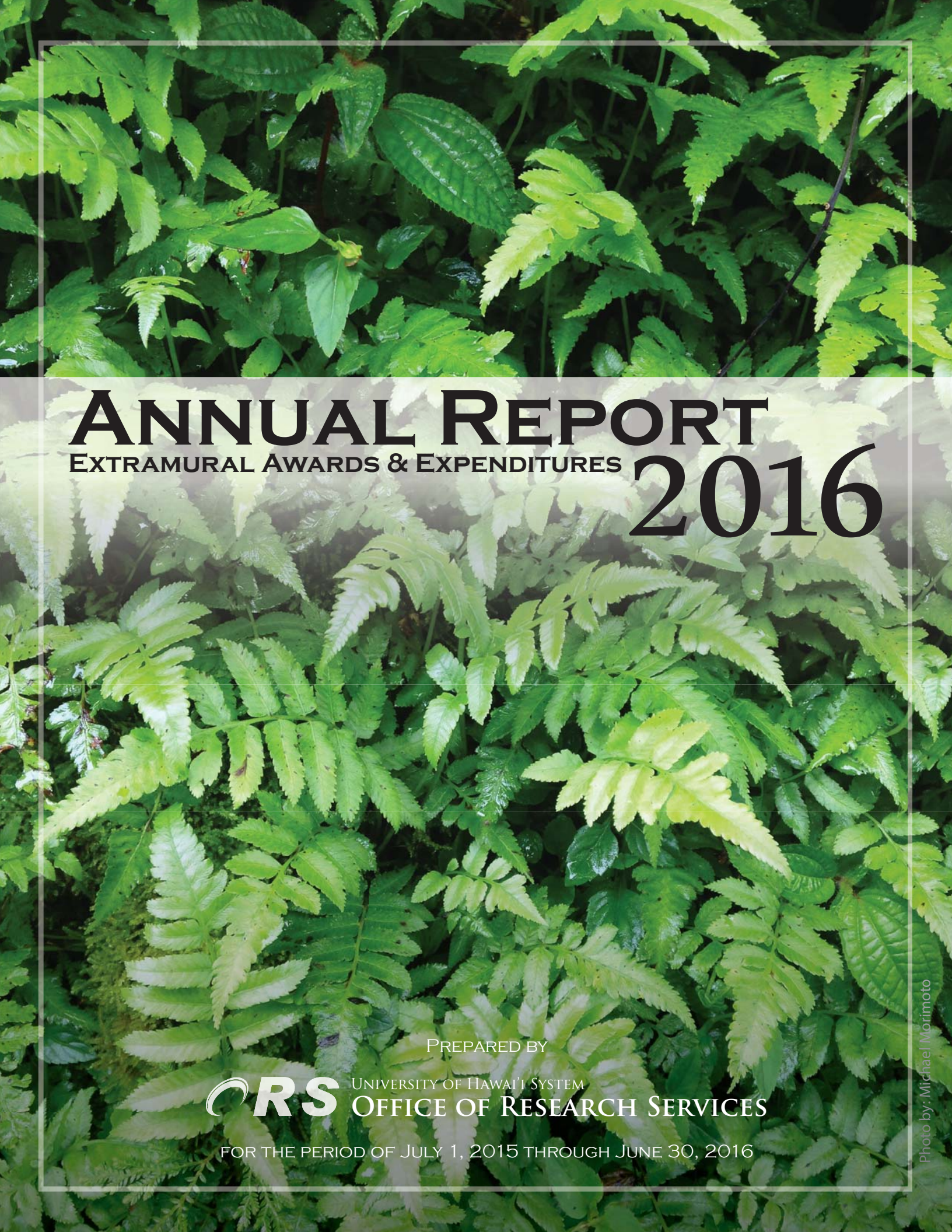


Annual Report 2016

Extramural Awards & Expenditures

Prepared by

University of Hawai'i System
Office of Research Services

for the period of July 1, 2015 through June 30, 2016

Photo by: Michael Morimoto

Table of Contents

Letter from Vice President for Research and Innovation Vassilis L. Syrmos 1

Proposals and Awards

Chart 1: Awards by Sponsor – FY 2016 3
Figure 1: Contract and Grant Awards by Sponsor Summary - FY 2016 4
Chart 2: Federal and Non-Federal Awards - % of Total Awarded 5
Figure 2: Federal and Non-Federal Awards Summary 5
Chart 3a: Non-Federal Awards by Fiscal Year 6
Chart 3b: Federal Awards by Fiscal Year 7
Figure 3: Contract and Grant Awards Received from External Sources 8
Chart 4: ARRA Awards by Sponsor Type – Fiscal Years 2011 to 2016 9
Figure 4: ARRA Awards Summary FYs 2011 to 2016 10
Chart 5a: Count of Contract and Grant Proposals Submitted 11
Chart 5b: Total $ Amount of Contract and Grant Proposals Submitted 12
Figure 5: Contract and Grant Proposals Submitted 13
Chart 6: Total Contract and Grant Awards – FYs 2003 to 2016 14
Figure 6: Total Contract and Grant Awards Summary 14
Figure 7: Top Individual Awards in FY 2016 15
Figure 8: Top 50 PIs for FY 2016 16
Chart 7: Contract and Grant Awards by Campus – FY 2016 17
Chart 8: UH Manoa Contract and Grant Awards by College/Department 18
Chart 9: UH Hilo Contract and Grant Awards by College/Department 19
Figure 9: Contract and Grant Awards Summary by Campus and by College/Department for UH Manoa and UH Hilo 20

Expenditures

Chart 10: Total Contract and Grant Expenditures by Source of Funds 27
Figure 10: Total Contract and Grant Expenditures by Source of Funds 28
Chart 10a: FYs 2011 to 2016 ARRA Expenditures by Source of Funds 29
Figure 10a: Total Contract and Grant ARRA Expenditures by Source of Funds 30
Chart 11: FY 2016 Total Contract and Grant Expenditures by Type of Program and Source of Funding 31
Figure 11: Total Contract and Grant Expenditures by Type of Program and Source of Funding 32
Chart 12: Total FTE Paid from Contract and Grant Funds 33
Figure 12: Total FTE Paid from Contract and Grant Funds 34
Chart 13: Breakdown of Facilities and Administrative Costs by Major Category 35
Chart 14: Total Royalties Received from University Patents – FYs 2012 to 2016 36
Figure 13: Total Royalties Received from University Patents – FYs 2012 to 2016 37

Appendix 1: Source of Awards 38

Dear Colleagues:

The University of Hawai‘i (UH), like other research institutions across the country, continues to weather an extremely challenging funding landscape brought on by the lingering effects of sequestration, uncertainties in agency funding, budget cuts and the realignment of R&D funding priorities. Despite these challenges, the UH research enterprise managed to halt three straight years of decline in extramural award funding and gutted out a slight increase in FY2015.

Unfortunately in FY2016, despite the continued efforts of our faculty, support staff and students, the University of Hawai‘i’s FY 2016 Extramural Awards closed at $391M – a decrease of eight percent compared to last year’s tally of $425M.

In addition to the difficult funding environment, UH also absorbed a number of hits that contributed to the decrease, including the end of a four-year workforce training initiative by the U.S. Department of Labor that awarded $10 million in FY 2015 to the UH Community Colleges for programs in cybersecurity and health; the absence of a large $12M U.S. Navy task order for the UH Applied Research Laboratory, as compared to FY 2015; and a significant decrease in extramural funding at UH Hilo of about $11M from FY2015.

While research funding will continue to remain a challenge at UH for years to come, we will continue to align the UH research enterprise with national science and technology funding priorities, while helping to address the critical challenges of the nation and our state. Here are some of the highlights of FY2016:

- The University of Hawai‘i received a $20M grant from the National Science Foundation’s Experimental Program to Stimulate Competitive Research (EPSCoR) for its *‘Ike Wai* collaboration, a five-year study of water sustainability issues. The project spans geophysics, microbiology, cyberinfrastructure, data modeling, indigenous knowledge and economic forecasting, and pairs UH scientists in partnerships with state and federal agencies, and the community.

- The Hawai‘i Natural Energy Institute (HNEI) at UH Mānoa received $8.5 million from the Office of Naval Research for its Asia-Pacific Research Initiative for Sustainable Energy Systems (APRISES) to continue testing and evaluation of renewable generation and power systems controls for smart- and micro-grids. APRISES continues to contribute substantial support for smart- and micro-grid research activities to ongoing efforts on Maui, Moloka‘i, Coconut Island and the UH Mānoa campus.

- Professor Loic Le Marchand at the UH Cancer Center received over $8M in two separate awards from the National Cancer Institute to study cancer risk in multi-ethnic groups.

On a related note, we are continuing our efforts to spearhead the Hawai‘i Innovation Initiative – a proactive partnership between UH, the private sector and government to create a third economic driver for the state based on UH research. Our XLR8UH venture accelerator program has developed 15 startup companies, generated over $600,000 in revenue and secured $7.8M in total funding. In March 2016, we launched the UH i-Lab, a reconfigurable working space for students in cross disciplines to engage in innovation and entrepreneurial projects; and in July, the Pacific Asian Center for Entrepreneurship (PACE) at UH Mānoa's Shidler College of Business opened their version of the i-Lab called sPACE. Finally, we will again be hosting the second annual *Future Focus* innovation conference in October – this year focusing on medical research, cybersecurity and entrepreneurship.

I am grateful for your continued support and fortitude as we continue to work together to get through the current funding doldrums and to uphold UH's core mission to educate our students, improve our economy and to make our world a better place. As always, thank you 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 – FY 2016
(in millions)

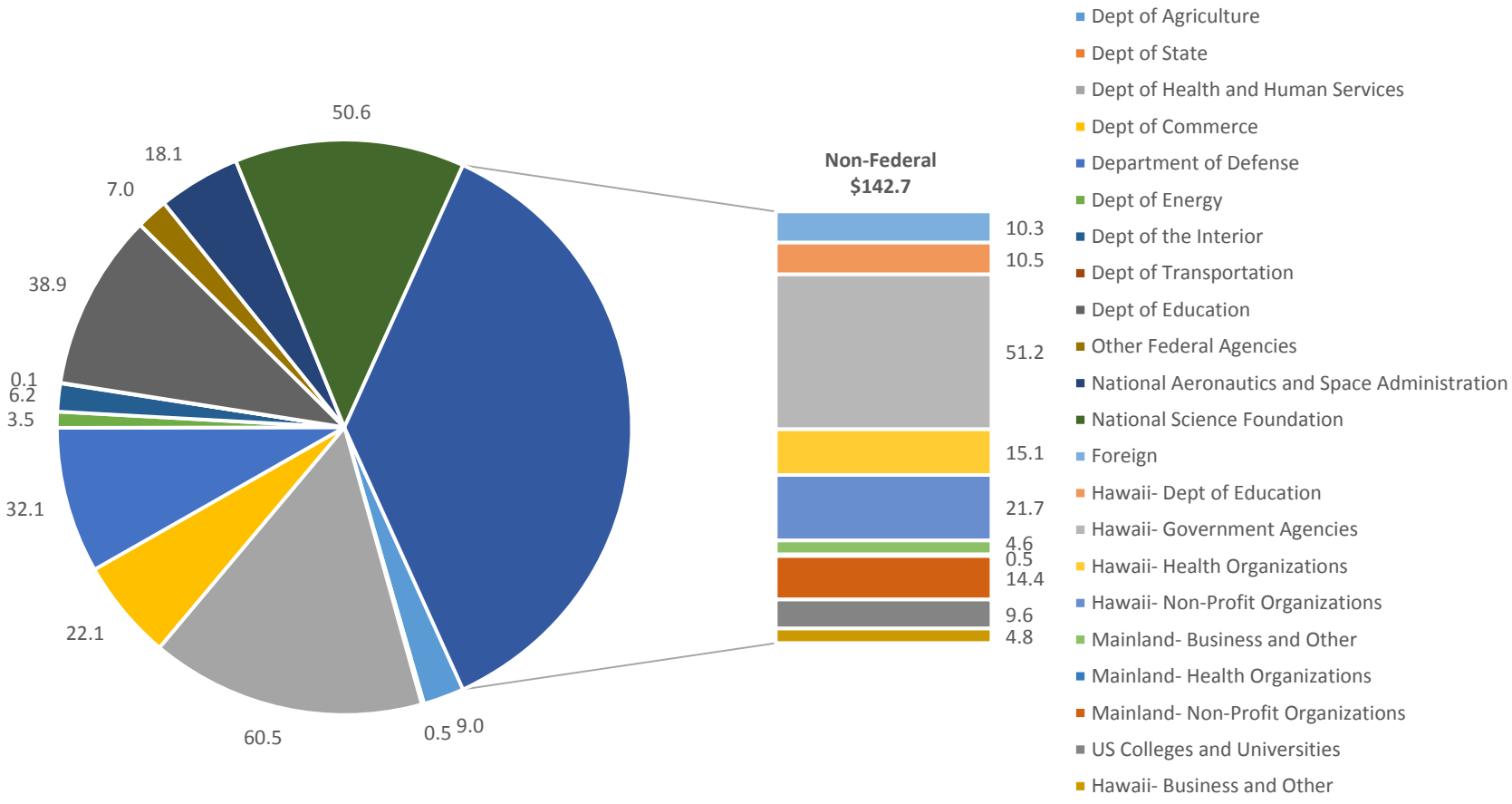


Figure 1: Contract and Grant Awards by Sponsor Summary - FY 2016

Sponsor Type	Award Count	Amount Awarded
Dept of Agriculture	65	9,025,934
Dept of State	2	499,247
Dept of Health and Human Services	117	60,546,030
Dept of Commerce	80	22,140,488
Department of Defense	83	32,051,837
Dept of Energy	8	3,452,402
Dept of the Interior	79	6,188,553
Dept of Transportation	1	75,000
Dept of Education	70	38,931,435
Other Federal Agencies	14	6,973,378
National Aeronautics and Space Administration	89	18,106,716
National Science Foundation	128	50,584,187
Foreign	62	10,348,765
Hawaii- Dept of Education	17	10,492,291
Hawaii- Government Agencies	358	51,241,567
Hawaii- Health Organizations	27	15,056,100
Hawaii- Non-Profit Organizations	289	21,714,557
Mainland- Business and Other	68	4,553,990
Mainland- Health Organizations	9	531,480
Mainland- Non-Profit Organizations	93	14,414,632
US Colleges and Universities	148	9,620,497
Hawaii- Business and Other	48	4,785,442
Grand Total	**1,855**	**391,334,528**

