  
INSTITUTE OF POHNPEI  
MARSHALL ISLANDS NATIONAL WEATHER SERVICE  
OFFICE  
MARSHALL ISLANDS, COLLEGE OF  
MELBOURNE, THE UNIVERSITY OF  
NAURU OCEAN RESOURCES INC.  
NICOLAUS COPERNICUS ASTRONOMICAL CENTRE  
OF THE POLISH ACADEMY OF SCIENCES  
OKINAWA PREFECTURE GOVERNMENT  
OKINAWA RESEARCH CENTER ON LONGEVITY  
SCIENCES  
PALAU NATIONAL WEATHER SERVICE OFFICE

RACHEL CARSON CENTER  
REPUBLIC MARSHALL ISLANDS  
REPUBLIC PALAU  
RESEARCH CORPORATION OF THE UNIVERSITY OF  
GUAM  
SENDAI UNIVERSITY  
SINTEF  
UNIVERSITY OF THE WEST OF ENGLAND BRISTOL  
WASEDA UNIVERSITY

**HAWAII- BUSINESS AND OTHER**

AHA PUNANA LEO INC  
ALU LIKE INC  
BISHOP MUSEUM  
EAST WEST CENTER DBA OF CCTI B/W EAST AND  
WEST, INC.  
GARDEN ISLE RESRCE CONSERV & DEVELOPMENT,  
INC.  
HANAHAUOLI SCHOOL  
HAWAII COUNCIL FOR THE HUMANITIES  
HAWAIIAN ELECTRIC COMPANY  
HUI NO KE OLA PONO, INC.  
INTERNATIONAL WASTEWATER TECHNOLOGIES,  
INC.  
INTERSTEL TECHNOLOGIES INC.  
IOLANI SCHOOL  
KAMEHAMEHA SCHOOLS  
KAUPO RANCH, LTD.  
KE KULA 'O NAWAHIOKALANI'OPU'U IKI PUBLIC  
CHARTER SCHOOL  
L. KRENK INC.  
MAKAI OCEAN ENGINEERING INC  
MALAMA KAHALAWAI INC  
MAUI COUNTY COMMUNITY TELEVISION  
MERRIE MONARCH FESTIVAL  
NALU SCIENTIFIC, LLC  
OCEAN ERA, LLC  
OCEANIT LABORATORIES INC  
'OHU 'OHU KO'OLAU INC  
PACIFIC RADIATION ONCOLOGY INC  
PULAMA LANAI  
RESEARCH CORPORATION UNIV HI  
SEA ENGINEERING, INC.  
SPECTRUM PHOTONICS, INC  
SSFM INTERNATIONAL INC.

THE KAHALA HOTEL & RESORT  
WASTEWATER ALTERNATIVES AND INNOVATIONS

**HAWAII- DEPT OF EDUCATION**

EDUCATION, DEPT-HI

**HAWAII- GOVERNMENT AGENCIES**

AGRICULTURE, DEPT-HI  
BUDGET & FINANCE, DEPT-HI  
BUSINESS, ECON DEV & TOUR, DPT  
BUSINESS, ECONOMIC DEV & TOUR-HAWAII  
TECHNOLOGY DEVELOPMENT CORP  
BUSINESS, ECONOMIC DEV&TOUR-HI STATE  
ENERGY OFFICE  
BUSINESS, ECONOMIC DEV&TOUR-OF C  
PLANNING  
CITY & COUNTY HONOLULU  
COUNTY HAWAII DEPT OF ENVIRONMENTAL  
MANAGEMENT, WASTEWATER DIVISION  
COUNTY KAUAI  
COUNTY MAUI  
COUNTY MAUI DEPARTMENT OF  
ENVIRONMENTAL MANAGEMENT  
COUNTY MAUI DEPT OF WATER SUPPLY  
COUNTY MAUI OFC OF ECON DEVEL  
COUNTY MAUI PLANNING DEPT  
COUNTY OF HAWAII DEPT OF RESEARCH AND  
DEVELOPMENT  
DEFENSE, DEPT-HI - HI ARMY NATL GUARD  
DEFENSE, DEPT-HI-HAWAII EMERGENCY MGMT  
AGENCY  
GOVERNOR, OFFICE OF - STATE OF HAWAII  
GOVERNOR, OFFICE OF-HI-EXEC OFFICE ON EARLY  
LEARNING  
HAWAII COUNTY PLANNING DEPARTMENT  
HAWAII INVASIVE SPECIES COUNCIL  
HAWAII STATE COUNCIL ON DEVELOPMENTAL  
DISABILITIES  
HAWAI'I STATE FOUNDATION ON CULTURE AND  
THE ARTS  
HAWAII TOURISM AUTHORITY  
HAWAIIAN AFFAIRS, OFFICE OF  
HAWAIIAN HOME LANDS, DEPT-HI  
HEALTH DEPT-HI MATERNAL AND CHILD HEALTH  
BRANCH  
HEALTH, DEPT-ADULT MENTAL HTH DV-HI  
HEALTH, DEPT-ALCOHOL & DRUG ABUSE DIV-HI  
HEALTH, DEPT-DEVELOPMENTAL DC-HI