Chart 2: Federal and Non-Federal Awards - % of Total Awarded FYs 2012 to 2016

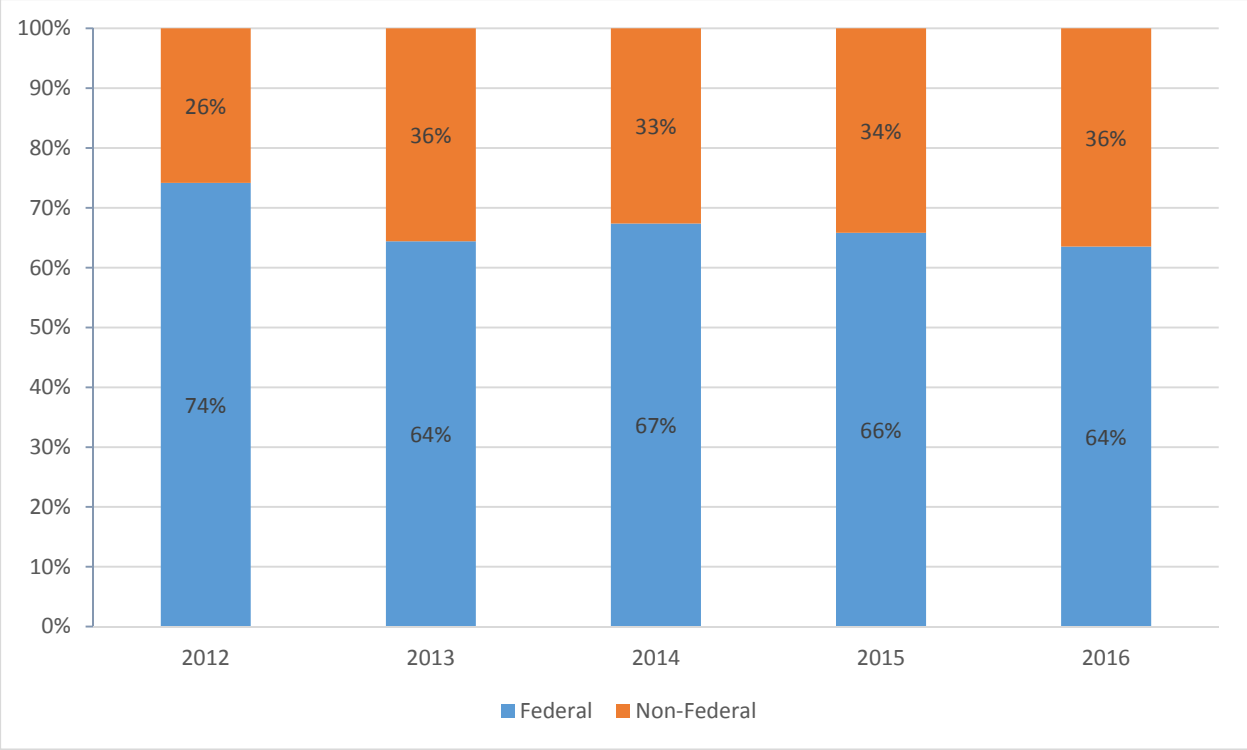


Figure 2: Federal and Non-Federal Awards Summary

Source of Funding	FY 2012 Amount Awarded	FY 2013 Amount Awarded	FY 2014 Amount Awarded	FY 2015 Amount Awarded	FY 2016 Amount Awarded
Federal	323,353,886	263,980,647	264,380,218	280,181,968	248,575,207
Non-Federal	112,521,081	145,802,671	127,934,737	145,468,370	142,759,321
Total	**435,874,967**	**409,783,318**	**392,314,955**	**425,650,338**	**391,334,528**

Chart 3a: Non-Federal Awards by Fiscal Year (in millions)

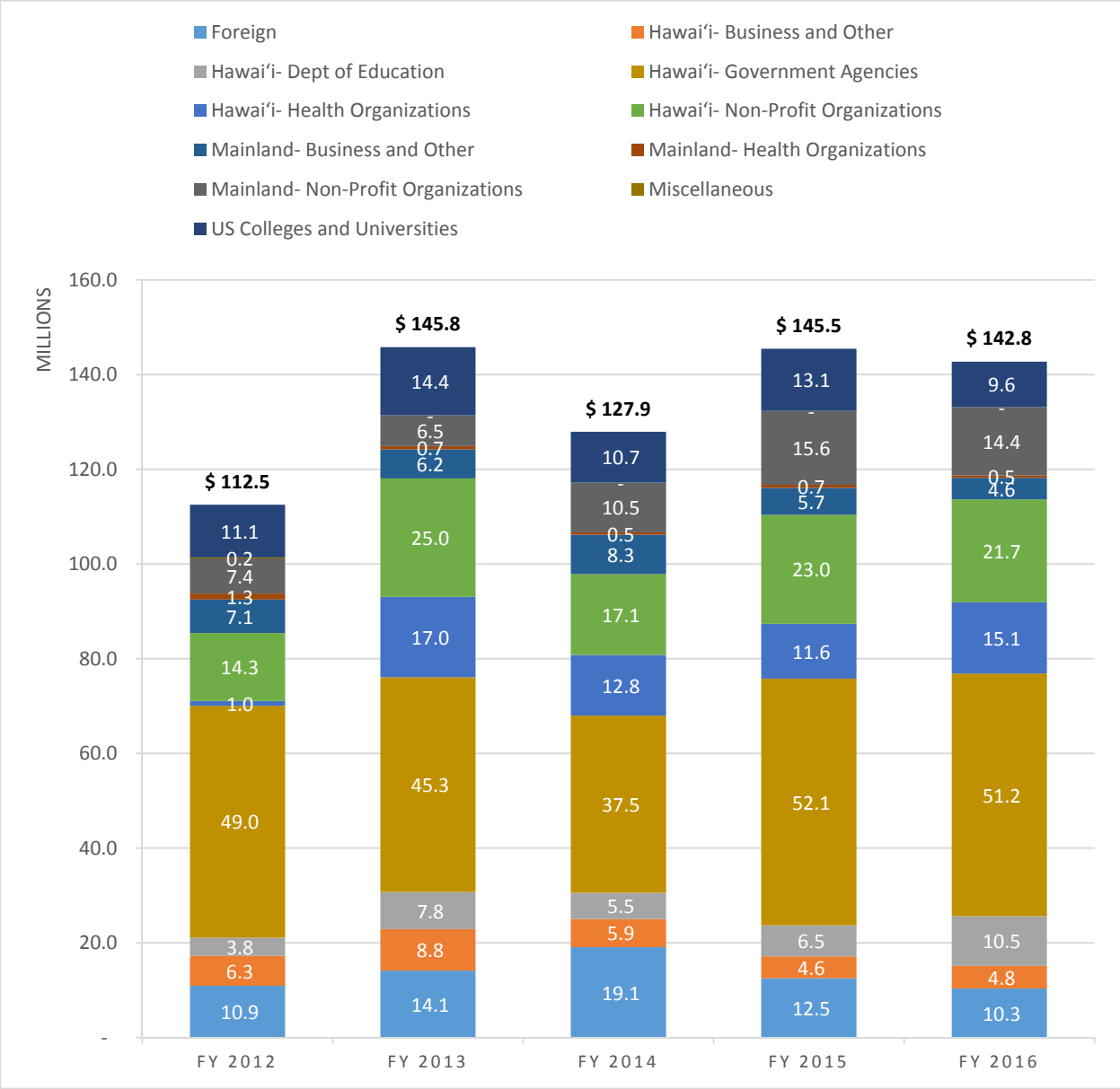


Chart 3b: Federal Awards by Fiscal Year (in millions)

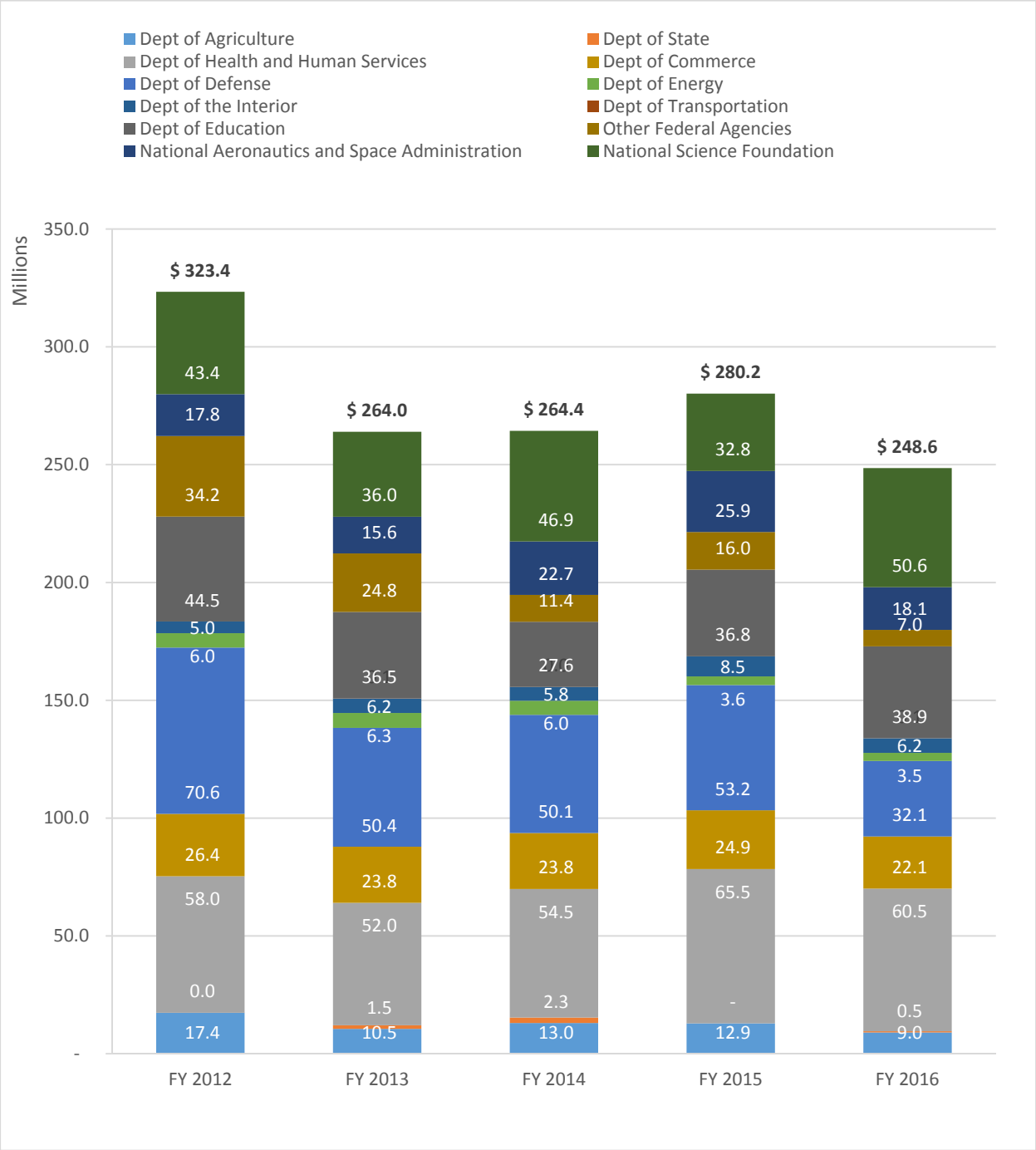


Figure 3: Contract and Grant Awards Received from External Sources
Fiscal Years 2012 to 2016

		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016	
Source of Funding		**Amount Awarded**	**% of Total**	**Amount Awarded**	**% of Total**	**Amount Awarded**	**% of Total**	**Amount Awarded**	**% of Total**	**Amount Awarded**	**% of Total**
Federal	Dept of Agriculture	17,375,514	4%	10,544,569	3%	13,040,882	3%	12,885,870	3%	9,025,934	2%
	Dept of State	9,250	0%	1,546,397	0%	2,335,534	1%	-	0%	499,247	0%
	Dept of Health and Human Services	57,981,206	13%	51,969,432	13%	54,540,150	14%	65,517,844	15%	60,546,030	15%
	Dept of Commerce	26,416,153	6%	23,827,535	6%	23,781,052	6%	24,909,828	6%	22,140,488	6%
	Department of Defense	70,630,629	16%	50,425,587	12%	50,125,047	13%	53,176,313	12%	32,051,837	8%
	Dept of Energy	6,048,107	1%	6,309,014	2%	6,008,761	2%	3,649,991	1%	3,452,402	1%
	Dept of the Interior	5,006,845	1%	6,210,569	2%	5,847,479	1%	8,505,102	2%	6,188,553	2%
	Dept of Transportation	-	0%	124,784	0%	10,000	0%	-	0%	75,000	0%
	Dept of Education	44,500,282	10%	36,529,862	9%	27,645,649	7%	36,808,161	9%	38,931,435	10%
	Other Federal Agencies	34,204,355	8%	24,829,955	6%	11,403,852	3%	15,981,072	4%	6,973,378	2%
	National Aeronautics and Space Administration	17,757,775	4%	15,615,148	4%	22,702,185	6%	25,912,694	6%	18,106,716	5%
	National Science Foundation	43,423,770	10%	36,047,795	9%	46,939,627	12%	32,835,093	8%	50,584,187	13%
Federal Total		**323,353,886**	**74%**	**263,980,647**	**64%**	**264,380,218**	**67%**	**280,181,968**	**66%**	**248,575,207**	**64%**
Non-Federal	Foreign	10,923,010	3%	14,126,278	3%	19,089,519	5%	12,538,417	3%	10,348,765	3%
	Hawaii- Business and Other	6,306,280	1%	8,758,859	2%	5,931,549	2%	4,604,200	1%	4,785,442	1%
	Hawaii- Dept of Education	3,849,568	1%	7,845,769	2%	5,519,860	1%	6,548,702	2%	10,492,291	3%
	Hawaii- Government Agencies	48,973,975	11%	45,346,358	11%	37,455,983	10%	52,087,837	12%	51,241,567	13%
	Hawaii- Health Organizations	1,039,441	0%	17,011,127	4%	12,781,158	3%	11,605,915	3%	15,056,100	4%
	Hawaii- Non-Profit Organizations	14,343,456	3%	24,980,130	6%	17,105,305	4%	23,008,349	5%	21,714,557	6%
	Mainland- Business and Other	7,059,345	2%	6,153,313	2%	8,310,778	2%	5,686,262	1%	4,553,990	1%
	Mainland- Health Organizations	1,288,146	0%	706,981	0%	505,858	0%	656,742	0%	531,480	0%
	Mainland- Non-Profit Organizations	7,448,311	2%	6,484,735	2%	10,512,867	3%	15,607,861	4%	14,414,632	4%
	Miscellaneous	158,121	0%	-	0%	-	0%	-	0%	-	0%
	US Colleges and Universities	11,131,428	3%	14,389,121	4%	10,721,860	3%	13,124,085	3%	9,620,497	2%
Non-Federal Total		**112,521,081**	**26%**	**145,802,671**	**36%**	**127,934,737**	**33%**	**145,468,370**	**34%**	**142,759,321**	**36%**
Grand Total		**435,874,967**	**100%**	**409,783,318**	**100%**	**392,314,955**	**100%**	**425,650,338**	**100%**	**391,334,528**	**100%**

Chart 4: ARRA Awards by Sponsor Type – Fiscal Years 2011 to 2016 (in millions)

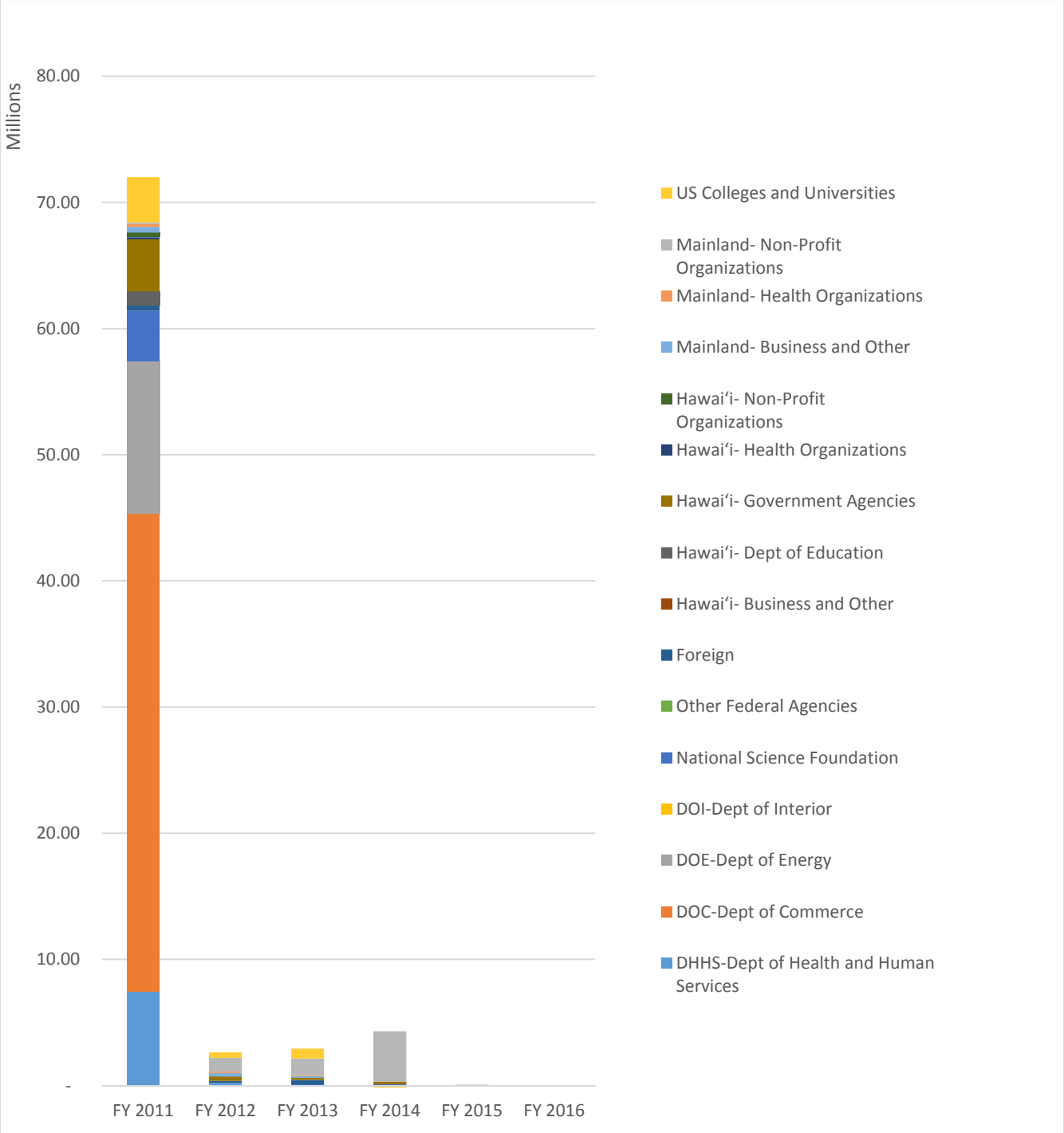


Figure 4: ARRA Awards Summary FYs 2011 to 2016

Source of Funding		2011 Amount Awarded	2011 % of Total	2012 Amount Awarded	2012 % of Total	2013 Amount Awarded	2013 % of Total	2014 Amount Awarded	2014 % of Total	2015 Amount Awarded	2015 % of Total	2016 Amount Awarded	2016 % of Total
Federal	DHHS-Dept of Health and Human Serv	7,438,686	10%	228,515	9%								
	DOC-Dept of Commerce	37,871,520	53%					(10,219)	0%				
	DOE-Dept of Energy	12,084,944	17%										
	DOI-Dept of Interior												
	National Science Foundation	4,010,908	6%			96,468	3%	102,918	3%				
	Other Federal Agencies												
	Subtotal	61,406,058	85%	228,515	9%	96,468	3%	92,699	2%	0		0	
Non-Federal	Foreign	411,973	1%	140,000	5%	344,634	12%						
	Hawaii- Business and Other												
	Hawaii- Dept of Education	1,120,080	2%										
	Hawaii- Government Agencies	4,129,020	6%	356,063	14%	161,586	6%	222,512	5%				
	Hawaii- Health Organizations	173,476	0%	(39,527)	-2%								
	Hawaii- Non-Profit Organizations	363,640	1%										
	Mainland- Business and Other	460,787	1%	278,121	11%	145,843	5%		0%				
	Mainland- Health Organizations	230,236	0%	118,346	5%	56,669	2%		0%				
	Mainland- Non-Profit Organizations	106,744	0%	1,072,487	41%	1,338,124	46%	3,979,886	98%	75,000	100%		
	US Colleges and Universities	3,592,922	5%	444,901	17%	789,101	27%	(230,774)	-6%				
	Subtotal	10,588,878	15%	2,370,391	91%	2,835,957	97%	3,971,624	98%	75,000	100%	0	
	Grand Total	**71,994,936**	**100%**	**2,598,906**	**100%**	**2,932,425**	**100%**	**4,064,323**	**100%**	**75,000**	**100%**	**0**	

Chart 5a: Count of Contract and Grant Proposals Submitted FYs 2015 and 2016

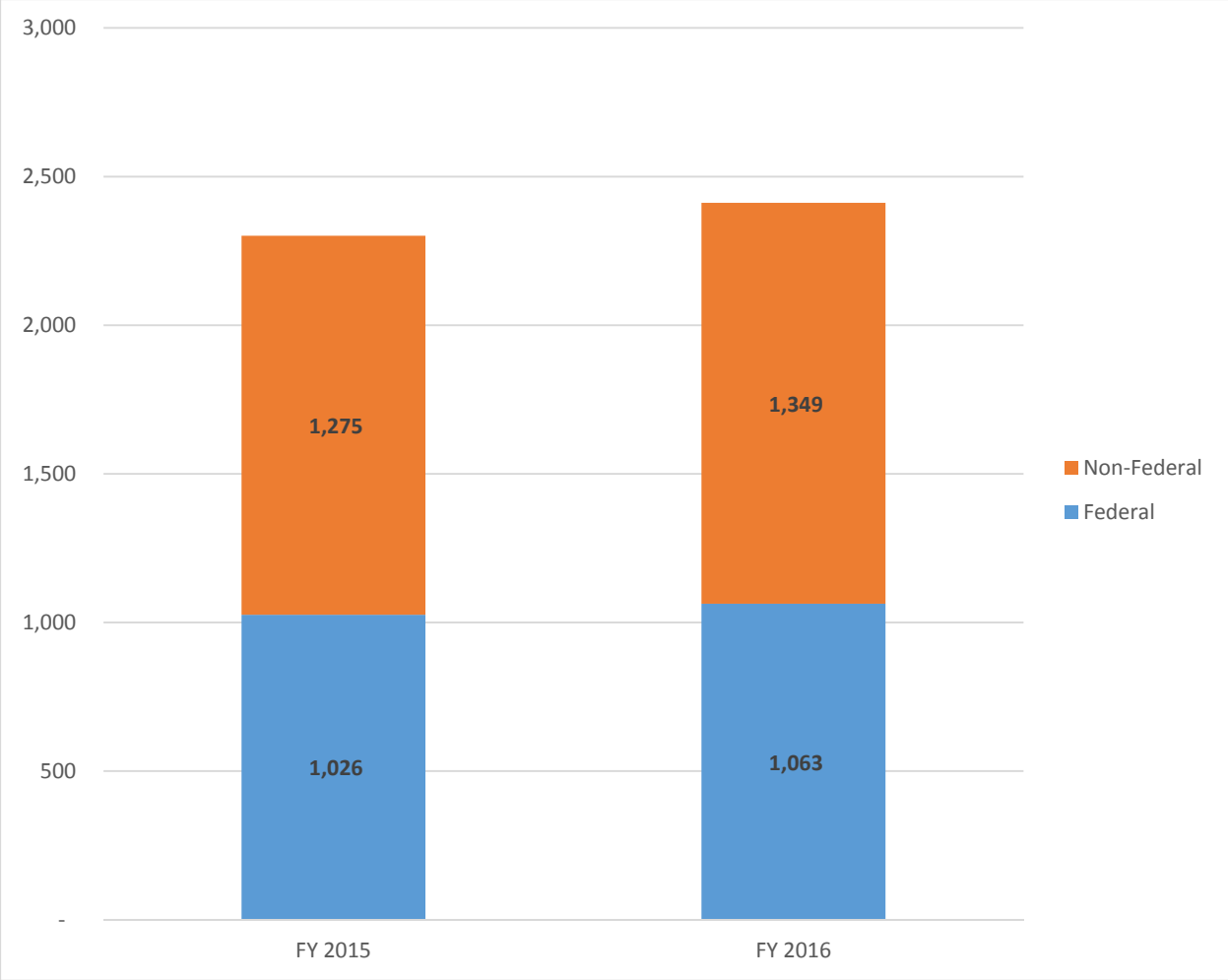


Chart 5b: Total $ Amount of Contract and Grant Proposals Submitted FYs 2015 and 2016 (in millions)

Figure 5: Contract and Grant Proposals Submitted
FYs 2015 and 2016

Source of Funding		FY 2015 Proposals Submitted	FY 2015 Requested Amount	FY 2016 Proposals Submitted	FY 2016 Requested Amount
Federal	Dept of Agriculture	108	31,391,301	78	12,149,231
	Dept of State	9	11,222,034	6	2,085,947
	Dept of Health and Human Services	174	251,730,429	166	181,408,031
	Dept of Commerce	100	27,847,247	112	46,484,696
	Department of Defense	65	57,347,911	70	137,304,930
	Dept of Energy	10	17,983,984	15	9,650,735
	Dept of the Interior	67	8,440,004	64	5,483,979
	Dept of Transportation	1	64,588	5	479,491
	Dept of Education	52	94,852,976	66	91,726,907
	Other Federal Agencies	48	26,866,281	53	11,641,664
	National Aeronautics and Space Administration	112	63,430,666	97	38,373,435
	National Science Foundation	280	168,857,681	331	200,266,917
Federal Total		**1,026**	**760,035,102**	**1,063**	**737,055,963**
Non-Federal	Foreign	79	15,961,343	65	10,741,760
	Hawaii- Business and Other	65	10,347,701	60	13,407,421
	Hawaii- Dept of Education	22	6,811,816	16	6,686,739
	Hawaii- Government Agencies	365	66,842,345	398	62,782,525
	Hawaii- Health Organizations	42	14,955,462	42	9,825,502
	Hawaii- Non-Profit Organizations	285	27,430,546	318	27,024,682
	Mainland- Business and Other	81	11,290,741	99	12,974,558
	Mainland- Health Organizations	31	10,015,137	34	7,209,105
	Mainland- Non-Profit Organizations	137	25,116,418	146	19,610,497
	US Colleges and Universities	168	44,523,961	171	39,074,378
Non-Federal Total		**1,275**	**233,295,470**	**1,349**	**209,337,167**
Grand Total		**2,301**	**993,330,572**	**2,412**	**946,393,130**

Chart 6: Total Contract and Grant Awards – FYs 2003 to 2016 (in millions)

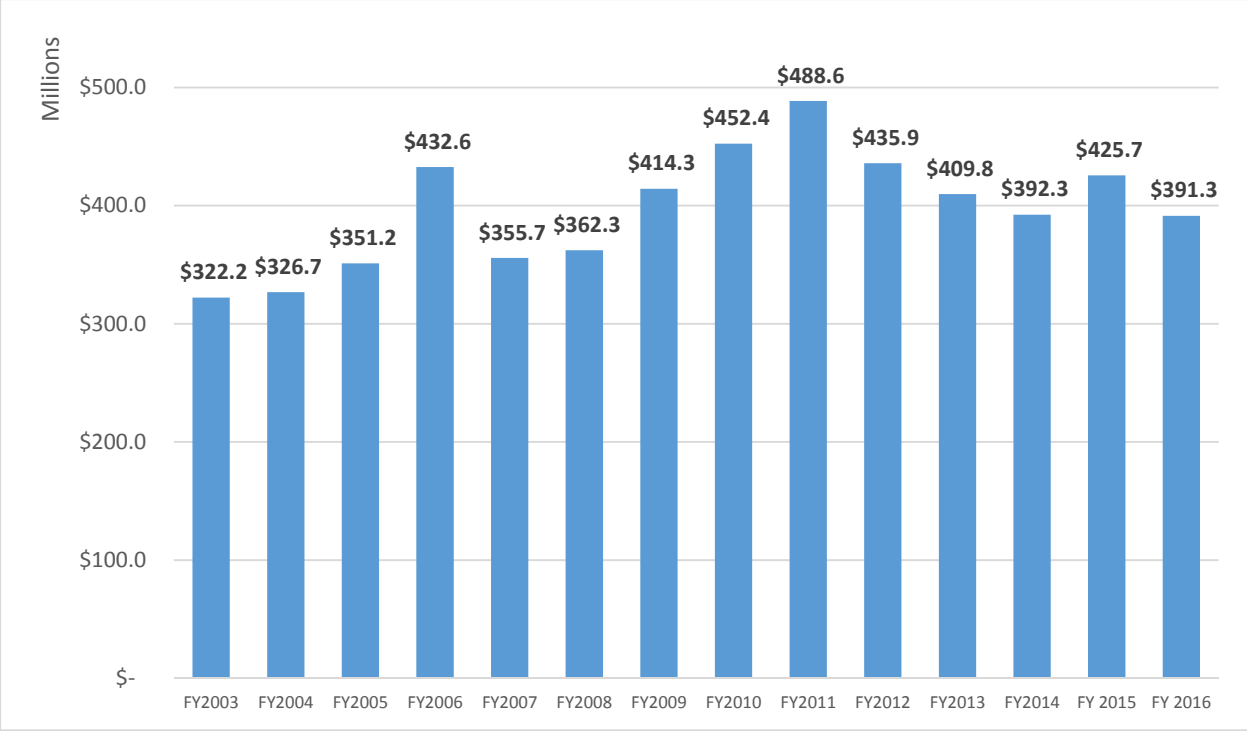


Figure 6: Total Contract and Grant Awards Summary FYs 2003 to 2016

Year	Total Awarded	% Change	Year	Total Awarded	% Change
FY2003	322,220,492	28%	FY2010	452,408,669	9%
FY2004	326,719,448	1%	FY2011	488,597,908	8%
FY2005	351,209,277	7%	FY2012	435,874,967	-11%
FY2006	432,594,275	23%	FY2013	409,783,318	-6%
FY2007	355,724,605	-18%	FY2014	392,314,955	-4%
FY2008	362,289,909	2%	FY 2015	425,650,338	8%
FY2009	414,260,208	14%	FY 2016	391,334,528	-8%

Figure 7: Top Individual Awards in FY 2016

Award Amount	PI Name	Department	Award Sponsor	Title
8,573,577	Richard Rocheleau	Hawaii Natural Energy Institute (HNEI)	DEFENSE, DEPT-NAVY OFC OF NAVAL RSCH	Asia Pacific Research Initiative for Sustainable Energy Systems 2015 (APRISES15)
5,361,300	Alexander Shor	School of Ocean and Earth Science and Technology	NATIONAL SCIENCE FOUNDATION	R/V Kilo Moana Ship Operations 2012-2016
5,135,000	Karl E Kim	Urban and Regional Planning	HOMELAND SECURITY, DEPT-FEMA	National Disaster Preparedness Training Center (NDPTC)
4,960,585	Haosheng Lin	Institute for Astronomy	ASSOCIATION UNIVERSITIES RESEARCH IN ASTRONOMY, INC.	Diffraction Limited Near Infra Red Spectro-Polarimeter Fabrication (Contract No. C22022BN)
4,366,738	Ivica Zalud	Department of Obstetrics, Gynecology and Women's Health	UNIVERSITY CLINICAL EDUCATIONAL & RSCH ASSOC (UCERA)	REIMBURSEMENT AGREEMENT FISCAL YEAR 2016 - AGREEMENT NO. SF16-UCERA-OBGYN
4,121,831	Loic Le Marchand	Cancer Etiology	HEALTH & HUMAN SVC, DEPT-NIH-FED NATL CANCER INST	Obesity, Body Fat Distribution, and Cancer Risk in the Multiethnic Cohort
4,000,000	Gwen Jacobs	Office of the VP for Information Tech/Chief Info Officer	NATIONAL SCIENCE FOUNDATION	EPSCoR RII Track 1: Ike Wai: Insuring Hawaii's Water Future
3,879,211	Loic Le Marchand	Cancer Etiology	HEALTH & HUMAN SVC, DEPT-NIH-FED NATL CANCER INST	Understanding Ethnic Differences in Cancer: The Multiethnic Cohort Study
3,820,489	Alan Tokunaga	Institute for Astronomy	NATIONAL AERONAUT & SPACE ADM	Operations and Maintenance of the Infrared Telescope Facility (IRTF) for NASA Headquarters
3,720,246	Robert Nichols	John A. Burns School of Medicine	HEALTH & HUMAN SVC, DEPT-NIH-FED NATL CTR FOR RSCH RES	INBRE II: Hawaii Statewide Research and Education Partnership (HSREP)
3,477,365	Karen Lee	Hawai'i P-20 Partnerships for Education Office	EDUCATION, DEPT-HI	To Implement 2015 Statewide Longitudinal Data System College and Career Project Outcomes for the Hawaii Department of Education
3,170,464	David Lassner	Maui High Performance Computing Center (MHPCC)	DEFENSE, DEPT-AIR FORCE RESEARCH LABORATORY	Transition of Operation, Management, and Research and Development Effort for the Maui High Performance Computing Center (MHPCC)
3,165,339	Anthony Guerrero	Department of Psychiatry	UNIVERSITY CLINICAL EDUCATIONAL & RSCH ASSOC (UCERA)	REIMBURSEMENT AGREEMENT FISCAL YEAR 2016 - AGREEMENT NO. SF16-UCERA-PSYCH
3,100,000	Jerris Hedges	John A. Burns School of Medicine	HEALTH & HUMAN SVC, DEPT-NIH-FED NATL CTR FOR RSCH RES	RCMI Multidisciplinary and Translational Research Infrastructure Expansion Hawaii (RMATRIX)
3,098,000	Mark Merrifield	Joint Institute for Marine and Atmospheric Research (JIMAR)	COMMERCE, DEPT-NATL NOAA-FED	Sustaining Healthy Coastal Ecosystems