HEALTH, DEPT-EXEC OFF AGING-HI  
HEALTH, DEPT-FAMILY HLTH SVC DIV-HI  
HEALTH, DEPT-HAZARD EVAL & EMERGENCY  
RESPONSE  
HEALTH, DEPT-HI  
HEALTH, DEPT-HI CLEAN WATER BRANCH  
HEALTH, DEPT-HI HARM REDUCTION SERVICES  
BRANCH  
HEALTH, DEPT-HI-CHILD/ADOLESC MENTAL HLTH  
DIV  
HEALTH, DEPT-HI-CHRONIC DISEASE PREVENTION  
& HEALTH PROMOTION DIV  
HEALTH, DEPT-HI-OFFICE OF LANGUAGE ACCESS  
HEALTH, DEPT-OFFICE OF PLANNING, POLICY,  
AND PROGRAM DEV-HI  
HUMAN SERVICES, DEPT-DIVISION OF  
VOCATIONAL REHABILITATION  
HUMAN SERVICES, DEPT-HI  
HUMAN SERVICES, DEPT-HI BENEFITS,  
EMPLOYMENT & SUPPORT SERVICES  
HUMAN SERVICES, DEPT-HI-MED-QUEST DIV  
HUMAN SERVICES, DEPT-OYS-HI  
JUDICIARY-HI  
LABOR & INDUSTRIAL RELATION, DPT-HI (DLIR)  
LAND & NATURAL RES, DPT (DLNR)-COMMISSION  
ON WATER RESOURCE MANAGEMENT  
LAND & NATURAL RES, DPT (DLNR)-  
CONSERVATION & RESOURCES ENFORCEMENT  
DIV  
LAND & NATURAL RES, DPT-AQUAT (DLNR)  
LAND & NATURAL RES, DPT-FORST (DLNR)  
LAND & NATURAL RES, DPT-INVASIVE SPEC (DLNR)  
LAND & NATURAL RES, DPT-STATE HISTORIC  
PRESERVATION DIV  
LAND & NATURAL RESOURCES, DEPT (DLNR)  
LAND & NATURAL RESOURCES, DEPT (DLNR)  
ENGINEERING DIV  
LAND & NATURAL RESOURCES, DEPT (DLNR) OFC  
CONS COAST LDS  
STATE OF HAWAII, WORKFORCE DEVELOPMENT  
COUNCIL  
TRANSPORTATION, DEPT-HI  
WATER SUPPLY, BOARD OF  
**HAWAII- HEALTH ORGANIZATIONS**  
HAWAII PACIFIC HEALTH MEDICAL GROUP  
KALIHI-PALAMA HEALTH CENTER  
KAPIOLANI MED CTR FOR WOMEN & CHILDREN

KAPIOLANI MEDICAL SPECIALIST  
KUAKINI MEDICAL CENTER  
PACIFIC IN VITRO FERTILIZATION INSTITUTE  
QUEEN'S MEDICAL CENTER  
STRAUB CLINIC & HOSPITAL  
UNIVERSITY CLINICAL EDUCATIONAL & RSCH  
ASSOC (UCERA)  
**HAWAII- NON-PROFIT ORGANIZATIONS**  
ALOHA INDEPENDENT LIVING HAWAII  
ALOHA UNITED WAY  
AMERICAN ASSOCIATION OF UNIVERSITY WOMEN  
- HONOLULU  
BIG ISLAND RESOURCE CONSERVATION & DEV  
COUNCIL INC.  
CHUN FOUNDATION  
EPIC OHANA, INC  
GENERAL CONTRACTORS ASSOC HI EDUCATIONAL  
FOUNDATION  
HAUOLI MAU LOA FOUNDATION  
HAWAII CANCER CONSORTIUM  
HAWAII CHILDREN'S ACTION NETWORK  
HAWAII COMMUNITY FOUNDATION (HCF)  
HAWAII COMMUNITY FOUNDATION GEIST FDTN  
HAWAII COMMUNITY FOUNDATION INGEBORG  
VF MCKEE FUND  
HAWAII COMMUNITY FOUNDATION MEDICAL  
RESEARCH  
HAWAII COMMUNITY FOUNDATION ROBERT C  
PERRY FUND  
HAWAII COMMUNITY FOUNDATION STRAUB  
TRUST ESTATE  
HAWAII CONSERVATION ALLIANCE FOUNDATION  
HAWAII HEALTH AND HARM REDUCTION CENTER  
(FORMERLY KNOWN AS THE CHOW PROJECT)  
HAWAII JUSTICE FOUNDATION  
HAWAII LEADERSHIP FORUM  
HAWAII PUBLIC HEALTH INSTITUTE  
HAWAII STATE RURAL HEALTH ASSOCIATION  
HAWAII WOMEN'S LEGAL FOUNDATION  
HAWAIIAN LEGACY FOUNDATION  
HAWAIIKIDSCAN  
INSTITUTE FOR HUMAN SERVICES  
KOKUA KALIHI VALLEY  
KUPU  
LANAKILA PACIFIC

MALAMA MAUNALUA  
MAUI COFFEE ASSOCIATION  
MAUI NUI MARINE RESOURCE COUNCIL  
OAHU ECONOMIC DEVELOPMENT BOARD  
OLELO  
PAC RESOURCES FOR ED & LEARNING (PREL)  
PACIFIC AMERICAN FOUNDATION  
PACIFIC ISLAND HEALTH OFFICERS ASSOCIATION  
PACIFIC ISLANDS PRIMARY CARE ASSOCIATION  
ROSHAN CULTURAL HERITAGE INSTITUTE  
SACRED HEARTS ACADEMY  
THE OUTDOOR CIRCLE  
THREE MOUNTAIN ALLIANCE FOUNDATION  
UNIVERSITY HAWAII FOUNDATION  
UNIVERSITY HEALTH PARTNERS  
WAIKIKI BEACH SPECIAL IMPROVEMENT DISTRICT  
ASSN  
WAIWAI OLA WATERKEEPERS HAWAIIAN ISLANDS  
WORLD TURTLE TRUST

**MAINLAND- BUSINESS AND OTHER**

BLUE ORIGIN FEDERATION, LLC  
ACADEMY OF NUTRITION AND DIETETICS  
ACCESSLEX INSTITUTE  
AMERICA VIEW  
AMERICAN SYSTEMS  
BROOKHAVEN NATIONAL LABORATORY  
CORTEVA AGRISCIENCE LLC (FORMERLY DOW  
AGROSCIENCES)  
DUDEK  
DUOLINGO  
ELEMENT ENERGY  
EXTENSION FOUNDATION  
GE PRECISION HEALTHCARE LLC (FORMERLY GE  
HEALTHCARE)  
GOODMAN TECHNOLOGIES, LLC  
GYNUITY HEALTH PROJECTS, INC.  
HDRE2M  
HEXAGON BIO  
HOLOGIC, INC  
ICON GOVERNMENT AND PUBLIC HEALTH  
SOLUTIONS, INC.  
JAMIE CAPLAN CONSULTING LLC  
JET PROPULSION LAB-JPL  
KBR WYLE SERVICES, LLC

LAWRENCE LIVERMORE NATL LAB  
LEIDOS  
LUNA INNOVATIONS INCORPORATED  
NATIONAL GEOGRAPHIC SOCIETY  
NATIONAL RENEWABLE ENERGY LAB  
PAREXEL INTERNATIONAL  
PPD INVESTIGATOR SERVICES, LLC  
PREDICTIVE SCIENCE INC.  
QUANTITECH LLC  
SALIOGEN THERAPEUTICS, INC.  
SANDIA NATIONAL LABORATORIES  
SEBELA PHARMACEUTICALS  
SIERRA NEVADA CORPORATION  
SMITHSONIAN ASTROPHYSICAL OBSERVATORY  
SOLIGENIX, INC.  
SPACE TELESCOPE SCIENCE INSTITUTE  
TETRA TECH, INC.  
TREVI SYSTEMS  
US ACUTE CARE SOLUTIONS  
UT-BATTELLE, LLC  
WOODS HOLE OCEANOGRAPHIC INSTITUTION  
X-BOW LAUNCH SYSTEMS

**MAINLAND- HEALTH ORGANIZATIONS**

AMERICAN HEART ASSOCIATION  
BETH ISRAEL DEACONESS MEDICAL CENTER  
BRIGHAM AND WOMEN'S HOSPITAL, INC.  
CHILDRENS HOSPITAL LOS ANGELES  
CHILDREN'S HOSPITAL OF PHILADELPHIA  
HUTCHINSON (FRED) CANCER RESRCH CTR  
KAISER FOUNDATION RESEARCH INSTITUTE  
RIVERSIDE RESEARCH INSTITUTE

**MAINLAND- NON-PROFIT ORGANIZATIONS**

ABELL FOUNDATION  
ALEX'S LEMONADE STAND FOUNDATION  
ALLEN (PAUL G) FAMILY FOUNDATION  
ALLIANCE FOR SUSTAINABLE ENERGY, LLC  
ALLIANCE NCTN FOUNDATION  
AMERICAN BIRD CONSERVANCY  
AMERICAN COUNCIL EDUCATION  
AMERICAN EDUCATIONAL RESEARCH  
ASSOCIATION  
AMERICAN FOUNDATION FOR PHARMACEUTICAL  
EDUCATION

AMERICAN ORCHID SOCIETY  
ANHEUSER-BUSCH COMPANIES- AH BUSCH FDTN  
ANN & ROBERT H. LURIE CHILDREN'S HOSPITAL  
OF CHICAGO  
ASSOCIATION FOR CONTEXTUAL BEHAVIORAL  
SCIENCE  
ASSOCIATION OF SPECIALTY CUT FLOWER  
GROWERS RESEARCH FOUNDATION  
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN  
ASTRONOMY, INC.  
BATTELLE MEMORIAL INSTITUTE  
BAY AREA ENVIRONMENTAL RESEARCH INSTITUTE  
BOSTON MEDICAL CENTER CORPORATION  
BURROUGHS WELLCOME FUND  
CAL POLY CORPORATION  
CEDARS-SINAI MEDICAL CENTER  
CLEAN REEFS  
COMMONWEALTH OF NORTHERN MARIANAS  
ISLANDS-COMMONWEALTH HEALTHCARE  
CORPORATION  
COMPUTING RESEARCH ASSOCIATION  
DONALD DANFORTH PLANT SCIENCE CENTER  
DUCKS UNLIMITED, INC.  
H. LEE MOFFITT CANCER CENTER AND RESEARCH  
INSTITUTE, INC.  
HEISING-SIMONS FOUNDATION  
HENRY M. JACKSON FOUNDATION FOR THE  
ADVANCEMENT OF MILITARY MEDICINE  
HERBERT W. HOOVER FOUNDATION  
IMA RESEARCH FOUNDATION  
INSTITUTE INTERNATIONAL EDUCATION  
INTERNATIONAL ALLIANCE FOR PHYTOBIOMES  
RESEARCH INC  
JOHNSON (ROBERT WOOD) FOUNDATION  
LAND ECONOMICS FOUNDATION OF LAMBDA  
ALPHA INTERNATIONAL  
MATHEMATICAL ASSOCIATION OF AMERICA  
MD ANDERSON CANCER CENTER  
MOTT (CHARLES STEWART) FOUNDATION  
NATIONAL ESTUARINE RESEARCH RESERVE  
ASSOCIATION  
NATIONAL FISH & WILDLIFE FOUNDATION  
NATIONAL FOUR-H COUNCIL (4-H)  
NATIONAL JEWISH HEALTH  
NATIONAL MARINE SANCTUARY FOUNDATION  
NATURE CONSERVANCY, THE