Figure 8: Top 50 PIs for FY 2016

Rank	Investigator	Total Amount Awarded	Unit
1	David Lassner	19,882,183	President, University of Hawai‘i System
2	David Duffy	15,877,594	College of Natural Sciences
3	Mark Merrifield	12,581,608	School of Ocean and Earth Science and Technology
4	Alexander Shor	10,913,199	School of Ocean and Earth Science and Technology
5	Karen Lee	10,249,571	Office of the VP for Academic Planning and Policy
6	Richard Rocheleau	8,739,508	School of Ocean and Earth Science and Technology
7	Loic Le Marchand	8,472,804	University of Hawaii Cancer Center
8	Jerris Hedges	7,383,515	John A. Burns School of Medicine
9	Haosheng Lin	6,286,824	Institute for Astronomy
10	Karl E Kim	5,584,918	College of Social Sciences
11	Clifford Morden	5,296,547	College of Natural Sciences
12	Alan Tokunaga	5,058,048	Institute for Astronomy
13	Gwen Jacobs	4,804,045	Office of the VP for Information Tech/Chief Info Officer
14	Ivica Zalud	4,410,164	John A. Burns School of Medicine
15	Debra Nakama	4,319,673	Chancellor, UH Maui College
16	David Karl	4,165,313	School of Ocean and Earth Science and Technology
17	Joseph Kaholokula	3,974,725	John A. Burns School of Medicine
18	Robert Nichols	3,777,276	John A. Burns School of Medicine
19	Judy Oliveira	3,758,994	Chancellor, UH West Oahu
20	Ardis Eschenberg	3,593,574	Chancellor, Windward Community College
21	Christopher Ostrander	3,254,549	School of Ocean and Earth Science and Technology
22	Anthony Guerrero	3,165,339	John A. Burns School of Medicine
23	Donald Young	2,967,022	College of Education
24	Matthew Church	2,932,197	School of Ocean and Earth Science and Technology
25	Brandi Jean Nalani Balutski	2,730,134	Hawai'inuiakea School of Hawaiian Knowledge
26	Kelley Withy	2,729,581	John A. Burns School of Medicine
27	Marla Berry	2,632,131	John A. Burns School of Medicine
28	Kelly Roberts	2,622,133	College of Education
29	Michael Melzer	2,619,448	College of Tropical Agriculture and Human Resources
30	Alexander Wylie	2,581,963	College of Social Sciences
31	Leon Richards	2,568,736	Chancellor, Kapiolani Community College
32	Darren Lerner	2,422,334	School of Ocean and Earth Science and Technology
33	William Ward	2,182,875	John A. Burns School of Medicine
34	Thomas Ernst	2,145,156	John A. Burns School of Medicine
35	Richard Wainscoat	2,139,288	Institute for Astronomy
36	Neal Palafox	2,105,895	John A. Burns School of Medicine
37	Pohai Kukea Shultz	2,076,483	College of Education
38	William Mihalke	2,042,108	College of Education
39	Mark Lane	2,019,605	Chancellor, Leeward Community College
40	Lee Stein	1,914,340	Chancellor, UH Maui College
41	Kay Fukuda	1,913,619	Vice Chancellor, Students
42	Kenneth Kaneshiro	1,872,875	Pacific Biosciences Research Center
43	Katy Ho	1,770,110	Chancellor, Honolulu Community College
44	Marjorie K L M Mau	1,741,572	John A. Burns School of Medicine
45	Luke Flynn	1,666,721	School of Ocean and Earth Science and Technology
46	Richard Yanagihara	1,665,782	John A. Burns School of Medicine
47	Kelvin Richards	1,620,342	School of Ocean and Earth Science and Technology
48	Charles Kinoshita	1,606,301	College of Tropical Agriculture and Human Resources
49	Brenda Yukari Hernandez	1,592,044	University of Hawaii Cancer Center
50	Edward Ruby	1,528,586	Pacific Biosciences Research Center

Chart 7: Contract and Grant Awards by Campus – FY 2016 (in millions)

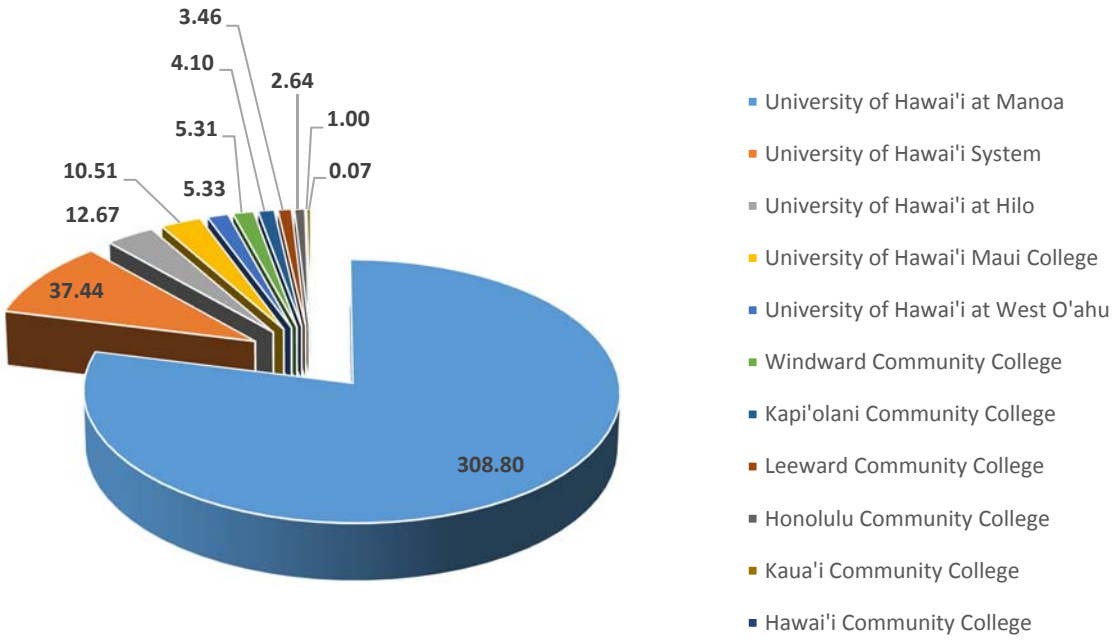
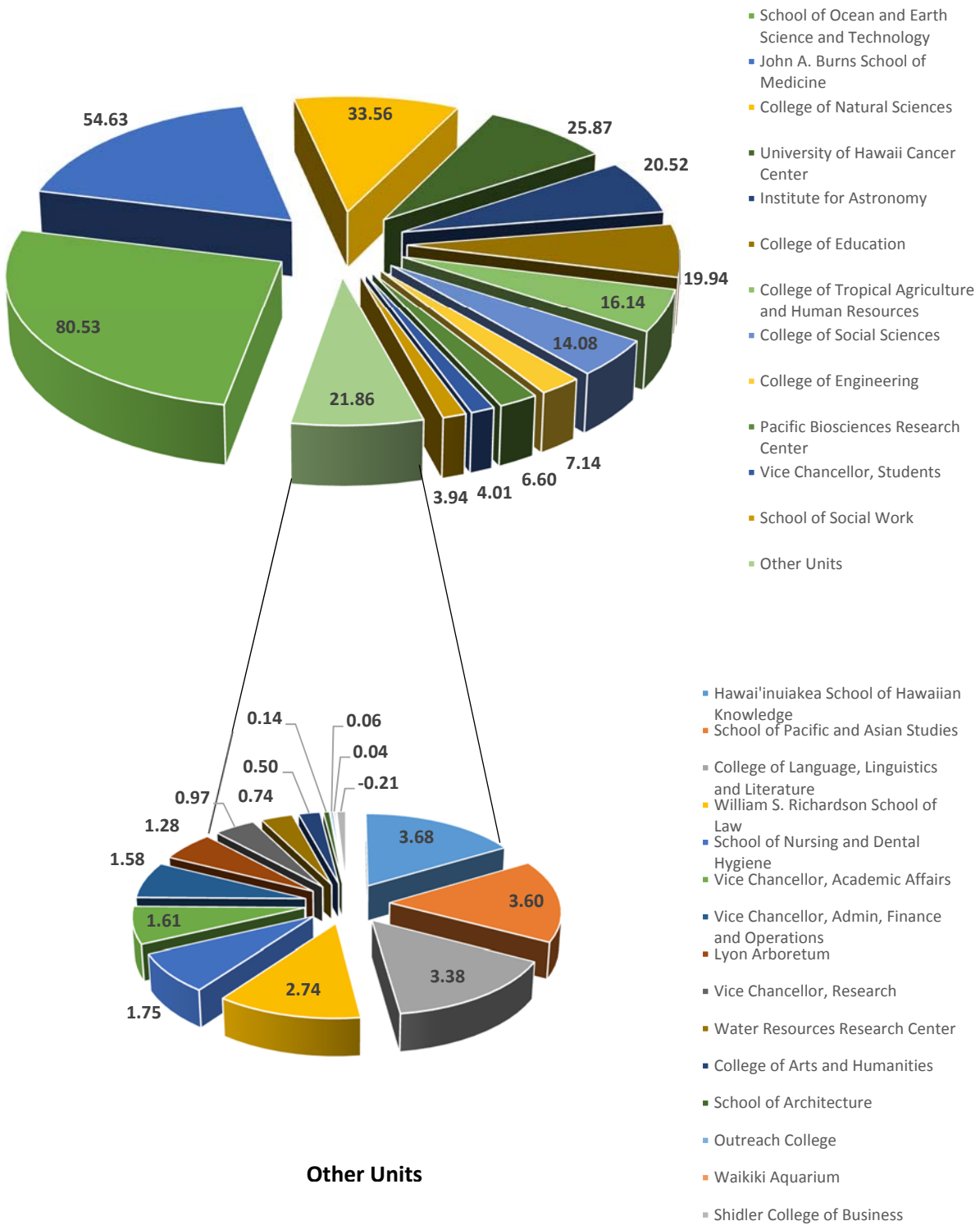


Chart 8: UH Manoa Contract and Grant Awards by College/Department (in millions)



Other Units

Chart 9: UH Hilo Contract and Grant Awards by College/Department (in millions)

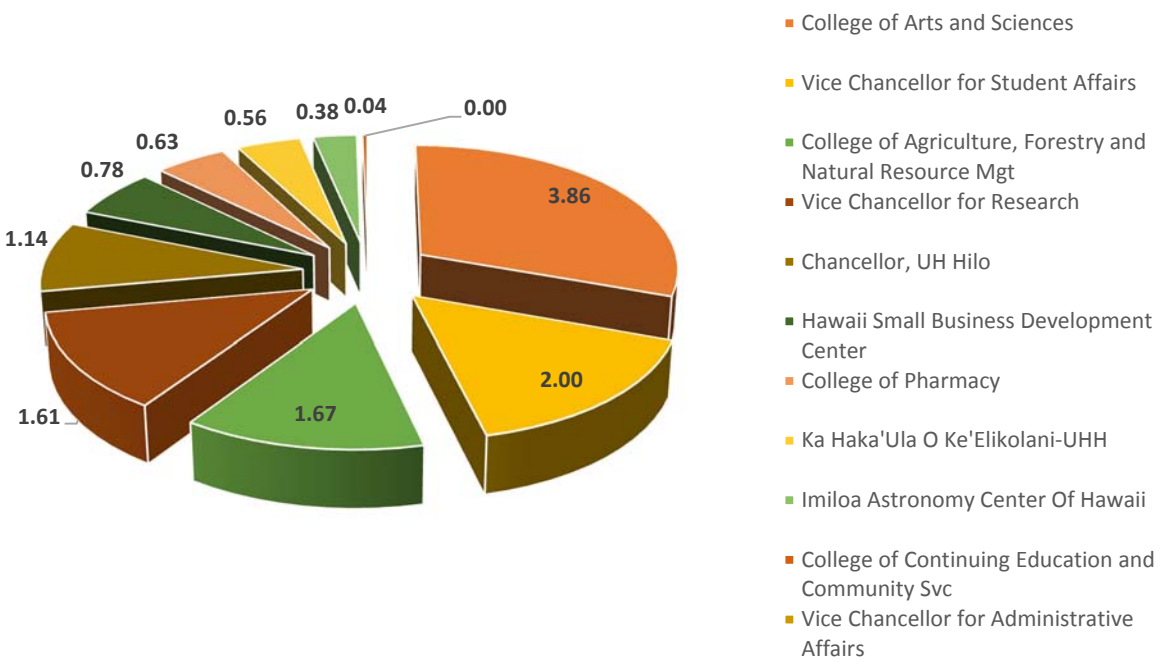


Figure 9: Contract and Grant Awards Summary by Campus and by College/Department for UH Manoa and UH Hilo

Campus	Award Amount	Award Count	% of Total
Hawai'i Community College	68,000	3	0.0%
Honolulu Community College	2,639,133	11	0.7%
Kapi'olani Community College	4,100,121	21	1.0%
Kaua'i Community College	1,004,692	7	0.3%
Leeward Community College	3,455,755	10	0.9%
University of Hawai'i at Hilo	12,669,755	129	3.2%
University of Hawai'i at Manoa	308,802,372	1,562	78.9%
University of Hawai'i at West O'ahu	5,326,027	10	1.4%
University of Hawai'i Maui College	10,510,676	27	2.7%
University of Hawai'i System	37,444,698	60	9.6%
Windward Community College	5,313,299	15	1.4%
Grand Total	**391,334,528**	**1,855**	**100.0%**

UH Manoa College/Department	Award Amount	Award Count	% of Total
College of Arts and Humanities	**502,487**	**14**	**0.2%**
Art and Art History	16,718	2	0.0%
College of Arts and Humanities	6,000	1	0.0%
Communicology	78,445	2	0.0%
History (UH Manoa)	52,445	1	0.0%
Music (UH Manoa)	26,347	2	0.0%
Philosophy (UH Manoa)	305,268	3	0.1%
Theatre and Dance	7,264	2	0.0%
UHM Uehiro Academy for Philosophy and Ethics in Education	10,000	1	0.0%
College of Education	**19,943,721**	**66**	**6.5%**
Center on Disability Studies/University Affiliated Pgms	10,073,720	32	3.3%
College of Education	5,238,470	8	1.7%
Curriculum Research and Development Group	1,057,184	7	0.3%
Department of Curriculum Studies	392,786	3	0.1%
Department of Educational Psychology	29,526	1	0.0%
Department of Kinesiology and Rehabilitation Science	1,157,630	11	0.4%
Department of Special Education	471,794	2	0.2%
Institute for Teacher Education	1,466,451	1	0.5%