NORTHEASTERN REGIONAL ASSOCIATION OF  
COASTAL OCEAN OBSERVING SYSTEMS  
OCEAN FOUNDATION  
PACIFIC STATES MARINE FISHERIES COMMISSION  
RESEARCH FOUNDATION STATE UNIV NY  
RIDGE TO REEFS, INC  
SATELL INSTITUTE  
SCHMIDT FAMILY FOUNDATION / SCHMIDT  
MARINE TECHNOLOGY PARTNERS  
SEATTLE INSTITUTE FOR BIOMEDICAL & CLINICAL  
RESEARCH  
SETI INSTITUTE  
SILICON VALLEY COMMUNITY FOUNDATION  
SIMONS FOUNDATION  
SOCIAL SCIENCE RESEARCH COUNCIL  
SOCIETY OF FAMILY PLANNING  
SOUTHWESTERN OHIO COUNCIL FOR HIGHER  
EDUCATION  
SPENCER FOUNDATION  
STEM NEXT OPPORTUNITY FUND  
SURFRIDER FOUNDATION  
THE HOPE FOUNDATION FOR CANCER RESEARCH  
THIRD SECTOR NEW ENGLAND, INC.  
TMT INTERNATIONAL OBSERVATORY LLC  
TREE FUND  
UNIVERSITIES SPACE RESEARCH ASSN  
UNIVERSITY CORP ATMOSPHERIC RSCH  
VIRGINIA INSTITUTE OF MARINE SCIENCE  
WESTERN STATES ART FEDERATION (WESTAF)  
WORLD EDUCATION, INC.  
WORLD WILDLIFE FUND  
**US COLLEGES AND UNIVERSITIES**  
ALASKA FAIRBANKS, UNIVERSITY OF  
AMERICAN FORESTS  
APPALACHIAN STATE UNIVERSITY  
ARIZONA STATE UNIVERSITY  
ARIZONA, UNIVERSITY OF  
ARKANSAS, UNIVERSITY OF  
BAYLOR COLLEGE OF MEDICINE  
BD OF REGENTS OF UNIVERSITY SYS OF GA-  
GEORGIA INSTITUTE OF TECHNOLOGY  
CALIFORNIA BERKELEY, UNIVERSITY OF  
CALIFORNIA DAVIS, UNIVERSITY OF  
CALIFORNIA INST OF TECHNOLOGY

CALIFORNIA LOS ANGELES, UNIV  
CALIFORNIA MERCED, UNIVERSITY OF  
CALIFORNIA RIVERSIDE, UNIVERSITY OF  
CALIFORNIA SAN DIEGO, UNIV  
CALIFORNIA SAN DIEGO, UNIV-SCRIPPS INST OF  
OCEAN  
CALIFORNIA SAN FRANCISCO, UNIV  
CALIFORNIA SANTA BARBARA, UNIV  
CALIFORNIA, UNIVERSITY OF-DIV OF  
AGRICULTURE & NATURAL RESOURCES  
CHAMINADE UNIVERSITY  
CLEMSON UNIVERSITY  
COLORADO DENVER, UNIVERSITY OF  
COLUMBIA UNIVERSITY  
CONNECTICUT, UNIVERSITY OF  
CORNELL UNIVERSITY  
EMORY UNIVERSITY  
FLORIDA STATE UNIVERSITY  
FLORIDA, UNIVERSITY OF  
GEORGE MASON UNIVERSITY  
GEORGE WASHINGTON UNIVERSITY  
HAWAII PACIFIC UNIVERSITY  
INDIANA UNIVERSITY  
JOHNS HOPKINS UNIVERSITY  
KANSAS STATE UNIVERSITY  
MARYLAND, UNIVERSITY OF  
MASSACHUSETTS INSTITUTE OF TECH  
MICHIGAN, UNIVERSITY OF  
MINNESOTA, UNIVERSITY OF  
MISSOURI-ST. LOUIS, UNIVERSITY OF  
MONTANA STATE UNIVERSITY  
MOREHOUSE SCHOOL OF MEDICINE  
NEVADA LAS VEGAS, UNIVERSITY OF  
NEW MEXICO, UNIVERSITY OF

NEW MEXICO, UNIVERSITY OF - HEALTH SCIENCES  
CENTER  
NEW YORK UNIVERSITY  
NORTHERN ARIZONA UNIVERSITY  
NORTHWESTERN UNIVERSITY  
NOTRE DAME, UNIVERSITY OF  
OKLAHOMA STATE UNIVERSITY  
OKLAHOMA, UNIVERSITY OF  
OREGON HEALTH SCIENCES UNIVERSITY  
OREGON STATE UNIVERSITY  
PITTSBURGH, UNIVERSITY OF  
PURDUE UNIVERSITY  
RUTGERS, STATE UNIVERSITY OF NEW JERSEY  
SANTA CLARA UNIVERSITY  
SOUTH CAROLINA, UNIVERSITY OF  
SOUTH FLORIDA, UNIVERSITY OF  
SOUTHERN CALIFORNIA, UNIVERSITY OF  
STANFORD UNIVERSITY  
THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE  
CITY OF NEW YORK  
THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE  
CENTER  
UNIVERSITY AT BUFFALO  
UNIVERSITY KANSAS CENTER RESEARCH, INC.  
UNIVERSITY OF CHICAGO  
UNIVERSITY OF DELAWARE  
UNIVERSITY OF TEXAS ARLINGTON  
UTAH, UNIVERSITY OF  
WASHINGTON STATE UNIVERSITY  
WASHINGTON UNIVERSITY (ST LOUIS, MO)  
WASHINGTON, UNIVERSITY OF  
WILLAMETTE UNIVERISTY  
WISCONSIN-MADISON, UNIVERSITY OF