UH Manoa College/Department	Award Amount	Award Count	% of Total
Office of Student Academic Services	56,160	1	0.0%
College of Engineering	**7,142,117**	**52**	**2.3%**
Civil and Environmental Engineering	1,614,093	12	0.5%
College of Engineering	983,203	6	0.3%
Electrical Engineering	1,415,886	15	0.5%
Hawaii Center for Advanced Communications	366,367	3	0.1%
Mechanical Engineering	2,762,568	16	0.9%
College of Language, Linguistics and Literature	**3,378,932**	**23**	**1.1%**
Center for Language and Technology	626,929	2	0.2%
College of Language, Linguistics and Literature	214,961	2	0.1%
Department of East Asian Languages and Literature	1,450,455	6	0.5%
Department of English	39,000	5	0.0%
Department of Indo-Pacific Languages	161,400	2	0.1%
Department of Linguistics	872,790	4	0.3%
Department of Second Language Studies	8,097	1	0.0%
Dept of Languages and Literatures of Europe and the Americas	5,300	1	0.0%
College of Natural Sciences	**33,558,922**	**274**	**10.9%**
College of Natural Sciences	16,000	1	0.0%
Department of Biology (Biology Program)	1,478,165	14	0.5%
Department of Botany	22,044,577	187	7.1%
Department of Chemistry	2,124,064	15	0.7%
Department of Mathematics	328,205	8	0.1%
Department of Microbiology	1,282,895	5	0.4%
Department of Physics and Astronomy	3,659,143	28	1.2%
Department of Zoology	19,443	2	0.0%
Information and Computer Sciences	2,606,430	14	0.8%
College of Social Sciences	**14,075,445**	**77**	**4.6%**
College of Social Sciences	57,108	1	0.0%
Department of Anthropology	284,847	3	0.1%
Economics (UH Manoa)	117,004	6	0.0%
Ethnic Studies	6,875	2	0.0%
Geography (UH Manoa)	774,872	9	0.3%
Psychology (UH Manoa)	1,831,147	8	0.6%
School of Communications	92,031	4	0.0%
Social Science Research Institute	5,113,943	33	1.7%
Social Sciences Public Policy Center	-	1	0.0%

UH Manoa College/Department	Award Amount	Award Count	% of Total
Sociology (UH Manoa)	127,700	6	0.0%
Urban and Regional Planning	5,669,918	4	1.8%
College of Tropical Agriculture and Human Resources	**16,142,548**	**157**	**5.2%**
Agricultural Diagnostic Service Center	129,974	1	0.0%
Center on the Family	896,704	9	0.3%
College of Tropical Agriculture and Human Resources	2,365,261	8	0.8%
Cooperative Extension	187,000	2	0.1%
Family and Consumer Sciences	129,680	6	0.0%
Hawaii County	34,930	3	0.0%
Human Nutrition, Food and Animal Sciences	697,943	10	0.2%
Kauai County	13,800	1	0.0%
Maui County	169,194	2	0.1%
Molecular Biosciences and Bioengineering	844,713	10	0.3%
Natural Resources and Environmental Mgt	2,543,005	30	0.8%
Oahu County	629,215	4	0.2%
Office of The Assoc Dean for Academic and Student Affairs	116,800	2	0.0%
Plant and Environmental Protection Sciences	6,276,939	54	2.0%
Tropical Plant and Soil Science	1,107,390	15	0.4%
Hawai'inuiakea School of Hawaiian Knowledge	**3,679,757**	**7**	**1.2%**
Hawai'inuiakea School of Hawaiian Knowledge	3,608,000	6	1.2%
Kamakakuokalani Center for Hawaiian Studies	71,757	1	0.0%
Institute for Astronomy	**20,520,303**	**72**	**6.6%**
Institute for Astronomy	20,520,303	72	6.6%
John A. Burns School of Medicine	**54,629,071**	**188**	**17.7%**
Center for Cardiovascular Research	90,000	1	0.0%
Department of Anatomy, Biochemistry, and Physiology	119,513	4	0.0%
Department of Cell and Molecular Biology	4,167,717	14	1.3%
Department of Complementary and Alternative Medicine	2,803,342	8	0.9%
Department of Family Medicine and Community Health	2,210,860	13	0.7%
Department of Geriatric Medicine	2,048,950	3	0.7%
Department of Medicine	7,802,816	30	2.5%

UH Manoa College/Department	Award Amount	Award Count	% of Total
Department of Native Hawaiian Health	6,115,649	24	2.0%
Department of Obstetrics, Gynecology and Women's Health	4,857,899	9	1.6%
Department of Pediatrics	3,372,679	16	1.1%
Department of Psychiatry	4,779,053	12	1.5%
Department of Surgery	1,906,598	10	0.6%
Department of Tropical Medicine, Medical Micro and Pharm	3,590,309	25	1.2%
Institute for Biogenesis Research	2,660,730	6	0.9%
John A. Burns School of Medicine	7,244,269	10	2.3%
Magnetic Resonance Imaging Center	158,687	1	0.1%
Native Hawaiian Center of Excellence	700,000	2	0.2%
Lyon Arboretum	**1,276,866**	**8**	**0.4%**
Lyon Arboretum	1,276,866	8	0.4%
Outreach College	**55,761**	**2**	**0.0%**
Community Programs	52,840	1	0.0%
Non-Credit Programs (UH Manoa)	2,921	1	0.0%
Pacific Biosciences Research Center	**6,595,821**	**42**	**2.1%**
Pacific Biosciences Research Center	6,595,821	42	2.1%
School of Architecture	**139,696**	**1**	**0.0%**
School of Architecture	139,696	1	0.0%
School of Nursing and Dental Hygiene	**1,746,083**	**8**	**0.6%**
Department of Nursing	1,611,083	6	0.5%
School of Nursing and Dental Hygiene	135,000	2	0.0%
School of Ocean and Earth Science and Technology	**80,532,485**	**348**	**26.1%**
Center for Microbial Oceanography, Research and Edu (C-MORE)	4,131,330	9	1.3%
Department of Atmospheric Sciences	1,338,684	10	0.4%
Department of Geology and Geophysics	3,122,001	27	1.0%
Department of Ocean and Resources Engineering	985,073	8	0.3%
Department of Oceanography	10,461,572	42	3.4%
Hawaii Institute of Geophysics and Planetology (HIGP)	7,799,444	74	2.5%
Hawaii Institute of Marine Biology (HIMB)	4,395,200	36	1.4%
Hawaii Natural Energy Institute (HNEI)	11,023,196	16	3.6%
International Pacific Research Center (IPRC)	4,372,773	35	1.4%
Joint Institute for Marine and Atmospheric Research (JIMAR)	16,724,648	47	5.4%

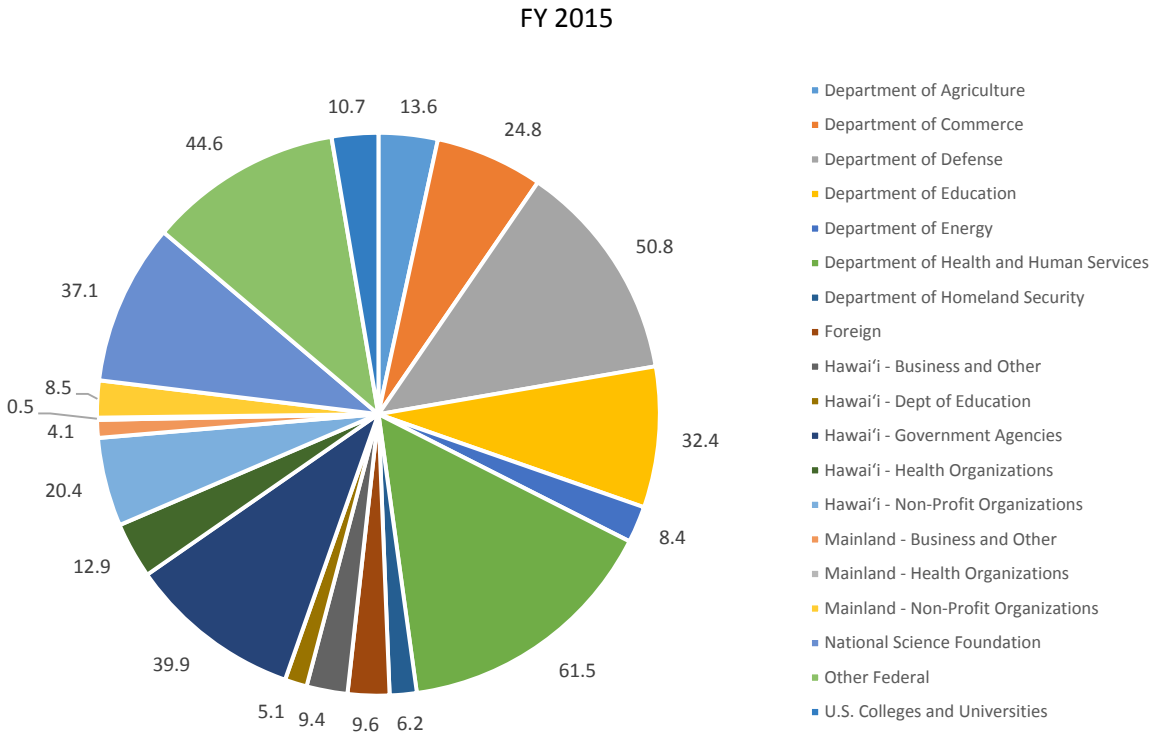
UH Manoa College/Department	Award Amount	Award Count	% of Total
School of Ocean and Earth Science and Technology	11,499,675	19	3.7%
Sea Grant College Program	4,582,437	24	1.5%
University Marine Center/Ship Operations	96,452	1	0.0%
School of Pacific and Asian Studies	**3,598,934**	**20**	**1.2%**
Center for Chinese Studies	244,674	6	0.1%
Center for Japanese Studies	713,000	4	0.2%
Center for Korean Studies	182,860	2	0.1%
Center for Pacific Islands Studies	582,000	3	0.2%
Center for Southeast Asian Studies	920,400	3	0.3%
School of Pacific and Asian Studies	956,000	2	0.3%
School of Social Work	**3,938,490**	**33**	**1.3%**
Dept of Public Health Sciences and Epidemiology	516,966	9	0.2%
Office of Public Health Studies	2,813,681	15	0.9%
School of Social Work	607,843	9	0.2%
Shidler College of Business	**(208,957)**	**4**	**-0.1%**
Department of Financial Economics and Institutions	54,000	1	0.0%
Department of Management and Industrial Relations	198,720	1	0.1%
Shidler College of Business	(461,677)	2	-0.1%
University of Hawaii Cancer Center	**25,874,191**	**91**	**8.4%**
Cancer Etiology	12,808,080	32	4.1%
Clinical Sciences	3,814,000	24	1.2%
Natural Products	2,334,195	14	0.8%
Social and Behavioral Sciences	696,043	5	0.2%
University of Hawaii Cancer Center	6,221,873	16	2.0%
Vice Chancellor, Academic Affairs	**1,612,550**	**9**	**0.5%**
Graduate Education	1,126,000	2	0.4%
International & Exch Prog	48,864	1	0.0%
Library (UH Manoa)	13,258	3	0.0%
Service Learning	41,899	2	0.0%
Undergraduate Education	382,529	1	0.1%
Vice Chancellor, Admin, Finance and Operations	**1,581,514**	**2**	**0.5%**
Facilities Management	1,581,514	2	0.5%
Vice Chancellor, Research	**969,481**	**1**	**0.3%**
Center on Aging	969,481	1	0.3%
Vice Chancellor, Students	**4,005,474**	**14**	**1.3%**
Health & Wellness	35,000	3	0.0%

UH Manoa College/Department	Award Amount	Award Count	% of Total
Student Equity Excel & Diversity	3,312,042	8	1.1%
Women's Center	658,432	3	0.2%
Waikiki Aquarium	**37,699**	**1**	**0.0%**
Waikiki Aquarium	37,699	1	0.0%
Water Resources Research Center	**735,955**	**12**	**0.2%**
Water Resources Research Center	735,955	12	0.2%
William S. Richardson School of Law	**2,737,026**	**36**	**0.9%**
William S. Richardson School of Law	2,737,026	36	0.9%
Grand Total	**308,802,372**	**1,562**	**100.0%**

UH Hilo College/Department	Award Amount	Award Count	% of Total
Chancellor, UH Hilo	**1,144,232**	**6**	**9.0%**
Chancellor, UH Hilo	1,144,232	6	9.0%
College of Agriculture, Forestry and Natural Resource Mgt	**1,674,869**	**15**	**13.2%**
College of Agriculture, Forestry and Natural Resource Mgt	905,531	8	7.1%
Pacific Aquaculture and Coastal Resources Ctr	769,338	7	6.1%
College of Arts and Sciences	**3,864,553**	**34**	**30.5%**
Anthropology (UH Hilo)	487,828	3	3.9%
Art (UH Hilo)	10,000	1	0.1%
Biology (UH Hilo)	366,871	6	2.9%
College of Arts and Sciences	225,000	1	1.8%
Geography (UH Hilo)	59,338	2	0.5%
Geology-Geophysics	9,841	1	0.1%
Humanities Division	11,432	1	0.1%
Marine Science	70,200	3	0.6%
Mathematics (UH Hilo)	1,105	1	0.0%
Natural Sciences Division	1,807,214	9	14.3%
Physics and Astronomy	609,486	4	4.8%
Psychology (UH Hilo)	6,238	1	0.0%
Social Sciences Division	200,000	1	1.6%
College of Continuing Education and Community Svc	**35,039**	**3**	**0.3%**
College of Continuing Education and Community Svc	35,039	3	0.3%
College of Pharmacy	**629,526**	**13**	**5.0%**
College of Pharmacy	190,600	4	1.5%

UH Hilo College/Department	Award Amount	Award Count	% of Total
Pharmaceutical Sciences	428,926	8	3.4%
Pharmacy Practice	10,000	1	0.1%
Hawaii Small Business Development Center	**775,150**	**3**	**6.1%**
Hawaii Small Business Development Center	775,150	3	6.1%
Imiloa Astronomy Center Of Hawaii	**378,393**	**4**	**3.0%**
Imiloa Astronomy Center Of Hawaii	378,393	4	3.0%
Ka Haka'Ula O Ke'Elikolani-UHH	**557,887**	**9**	**4.4%**
Hale Kuamo'o Center	150,000	2	1.2%
Ka Haka'Ula O Ke'Elikolani-UHH	407,887	7	3.2%
Vice Chancellor for Administrative Affairs	**3,925**	**2**	**0.0%**
Vice Chancellor for Administrative Affairs	3,925	2	0.0%
Vice Chancellor for Research	**1,606,691**	**31**	**12.7%**
Vice Chancellor for Research	1,606,691	31	12.7%
Vice Chancellor for Student Affairs	**1,999,490**	**9**	**15.8%**
Upward Bound	1,044,120	5	8.2%
Vice Chancellor for Student Affairs	955,370	4	7.5%
Grand Total	**12,669,755**	**129**	**100.0%**

Chart 10: Total Contract and Grant Expenditures by Source of Funds FYs 2015 and 2016 (in millions)



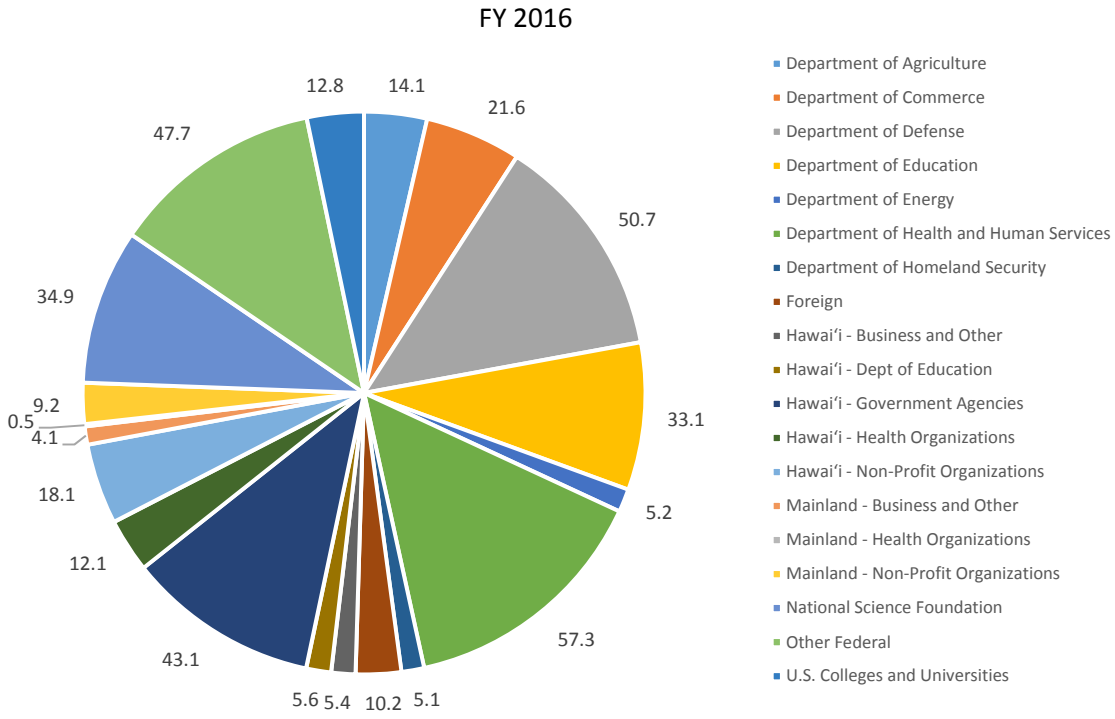


Figure 10: Total Contract and Grant Expenditures by Source of Funds FY 2016

Source of Funds	FY 2015	% of Total	FY 2016	% of Total
Department of Agriculture	$ 13,602,896.15	3%	$ 14,142,650.17	4%
Department of Commerce	$ 24,791,873.61	6%	$ 21,609,517.04	6%
Department of Defense	$ 50,801,318.99	13%	$ 50,699,634.71	13%
Department of Education	$ 32,431,562.65	8%	$ 33,119,583.86	8%
Department of Energy	$ 8,377,538.44	2%	$ 5,232,275.42	1%
Department of Health and Human Services	$ 61,546,255.20	15%	$ 57,280,832.73	15%
Department of Homeland Security	$ 6,202,696.43	2%	$ 5,103,423.90	1%
National Science Foundation	$ 37,102,370.58	9%	$ 34,910,031.98	9%
Other Federal	$ 44,577,339.24	11%	$ 47,650,994.60	12%
Foreign	$ 9,602,090.32	2%	$ 10,172,939.44	3%
Hawai‘i - Business and Other	$ 9,361,115.06	2%	$ 5,370,518.43	1%
Hawai‘i - Dept of Education	$ 5,096,928.57	1%	$ 5,634,532.42	1%
Hawai‘i - Government Agencies	$ 39,948,931.47	10%	$ 43,118,833.92	11%
Hawai‘i - Health Organizations	$ 12,858,297.99	3%	$ 12,077,216.67	3%
Hawai‘i - Non-Profit Organizations	$ 20,407,122.89	5%	$ 18,070,393.81	5%
Mainland - Business and Other	$ 4,095,729.10	1%	$ 4,131,742.36	1%
Mainland - Health Organizations	$ 540,803.35	0%	$ 483,359.75	0%
Mainland - Non-Profit Organizations	$ 8,494,929.53	2%	$ 9,243,855.81	2%
U.S. Colleges and Universities	$ 10,667,627.59	3%	$ 12,799,790.60	3%
GRAND TOTAL	**$ 400,507,427.16**	**100%**	**$ 390,852,127.62**	**100%**

Summary:

- Expenditures declined in FY 2016 to approximately $391 million
- The largest source is the Department of Health and Human Services (15% of the total), followed by the Department of Defense (13% of the total).

Chart 10a: FYs 2011 to 2016 ARRA Expenditures by Source of Funds (in millions)

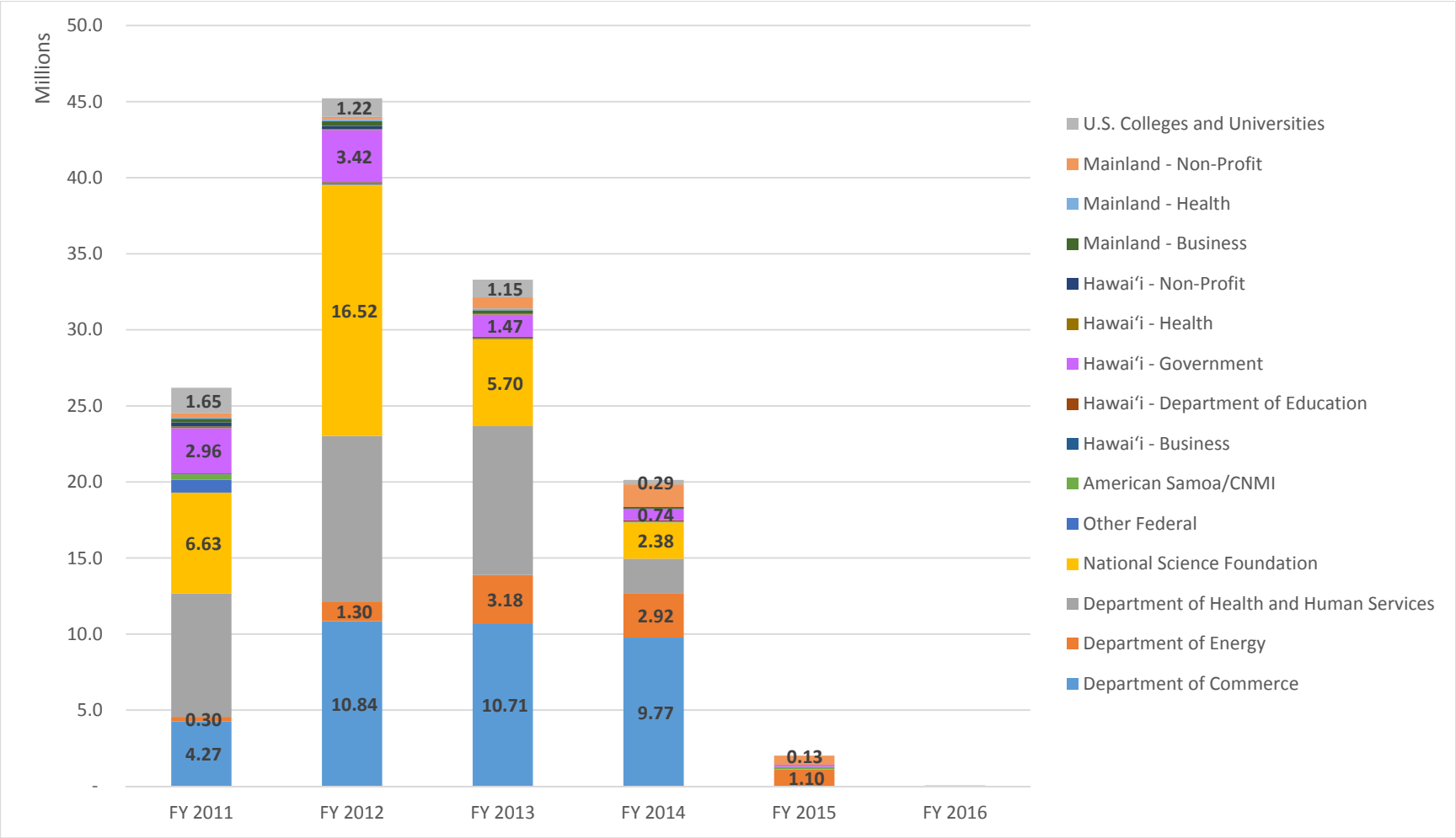


Figure 10a: Total Contract and Grant ARRA Expenditures by Source of Funds
FYs 2011 to 2016

	FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016	
Source of Funds	**Amount Expended**	**% of Total**	**Amount Expended**	**% of Total**	**Amount Expended**	**% of Total**	**Amount Expended**	**% of Total**	**Amount Expended**	**% of Total**	**Amount Expended**	**% of Total**
Department of Commerce	4,265,074	16%	10,844,984	24%	10,706,254	32%	9,769,432	49%	-	0%	-	0%
Department of Energy	296,825	1%	1,296,178	3%	3,177,649	10%	2,922,132	15%	1,097,437	55%	-	0%
Department of Health and Human Services	8,107,154	31%	10,880,885	24%	9,783,842	29%	2,260,482	11%	8,954	0%	-	0%
National Science Foundation	6,634,696	25%	16,523,432	37%	5,704,125	17%	2,381,758	12%	-	0%	-	0%
Other Federal	850,603	3%	108,481	0%	-	0%	-	0%	-	0%	-	0%
American Samoa/CNMI	342,599	1%	32,520	0%	62,555	0%	63,164	0%	166,083	8%	-	0%
Hawai'i - Business	21,404	0%	172	0%	-	0%	-	0%	-	0%	-	0%
Hawai'i - Department of Education	50,115	0%	28,839	0%	103,425	0%	78,293	0%	-	0%	-	0%
Hawai'i - Government	2,964,773	11%	3,424,288	8%	1,467,617	4%	743,131	4%	133,776	7%	-	0%
Hawai'i - Health	116,957	0%	60,322	0%	42,949	0%	-	0%	-	0%	-	0%
Hawai'i - Non-Profit	262,895	1%	207,347	0%		0%	23,397	0%	-	0%	1,102	2%
Mainland - Business	243,233	1%	317,938	1%	234,315	1%	107,671	1%	-	0%	-	0%
Mainland - Health	72,418	0%	121,666	0%	115,509	0%	-	0%	-	0%	-	0%
Mainland - Non-Profit	307,182	1%	154,938	0%	740,465	2%	1,493,685	7%	600,096	30%	44,588	98%
U.S. Colleges and Universities	1,654,720	6%	1,217,783	3%	1,153,833	3%	288,558	1%	-	0%	-	0%
TOTAL ARRA Expenditures	**26,190,648**	**100%**	**45,219,773**	**100%**	**33,292,537**	**100%**	**20,131,703**	**100%**	**2,006,346**	**100%**	**45,690**	**100%**

Chart 11: FY 2016 Total Contract and Grant Expenditures by Type of Program and Source of Funding (in millions)

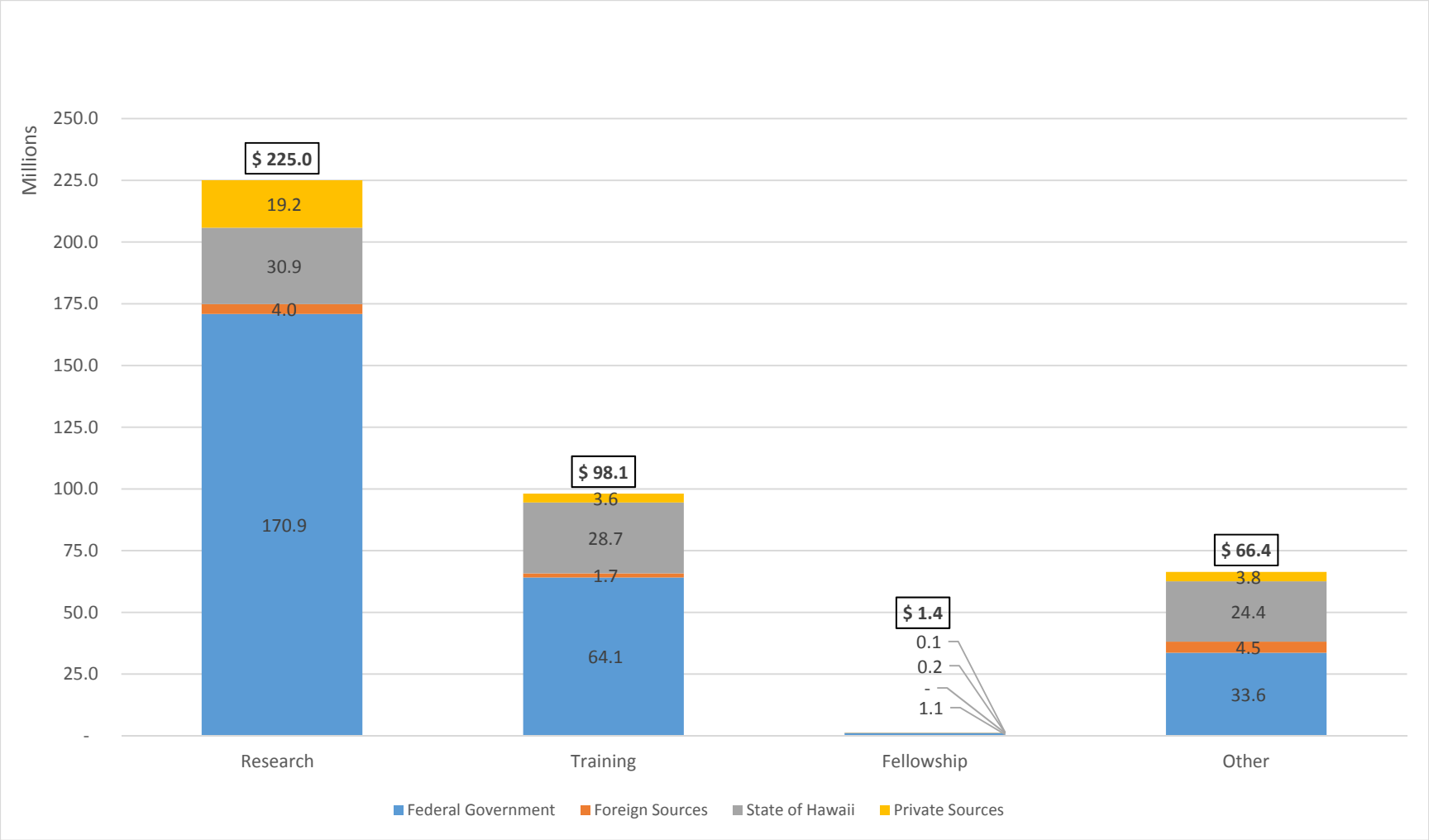


Figure 11: Total Contract and Grant Expenditures by Type of Program and Source of Funding Fiscal Year 2016

	Source of Funding	Research	Training	Fellowship	Other	Total	% of total
Federal Government	Department of Agriculture	11,786,300	2,275,639	-	80,711	14,142,650	4%
	Department of Commerce	18,769,198	374,722	115,425	2,350,172	21,609,517	6%
	Department of Defense - Air Force	10,175,251	-	-	-	10,175,251	3%
	Department of Defense - Army	5,196,174	1,499	-	56,601	5,254,274	1%
	Department of Defense - Navy	19,395,340	32,076	-	2,664,085	22,091,501	6%
	Department of Education	570,979	29,602,859	-	2,945,746	33,119,584	8%
	Department of Energy	5,202,481	-	-	29,794	5,232,275	1%
	Department of Health and Human Services	47,288,450	7,335,537	-	2,656,846	57,280,833	15%
	Department of Homeland Security	44,362	5,059,062	-	-	5,103,424	1%
	Department of Interior	7,056,511	82,486	-	575,204	7,714,201	2%
	Department of State	513,398	108,423	-	-	621,821	0%
	Department of Transportation	30,494	-	-	-	30,494	0%
	Department of Veterans Affairs	16,360	51,574	-	-	67,934	0%
	Environmental Protection Agency	66,197	31,867	625	1,013	99,702	0%
	National Aeronautics and Space Administration	11,747,033	1,274,125	98,515	9,146,215	22,265,888	6%
	National Science Foundation	19,905,854	5,387,726	877,467	8,738,985	34,910,032	9%
	Other Department of Defense	12,878,978	46,052	-	253,578	13,178,609	3%
	Other Federal	232,130	12,475,138	-	4,143,687	16,850,954	4%
Federal Government Total		**170,875,489**	**64,138,786**	**1,092,032**	**33,642,637**	**269,748,944**	**69%**
Foreign Sources	Foreign Sources	4,013,382	1,673,403	-	4,486,155	10,172,939	3%
Foreign Sources Total		**4,013,382**	**1,673,403**	**-**	**4,486,155**	**10,172,939**	**3%**
State of Hawaii	Hawai'i - Business and Other	1,548,823	3,160,265	-	661,430	5,370,518	1%
	Hawai'i - Department of Education	1,876	1,767,592	-	3,865,064	5,634,532	1%
	Hawai'i - Government Agencies	20,203,834	8,391,909	-	14,523,091	43,118,834	11%
	Hawai'i - Health Organizations	641,667	11,128,762	-	306,787	12,077,217	3%
	Hawai'i - Non- Profit Organizations	8,500,729	4,281,559	216,902	5,071,203	18,070,394	5%
State of Hawaii Total		**30,896,930**	**28,730,088**	**216,902**	**24,427,576**	**84,271,495**	**22%**
Private Sources	Mainland - Business and Other	3,410,581	235,738	-	485,423	4,131,742	1%
	Mainland - Health Organizations	369,733	97,226	-	16,400	483,360	0%
	Mainland - Non-Profit Organizations	6,251,939	2,331,719	8,572	651,626	9,243,856	2%
	U.S. Colleges and Universities	9,198,797	904,991	45,000	2,651,002	12,799,791	3%
Private Sources Total		**19,231,051**	**3,569,675**	**53,572**	**3,804,451**	**26,658,749**	**7%**
Grand Total		**225,016,852**	**98,111,951**	**1,362,506**	**66,360,819**	**390,852,128**	**100%**