# Strategic Directions: Extramural Awards Targets vs. Actuals FY 14 – FY 21

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BOR Committee on Research & Innovation  
October 7, 2021



# Strategic Directions Targets

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- FY 2014 base year
  - Most current data at time FY 15 – FY 21 projections were made
  - Projections are not influenced by temporary stimulus funding (ARRA awards ended prior to FY 14)
- Based on historical trends, a 5% growth rate per year was used to generate targets



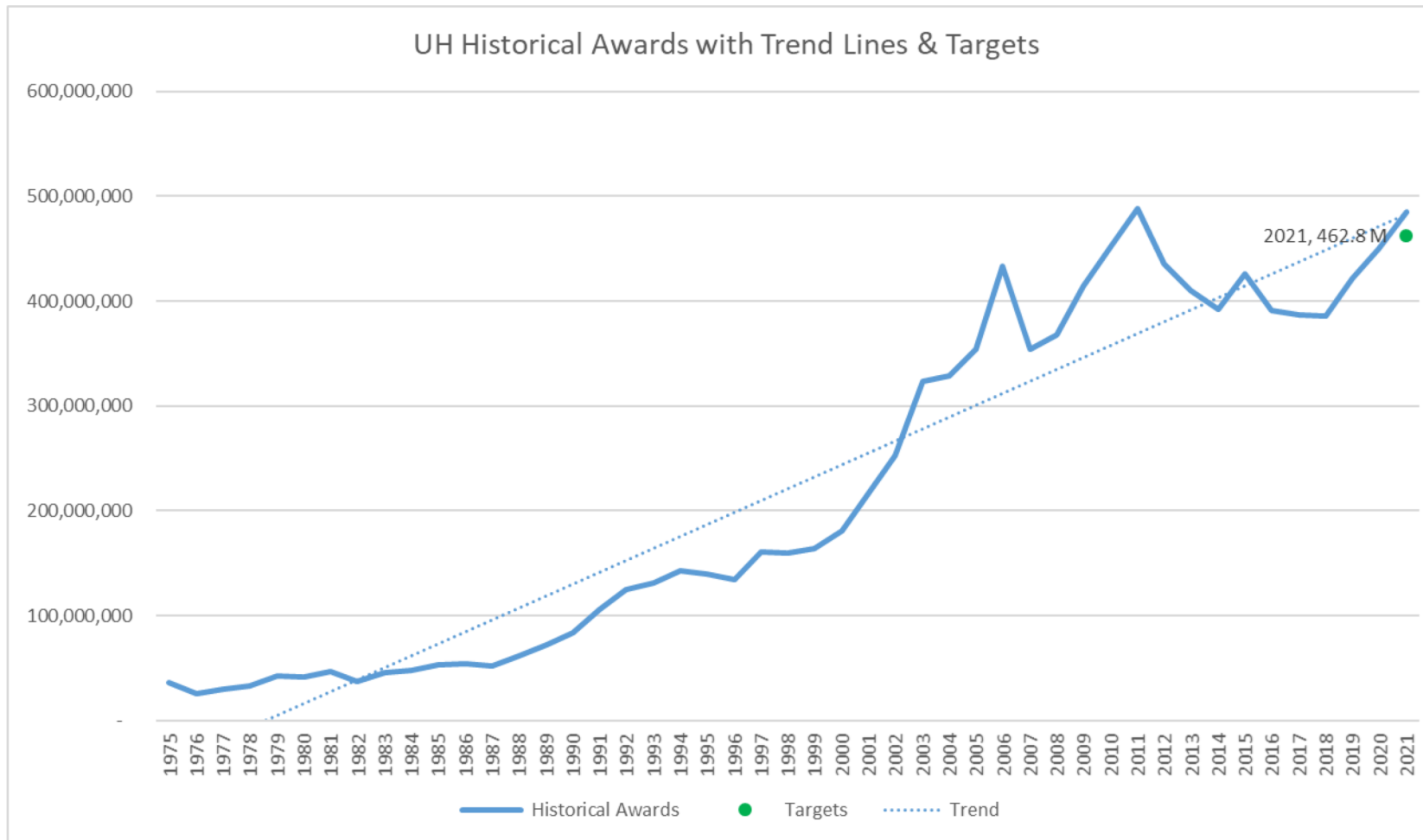


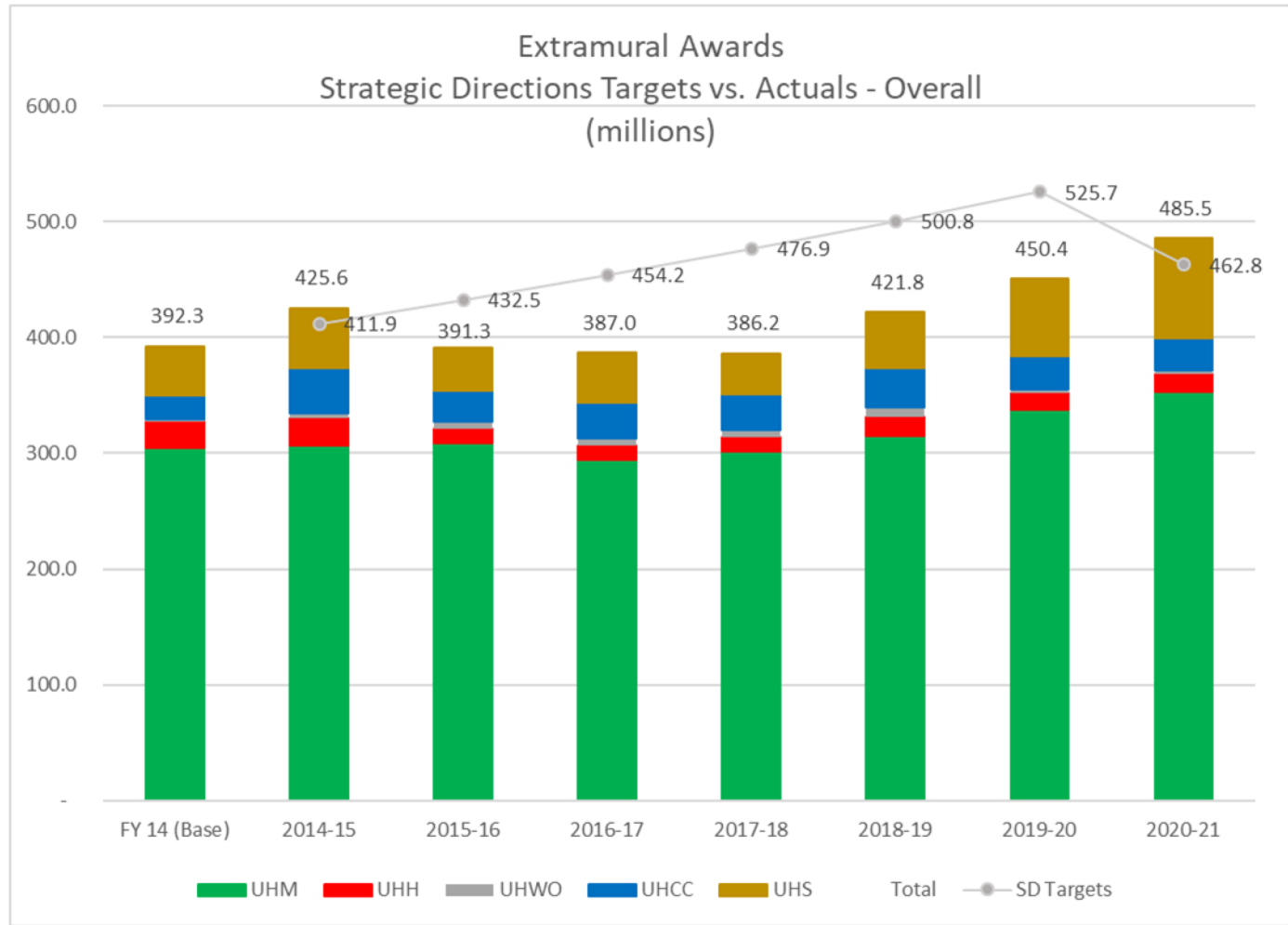
# Revised FY 21 SD Targets

Target	Original	Revised
Extramural awards	\$552.0 million	\$462.8 million
Invention disclosures	55	48
US patents	20	5
Licenses/options	13	10
Extramural expenditures	\$411.0 million	\$403.0 million
F&A recovery	\$49.0 million	\$52.0 million
Active licenses/options	144	144
Royalties	\$270,000	\$230,000