Chart 12: Total FTE Paid from Contract and Grant Funds
FYs 2015 and 2016

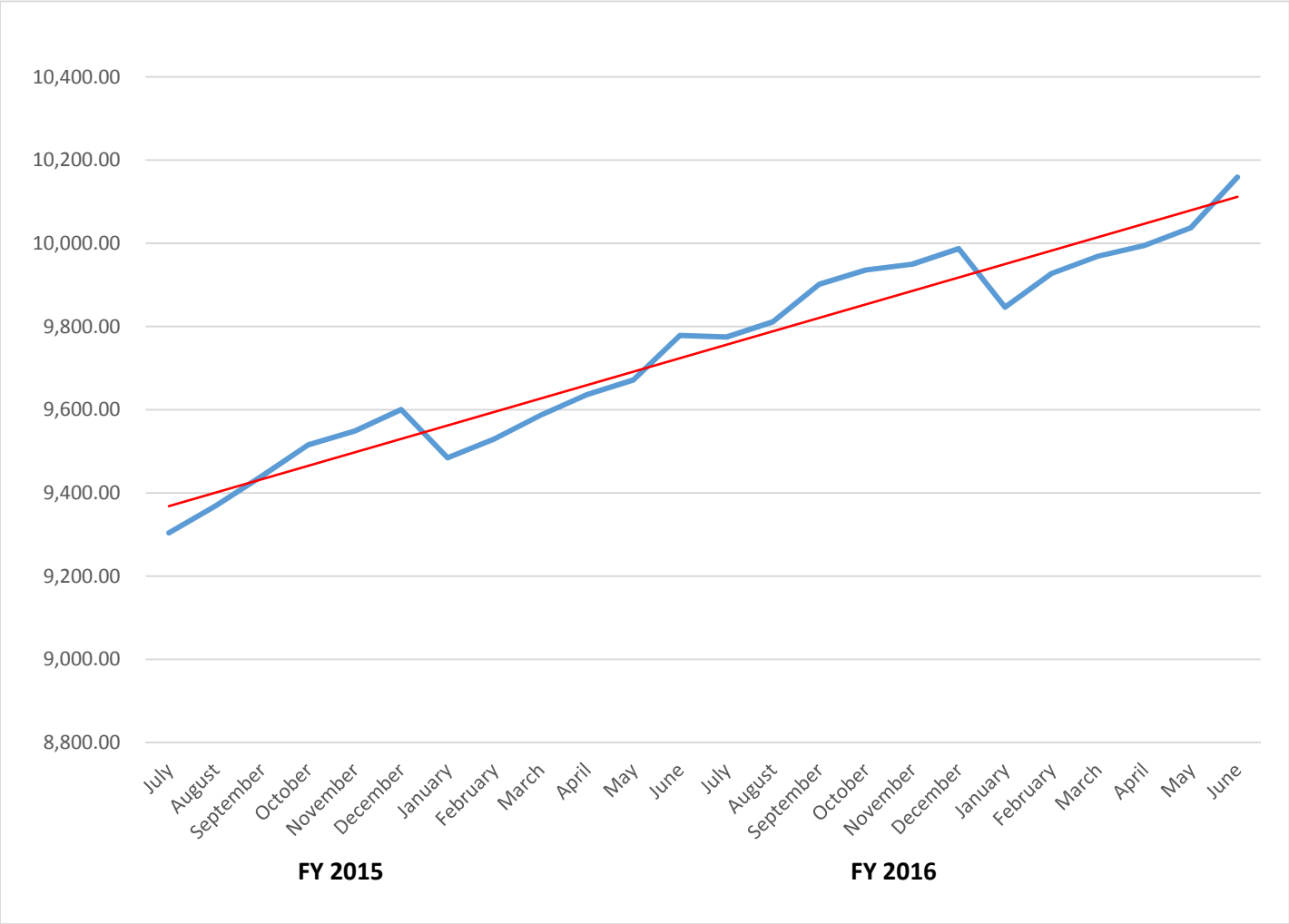
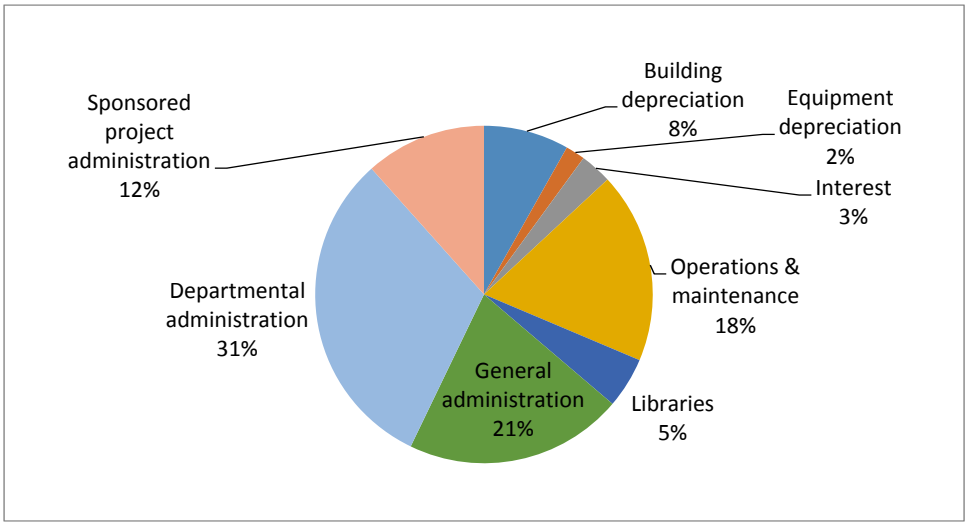


Figure 12: Total FTE Paid from Contract and Grant Funds FYs 2015 and 2016

Month	Year to Date FY 15	Year to Date FY 16
July	9,303.97	9,774.63
August	9,368.76	9,811.06
September	9,440.48	9,901.63
Monthly Average Q1	**9,371.07**	**9,829.11**
October	9,515.47	9,935.74
November	9,548.79	9,949.81
December	9,600.40	9,986.98
Monthly Average Q2	**9,554.89**	**9,957.51**
January	9,484.32	9,846.54
February	9,529.40	9,927.20
March	9,586.76	9,968.78
Monthly Average Q3	**9,533.49**	**9,914.17**
April	9,636.26	9,994.65
May	9,671.51	10,037.40
June	9,778.40	10,158.76
Monthly Average Q4	**9,695.39**	**10,063.60**
Monthly Average FY	**9,538.71**	**9,941.10**
Change (Number)		**402.39**
Change (Percent)		**4.22%**

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

Chart 13: Breakdown of Facilities and Administrative Costs by Major Category FY 2011 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 one third 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 2011). Thirty-three 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 Subjects, Institutional Animal Care & Compliance, and Research Corporation of the University of Hawai‘i. Of the 36% spent on facilities, half 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 $48 million in F&A cost reimbursements in FY 2016. 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 14: Total Royalties Received from University Patents – FYs 2012 to 2016 (in thousands)

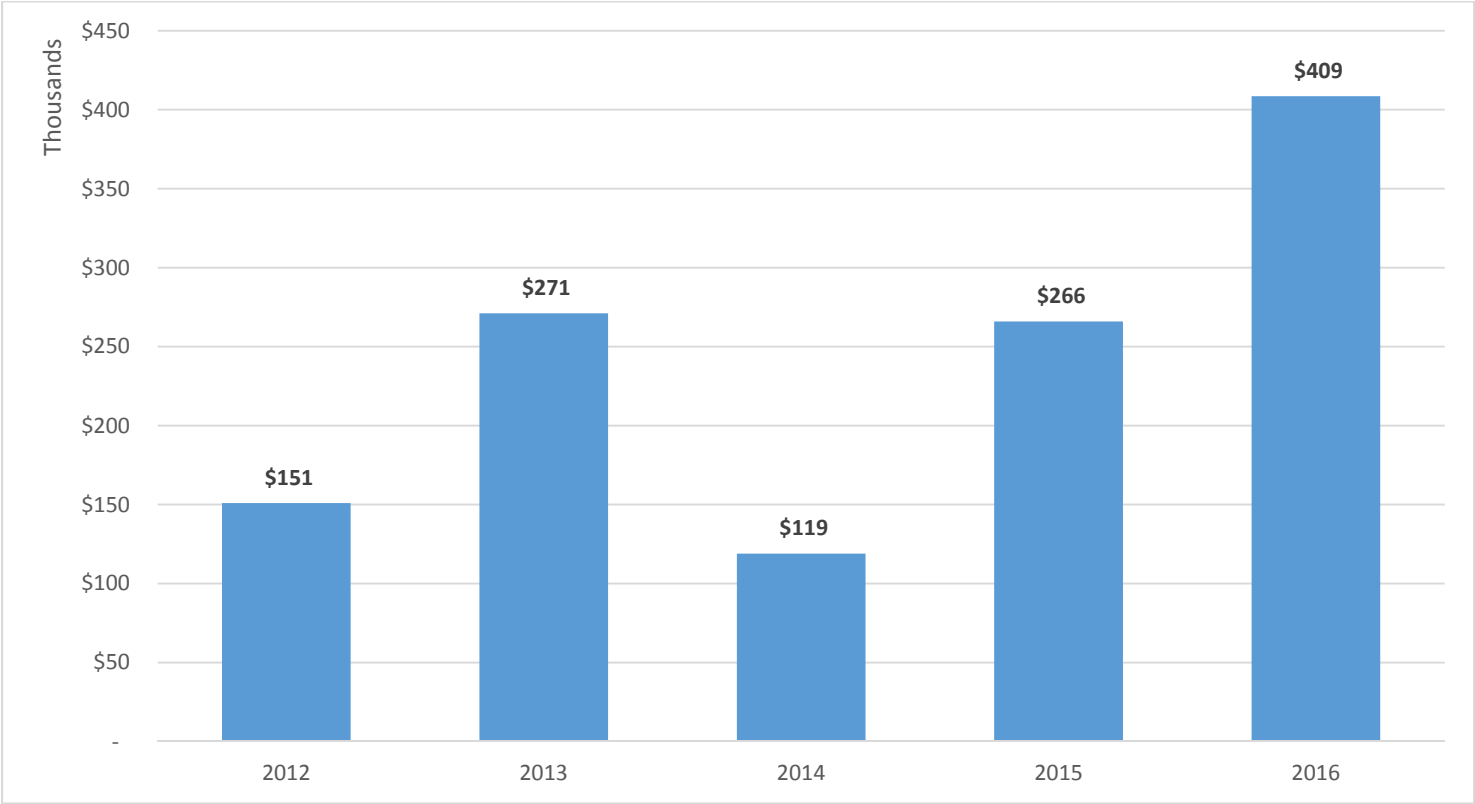


Figure 13: Total Royalties Received from University Patents – FYs 2012 to 2016

Fiscal Year	Royalties
2012	$ 150,950
2013	$ 271,064
2014	$ 118,991
2015	$ 265,974
2016	$ 408,513
Total Royalties	**$ 1,215,492**

Appendix 1: Source of Awards

FEDERAL

Dept of Agriculture

Agriculture, Dept - Animal and Plant Health Inspection Service

AGRICULTURE, DEPT, FOREST SVC-FED

AGRICULTURE, DEPT-AGRI RSCH SVC-FED

AGRICULTURE, DEPT-FED

AGRICULTURE, DEPT-NATL INS FOOD AND AGRICULTURE

AGRICULTURE, DEPT-NATRL RES SVC-FED

Dept of State

STATE, DEPT-US AGENCY INTL DEV-FED USAID

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-CHRONIC DISEASE PREVENTION & HEALTH PROMO

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

HEALTH & HUMAN SVC, DEPT-FED

HEALTH & HUMAN SVC, DEPT-HRSA-FED

HEALTH & HUMAN SVC, DEPT-HRSA-FED ADV NURSE ED PGM

HEALTH & HUMAN SVC, DEPT-HRSA-FED BUR OF HLTH PROF

HEALTH & HUMAN SVC, DEPT-HRSA-FED MATERNAL & CHILD HLTH

HEALTH & HUMAN SVC, DEPT-NIH-FED

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

HEALTH & HUMAN SVC, DEPT-NIH-FED NATL CTR FOR RSCH RES

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 GEN MED SCI

HEALTH & HUMAN SVC, DEPT-NIH-FED OFFICE OF DIRECTOR

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

HEALTH&HUMAN SVC,DEPT-NIH-FED NTL INST NEURO DIS&STROKE

Dept of Commerce

COMMERCE, DEPT-ECONOMIC DEV ADM-FED

COMMERCE, DEPT-MINORITY BUSN DEV AGENGY-FED

COMMERCE, DEPT-NATIONL INST STANDARDS &TECH-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

Department of Defense

Defense Intelligence Agency

DEFENSE, DEPT- US ARMY CORPS OF ENGINEERS

Defense, Dept. - U.S. Army Research Office

DEFENSE, DEPT-AIR FORCE OFC OF SCI RSCH

DEFENSE, DEPT-AIR FORCE RESEARCH LABORATORY

DEFENSE, DEPT-AIR FORCE SPACE & MISSILE SYS CTR

DEFENSE, DEPT-ARMY

DEFENSE, DEPT-ARMY ENG RSCH & DEV CTR

DEFENSE, DEPT-ARMY MED RSCH ACQSTN (USAMRAA)

DEFENSE, DEPT-ARMY RESEARCH LABORATORY

DEFENSE, DEPT-EDUCATION ACTIVITY

DEFENSE, DEPT-NATIONAL GEOSPATIAL INTELLEGENCE AGENCY
DEFENSE, DEPT-NATIONAL SECURITY AGY
DEFENSE, DEPT-NAVY
DEFENSE, DEPT-NAVY NAVAL FAC ENGRG COMMAND
DEFENSE, DEPT-NAVY NAVAL RSCH LAB
DEFENSE, DEPT-NAVY OFC OF NAVAL RSCH
DEFENSE, DEPT-NAVY SPACE & NAVAL WARFARE SYS CTR PACIFIC
DEFENSE, DEPT-STRATEGIC ENV RSCH & DEV PROG
DEFENSE, DEPT-WASHINGTON HEADQUARTERS SVCS

Dept of Energy

ENERGY, DEPT
Energy, Dept. of - Basic Energy Sciences
Energy, Dept. of-Lawrence Berkeley Natl Lab

Dept of the Interior

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

Dept of Transportation

TRANSPORTATION, DEPT-FED-FED AVIATION ADMIN

Dept of Education

EDUCATION, DEPT-FED
EDUCATION, DEPT-FED INTL ED PROGRAM SVC
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

Other Federal Agencies

ENVIRONMENTAL PROTECTION AGENCY
HOMELAND SECURITY, DEPT-FEMA
JAPAN UNITED STATES FRIENDSHIP COMMISSION
JUSTICE, DEPT-OFFICE JUSTICE PROG
PEACE CORPS
SMALL BUSINESS ADMINISTRATION
Social Security Administration
US Spc Ops Cmd-Special Ops Rsch, Dev, & Acquisition Ctr
VETERANS AFFAIRS, DEPT-FED

National Aeronautics and Space Administration

NATIONAL AERONAUT & SPACE ADM
NATL AERONAUTICS & SPACE ADM-AMES RESEARCH CTR
NATL AERONAUTICS & SPACE ADM-Goddard Space Flight Ctr

National Science Foundation

NATIONAL SCIENCE FOUNDATION

NON-FEDERAL

Foreign

ACADEMY KOREAN STUDIES
Aichi University
American Samoa Environmental Protection Agency
AMERICAN SAMOA, GOVERNMENT
American Samoa, Government- Department of Education
Aoyama Gakuin University
APEC CLIMATE CENTER
Bayer Healthcare Pharmaceuticals Inc
Bermuda Institue of Ocean Sciences, Inc.
BIO-ON SRL
Bundesanstalt fur Geowissenshaften und Rohstoffe
Chuo University
COMMONWEALTH OF NO MARIANA ISLANDS
FEDERATED STATES MICRONESIA
GUAM, GOVERNMENT - Public Health and Social Services
GUAM, UNIVERSITY OF
Helmholtz Centre for Environmental Research - UFZ
Hitachi, Ltd. Infrastructure Systems Co
India, Government of-Ministry of Earth Sciences
JAPAN AGENCY MARINE-EARTH SCIENCE AND TECHNOLOGY
JAPAN FOUNDATION
Japan Foundation, Los Angeles
KEK HIGH ENERGY ACCELERATOR RCH ORG

King Fahd University of Petroleum & Minerals
KOREA FOUNDATION
KOREA INSTITUTE OF OCEAN SCIENCE & TECHNOLOGY
Korean Institute of Criminology
Literature Translation Institute of Korea
London, University of-Royal Holloway
NATIONAL ASTRONOMICAL OBSV JAPAN
NATIONAL CENTRAL UNIVERSITY TAIWAN
Nestle Institute of Health Sciences Ltd.
North Pacific Marine Science Org
Osterlens Folkhogskola
REPUBLIC MARSHALL ISLANDS
REPUBLIC PALAU
Royal Thai Embassy
RYUKYUS, UNIVERSITY OF
SINTEF
The Micronutrient Initiative
Tongji University
Toronto, University of
UK Seabed Resources Ltd
Umea University
Viiv Healthcare
Winnipeg, University of

Hawaii- Business and Other

Adnoviv LLC
AHA PUNANA LEO INC
ALU LIKE INC
BISHOP MUSEUM
CHAMBER OF COMMERCE HAWAII
Chiltern International Inc.
DAMIEN MEMORIAL SCHOOL
EAST WEST CENTER
HAWAII COUNCIL FOR THE HUMANITIES
Iolani School
KAMEHAMEHA SCHOOLS
Ke Kula 'o Nawahiokalani'opu'u Iki Public Charter School
LE JARDIN ACADEMY
MAUI COUNTY COMMUNITY TELEVISION
Nalu Scientific, LLC
'OHU'OHU KO'OLAU INC
Pacific Biodiesel
PACIFIC RADIATION ONCOLOGY INC
PAPA OLA LOKAHI
Spectrum Photonics, Inc
Thetis Pacific LLC-ClearStream.Bio
TOWILL, R.M. CORPORATION

Hawaii- Dept of Education

EDUCATION, DEPT-HI
EDUCATION, DEPT-HI -Blanche Pope Elem School
Hawaii State Public Charter School Commission

Hawaii- Government Agencies

AGRICULTURE, DEPT-HI
BUDGET & FINANCE, DEPT-HI PUBLIC UTIL COMM
CITY & COUNTY HONOLULU
CITY & COUNTY HONOLULU DEPT OF PARKS & REC
COUNTY HAWAII
County Hawaii Dept of Environmental Management, Wastewater Division
County Hawaii Dept of Research and Development
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 Kauai Department of Water
DEFENSE, DEPT-HI - HI ARMY NATL GUARD
DEFENSE, DEPT-HI-Hawaii Emergency Mgmt Agency
GOVERNOR, OFFICE OF-HI-EXEC OFFICE ON EARLY LEARNING
Hawaii Housing Finance and Development Corporation
Hawai'i State Foundation on Culture and the Arts
Hawaii Strategic Development Corporation
HAWAIIAN AFFAIRS, OFFICE OF
HAWAIIAN HOME LANDS, DEPT-HI
HEALTH, DEPT-ALCOHOL & DRUG ABUSE DIV-HI

HEALTH, DEPT-CHILD/ADOLESC MENTAL HLTH 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 COMM HEALTH DIV
HEALTH, DEPT-HI DISABILITY & COMM ACCESS BD
HEALTH, DEPT-HI STD/AIDS PREVENTION BRANCH
HEALTH, DEPT-MAT & CHILD
Health, Dept-Office of Planning, Policy, and Program Dev-HI
HEALTH, DEPT-TOBACCO SETTLEMENT-HI
HIGH TECHNOLOGY DEVELOPMENT CORPORATION-HI
HUMAN SERVICES, DEPT-Division of Vocational Rehabilitation
HUMAN SERVICES, DEPT-HI
HUMAN SERVICES, DEPT-HI Benefits, Employment & Support Services
HUMAN SERVICES, DEPT-OYS-HI
JUDICIARY-HI
Kahoolawe Island Reserve Commission
Kauai Fire Department
LABOR & INDUSTRIAL RELATION, DPT-HI (DLIR)
LAND & NATURAL RES, DPT-AQUAT (DLNR)
LAND & NATURAL RES, DPT-BOATING & OCEAN REC (DLNR)
LAND & NATURAL RES, DPT-FORST (DLNR)
LAND & NATURAL RES, DPT-INVASIVE SPEC (DLNR)
LAND & NATURAL RESOURCES, DEPT (DLNR)
LAND & NATURAL RESOURCES, DEPT (DLNR) ENGINEERING DIV
LAND & NATURAL RESOURCES, DEPT (DLNR) OFC CONS COAST LDS
Office of Information Mgmt & Technology-HI
PUBLIC SAFETY, DEPT-HI
TRANSPORTATION, DEPT-HI
WATER SUPPLY, BOARD OF

Hawaii- Health Organizations

CASTLE MEDICAL CENTER
HAWAII HEALTH SYSTEMS CORPORATION
KALIHI-PALAMA HEALTH CENTER
KAPIOLANI MED CTR FOR WOMEN & CHILDREN
KUAKINI MEDICAL CENTER
PACIFIC IN VITRO FERTILIZATION INSTITUTE
QUEEN EMMA CLINICS
QUEENS HEALTH SYSTEMS
QUEEN'S HOSPITAL MEDICAL CENTER
STRAUB CLINIC & HOSPITAL
UNIVERSITY CLINICAL EDUCATIONAL & RSCH ASSOC (UCERA)

Hawaii- Non-Profit Organizations

ANGUS FOUNDATION, MYRA & JEAN KENT
CANADA FRANCE HAWAII TELESCOPE
CASTLE (HAROLD K L) FOUNDATION
COALITION DRUG-FREE HAWAII
CONSUELO ZOBEL ALGER FOUNDATION
EPIC Ohana, Inc
GENERAL CONTRACTORS ASSOC HI EDUCATIONAL FOUNDATION
Hanalani Schools
Hawaii Cancer Consortium
HAWAII COMMUNITY FOUNDATION (HCF)
HAWAII COMMUNITY FOUNDATION GEIST FDTN
HAWAII COMMUNITY FOUNDATION MED RSCH FUNDS
Hawaii Community Foundation-Hawaii Tourism Authority Fund
Hawaii Justice Foundation
Hawaii Maoli
Hawaii Public Health Institute
Hawaiian Legacy Foundation
HAWAIIAN SILVERSWORD FOUNDATION
Institute for Human Services
Kula no na Po`e Hawaii
LEAHI FOUNDATION (HCF)
MALAMA O MANOA
NATURE CONSERVANCY, THE-HAWAII
OCEANIC INSTITUTE-CTR FOR TOP & SUB TROP AQUA (CTSA)

Oceanwide Science Institute
OLELO
PAC RESOURCES FOR ED & LEARNING (PREL)
PAC5
PACIFIC AMERICAN FOUNDATION
PACIFIC HEALTH RESEARCH & ED INSTITUTE
PARENTS & CHILDREN TOGETHER (PACT)
Queen Liliuokalani Trust
Sacred Hearts Academy
Society of Actuaries
TRI-ISLE RES CONSERVATION & DEV COUNCIL
UNIVERSITY HAWAII FOUNDATION
Waikiki Beach Special Improvement District Assn
WORLD TURTLE TRUST

Mainland- Business and Other

Altor Biosciences
AMERICA VIEW
BOEING COMPANY-BOEING LASER TECH SVCS
CDM Smith Federal Programs Corporation
Cerego LLC
Community College Natl Ctr for Community Engagement
DEVELOPMENT ALTERNATIVES INC
ECOG-ACRIN Cancer Research Group
ELI LILLY & COMPANY
FirstPass Engineering
GENENTECH INC
GILEAD FOUNDATION - GILEAD SCIENCES INC
Gynuity Health Projects
HEALTH RESEARCH INC
ICS Associates Inc.
Ignyta, Inc.
InnoSys, Inc
Intelligent Medical Decisions, Inc
Intrexon
JAMSS America, Inc
JET PROPULSION LAB-JPL
Koa Technologies LLC
LAWRENCE LIVERMORE NATL LAB
Lilly USA, LLC
LOCKHEED MARTIN CORP SPACE SYSTEMS
McSwain Engineering, Inc.
MERCK & COMPANY INC
Merck Sharp & Dohme Corp
NATIONAL GEOGRAPHIC SOCIETY
NATL RADIO ASTRONOMY OBSERVATORY
NiyamIT, Inc.
Nonagen Bioscience Corp
PracticeWise LLC
Predictive Science Inc.
Prometheus Laboratories Inc.
Q-Peak, Inc.
Sandia National Laboratories
SIEMENS MEDICAL SOLUTIONS USA INC
Sierra Lobo Inc.
Sigma Delta Epsilon-Graduate Women in Science, Inc.
SMITHSONIAN ASTROPHYSICAL OBSERVATORY
SPACE TELESCOPE SCIENCE INSTITUTE
T.A. Sciences
Tetra Tech, Inc.
Tobira Therapeutics
UT-Battelle, LLC
WOODS HOLE OCEANOGRAPHIC INSTITUTION
Wyle Laboratories, Inc.

Mainland- Health Organizations

AMERICAN HEART ASSOCIATION
BRIGHAM AND WOMEN'S HOSPITAL, INC.
Children's Hospital of Philadelphia
MARCH OF DIMES
MAYO CLINIC ROCHESTER
RIVERSIDE RESEARCH INSTITUTE

Mainland- Non-Profit Organizations

Alliance for Sustainable Energy, LLC
Alternatives Research & Development Foundation
American Association of Immunologists, Inc.
American Bar Association
American Bird Conservancy
American Genetic Association
American Psychiatric Association
ANHEUSER-BUSCH COMPANIES- AH BUSCH FDTN
Arnold and Mabel Beckman Foundation

Association of Universities for Research in Astronomy, Inc.
ASSOCIATION UNIVERSITIES RESEARCH IN ASTRONOMY, INC.
ASSOCIATION UNIVERSITY CENTER DISABILITIES
BATTELLE MEMORIAL INSTITUTE
CADES FOUNDATION (J RUSSELL/CHARLOTTE MCL)
CARNEGIE INSTITUTE WASHINGTON
CASEY, ANNIE E., FOUNDATION
Center for Global Development
Conservation International - Hawaii Fish Trust
CONSORTIUM FOR OCEAN LEADERSHIP
Council on International Educational Exchange
Duke University
Global Coalition Against Cervical Cancer
Gynecologic Oncology Group
Heising-Simons Foundation
Institute for Wildlife Studies
INSTITUTE INTERNATIONAL EDUCATION
JACKSON (HENRY M) FOUNDATION
Joyful Heart Foundation
Lowell Observatory
Monterey Bay Aquarium
Moore (Gordon & Betty) Foundation
Mountain West Clinical & Translational Rsrch Infrastructure Network
NATIONAL ACADEMIES
National Bureau of Economic Research
NATIONAL FISH & WILDLIFE FOUNDATION
NATIONAL FOUR-H COUNCIL (4-H)
NATIONAL MARINE SANCTUARY FOUNDATION
Palo Alto Veterans Institute for Research, Inc.
PLANETARY SCIENCE INSTITUTE
RESEARCH FOUNDATION STATE UNIV NY
San Jose State University Research Foundation
SEATTLE INSTITUTE FOR BIOMEDICAL & CLINICAL RESEARCH
SETI Institute
Simons Foundation
SOUTHWEST RESEARCH INSTITUTE
St. Baldrick's Foundation
Transforming Youth Recovery
Truth Initiative
UNIVERSITIES SPACE RESEARCH ASSN
UNIVERSITY CORP ATMOSPHERIC RSCH
USA Funds
VentureWell
WESTERN STATES ART FEDERATION (WESTAF)
World Cocoa Foundation

US Colleges and Universities

ALASKA FAIRBANKS, UNIVERSITY OF
ARIZONA STATE UNIVERSITY
ARIZONA, UNIVERSITY OF
Board of Curators of the University of Missouri
CALIFORNIA BERKELEY, UNIVERSITY OF
CALIFORNIA DAVIS, UNIVERSITY OF
CALIFORNIA INST OF TECHNOLOGY
CALIFORNIA LOS ANGELES, UNIV
CALIFORNIA SAN DIEGO, UNIV
CALIFORNIA SAN DIEGO, UNIV-SCRIPPS INST OF OCEAN
CALIFORNIA SAN FRANCISCO, UNIV
CALIFORNIA SANTA BARBARA, UNIV
California State University, Fresno
California, University of-Div of Agriculture & Natural Resources
CHAMINADE UNIVERSITY
City University of New York
College of Charleston
Colorado State University
COLUMBIA UNIVERSITY
CORNELL UNIVERSITY
DARTMOUTH COLLEGE
Endicott College
FLORIDA, UNIVERSITY OF CENTRAL
GEORGIA INSTITUTE OF TECHNOLOGY
HARVARD UNIVERSITY
HAWAII PACIFIC UNIVERSITY
Icahn School of Medicine at Mount Sinai
ILLINOIS, UNIVERSITY OF
INDIANA UNIVERSITY
Iowa State University

JOHNS HOPKINS UNIVERSITY
KANSAS STATE UNIVERSITY
LANGUAGE LEARNING PGM-UNIV MICHIGAN
MARYLAND, UNIVERSITY OF
MASSACHUSETTS INSTITUTE OF TECH
Metropolitan State University of Denver
MIAMI, UNIVERSITY OF
MICHIGAN STATE UNIVERSITY
MICHIGAN, UNIVERSITY OF
Morehouse School of Medicine
NEVADA LAS VEGAS, UNIVERSITY OF
NEW HAMPSHIRE, UNIVERSITY OF
NEW MEXICO, UNIVERSITY OF
NORTH CAROLINA CHAPEL HILL, UNIV
NORTHEASTERN UNIVERSITY
NORTHWESTERN UNIVERSITY
NOTRE DAME, UNIVERSITY OF
OREGON STATE UNIVERSITY
PITTSBURGH, UNIVERSITY OF
Portland State University
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