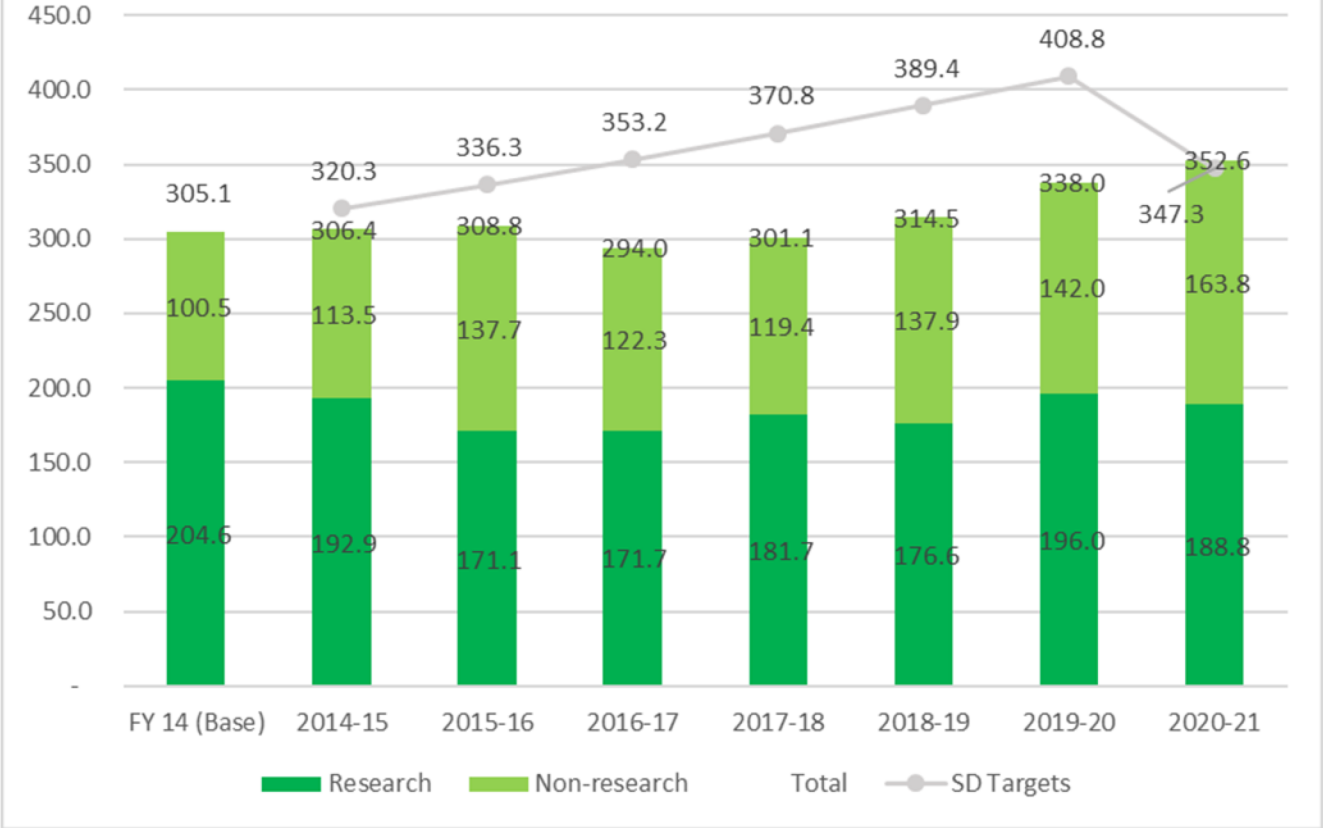


# UH Historical Awards

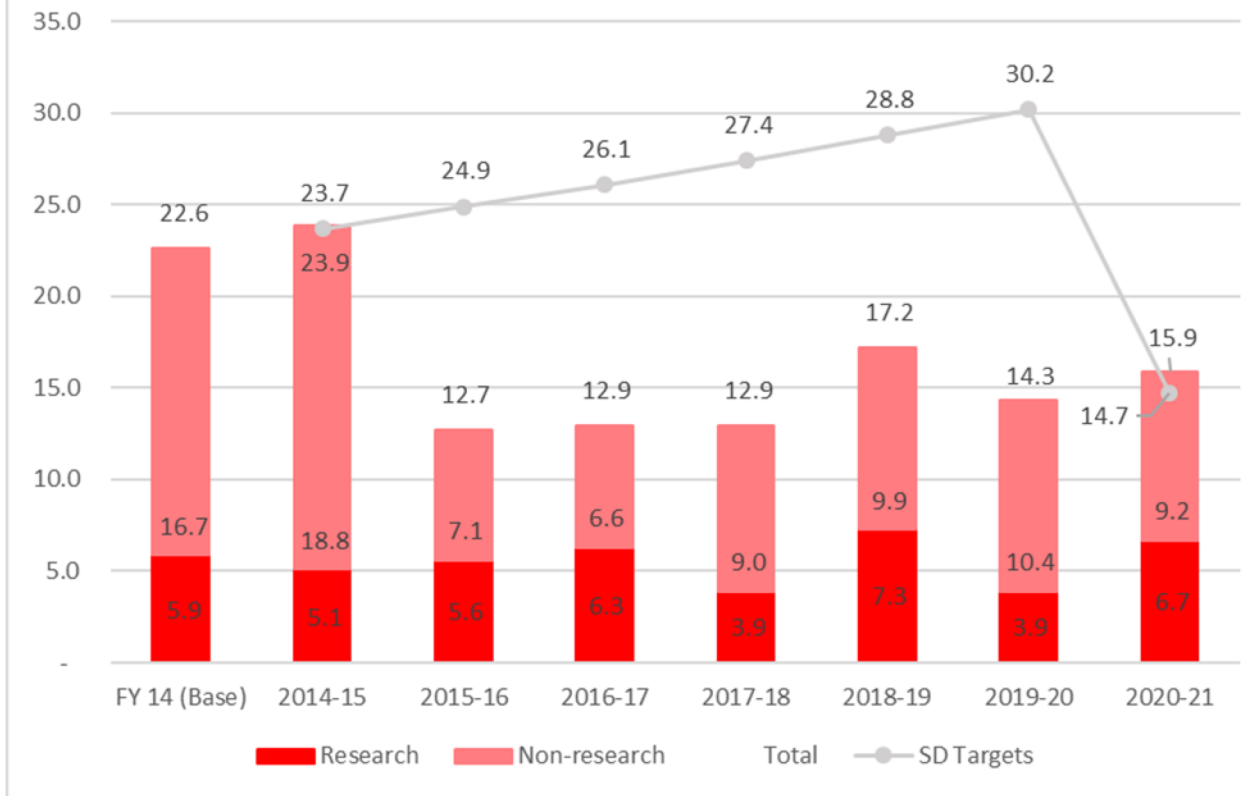




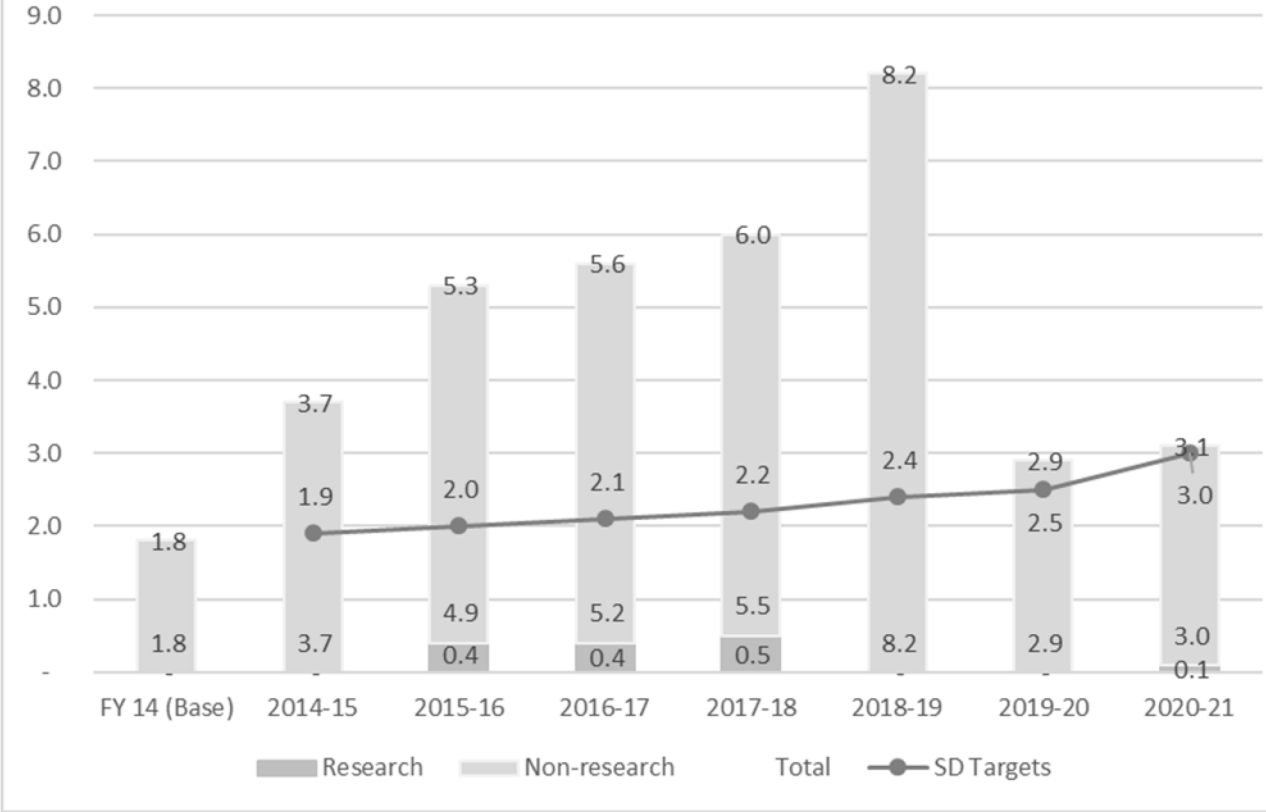
### Extramural Awards Strategic Directions Targets vs. Actuals - UH Manoa (millions)



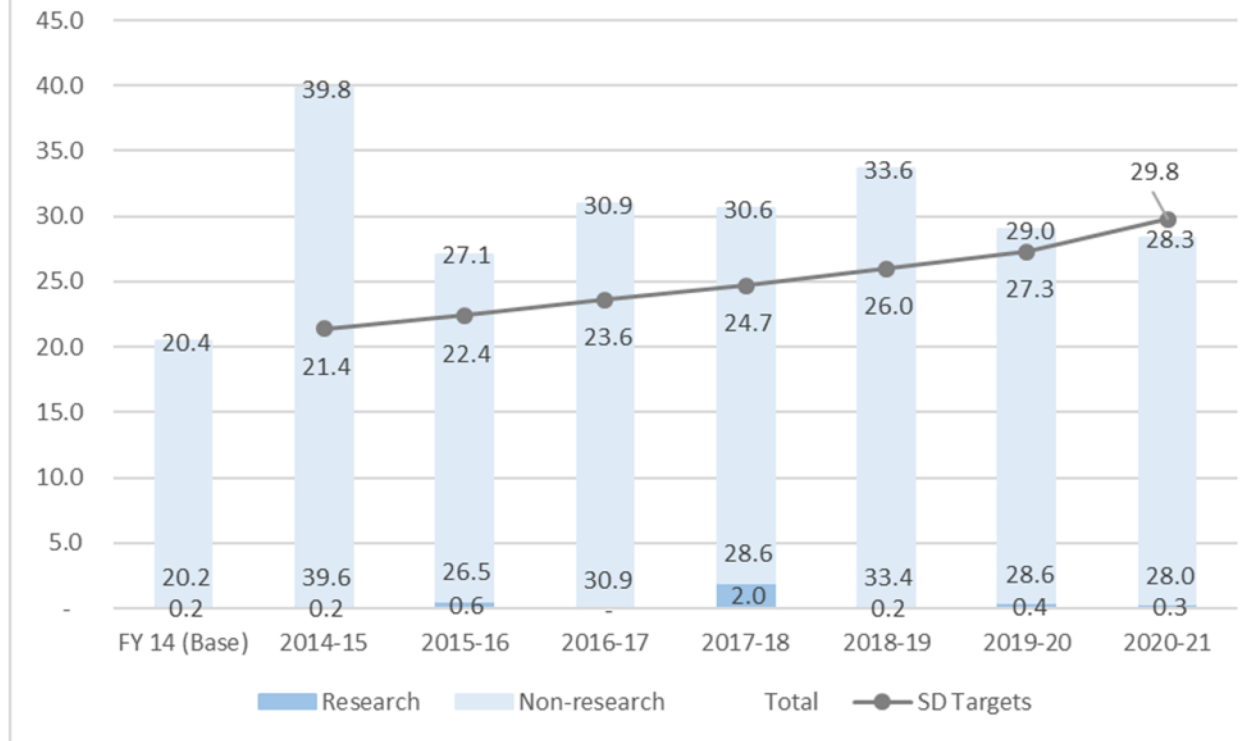
### Extramural Awards Strategic Directions Targets vs. Actuals - UH Hilo (millions)



Extramural Awards  
 Strategic Directions Targets vs. Actuals - UH West Oahu  
 (millions)



Extramural Awards  
 Strategic Directions Targets vs. Actuals -  
 UH Community Colleges & UH Maui College  
 (millions)



### Extramural Awards Strategic Directions Targets vs. Actuals - UH System (millions)

