

Managers and Assets Under Management as of September 30, 2019
State of Hawaii Employees' Retirement System

Risk-Based Policy Framework

Strategic Class	Sub-Class	Manager	Assets Under Management	% of Total	Inception Date
Broad Growth	Traditional Growth				
	Global Small Cap Equity	Wasatch	444,231,997	2.55%	1/1/2019
	Global Small Cap Equity	Wellington	453,037,753	2.60%	4/1/2017
	Global Mid-Large Cap Equity	Longview	682,667,567	3.92%	9/1/2017
	Global Mid-Large Cap Equity	QMA	768,855,914	4.41%	9/1/2017
	Global Equity - Passive	BlackRock - Alpha Tilts	1,175,044,695	6.74%	6/1/2016
	Global Equity - Passive	Legal & General	1,421,565,904	8.16%	5/1/2016
	Stabilized Growth				
	Public Extended Global Credit	Tortoise Credit	5,686,499	0.03%	5/1/1990
	Public Extended Global Credit	HPS Credit	225,332,986	1.29%	6/30/2019
	Public Extended Global Credit	PIMCO	195,326,677	1.12%	4/1/2015
	Public Extended Global Credit	Western Asset Management	427,697,699	2.45%	7/1/2005
	Core Real Estate (Separate)	Heitman Capital	434,501,504	2.49%	11/1/1995
	Core Real Estate	Heitman Core RE Debt Fund	50,143,529	0.29%	2/1/2018
	Core Real Estate (Separate)	INVESCO Realty	154,408	0.00%	8/1/1998
	Core Real Estate	Cabot Ind Core	42,835,714	0.25%	8/1/2016
	Core Real Estate	H2 Core Real Estate Debt Fund	12,778,464	0.07%	9/1/2015
	Core Real Estate	INVESCO Comm Mortgage	53,726,334	0.31%	5/1/2018
	Low Volatility Equity	Robeco	569,473,842	3.27%	10/1/2016
	Low Volatility Equity	TOBAM	471,915,543	2.71%	10/1/2016
	Options-Based Equity	AQR	655,285,969	3.76%	6/30/2019
	Options-Based Equity	Gateway Investment Advisers LLC - Put-Write	691,292,546	3.97%	9/1/2016
	Options-Based Equity	Gateway Investment Advisers LLC - Non-Replication	478,800	0.00%	12/1/2011
	Options-Based Equity	Geode	650,556,670	3.73%	10/1/2019
	Options-Based Equity	Neuberger Berman	673,976,220	3.87%	10/1/2016
	Private Growth				
	Private Equity	Hamilton Lane	1,632,657,578	9.37%	11/1/1997
	Private Equity	I-Squared Global Infrastructure	17,411,543	0.10%	6/1/2015
	Private Equity	I-Squared Global Infrastructure II	17,776,957	0.10%	7/1/2018
	Private Equity	Secondary Private Equity	8,221,741	0.05%	7/1/2018
	HiTIP	Stafford	22,532,923	0.13%	5/1/2009
	HiTIP	Stafford II	8,709,099	0.05%	4/1/2017
	Non-Core Real Estate - Opportunistic	BlackSand Capital Fund I	2,632,396	0.02%	9/1/2011
	Non-Core Real Estate - Opportunistic	BlackSand Capital Fund II	974,040	0.01%	4/1/2019
	Non-Core Real Estate - Opportunistic	Blackstone Real Estate VII	11,446,945	0.07%	6/1/2012
	Non-Core Real Estate - Opportunistic	Blackstone Real Estate IX	3,497,634	0.02%	10/1/2019
	Non-Core Real Estate - Opportunistic	Cerberus IV	28,117,245	0.16%	1/1/2017
	Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund II	5,086,251	0.03%	7/1/2012
	Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund III	18,922,655	0.11%	1/1/2015
	Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund IV	977,876	0.01%	8/1/2018
	Non-Core Real Estate - Opportunistic	Lone Star Fund II	563,570	0.00%	6/1/2011
	Non-Core Real Estate - Opportunistic	Lone Star Fund VII	251,781	0.00%	6/1/2011
	Non-Core Real Estate - Opportunistic	Torchlight Debt Opportunity Fund V	21,292,842	0.12%	6/1/2015
	Non-Core Real Estate - Opportunistic	Torchlight Debt Fund VI	11,359,421	0.07%	3/1/2018
	Non-Core Real Estate - Value-Add	AG Asia Realty Fund III	21,528,321	0.12%	7/1/2016
	Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund II	1,348,818	0.01%	4/1/2008
	Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund III	4,359,525	0.03%	4/1/2012
	Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund IV	36,827,488	0.21%	6/1/2015
	Non-Core Real Estate - Value-Add	AG Europe Realty II	32,036,181	0.18%	5/1/2018
	Non-Core Real Estate - Value-Add	Almanac VI	5,381,223	0.03%	11/1/2012
	Non-Core Real Estate - Value-Add	Almanac VII	17,345,331	0.10%	4/1/2015
	Non-Core Real Estate - Value-Add	Almanac VIII	2,328,840	0.01%	1/1/2019
	Non-Core Real Estate - Value-Add	BlackRock Asia IV	33,457,122	0.19%	7/1/2017
	Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value Fund VI	36,022	0.00%	10/1/2012
	Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value Fund VII	4,163,045	0.02%	5/1/2015
	Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value B	45,127,720	0.26%	10/1/2017
	Non-Core Real Estate - Value-Add	DRA GR INC X	34,354,371	0.20%	2/1/2017
	Non-Core Real Estate - Value-Add	H2 CP (RE Debt)	30,244,607	0.17%	11/1/2016
	Non-Core Real Estate - Value-Add	Kayne Anderson V	25,340,158	0.15%	6/1/2018
	Non-Core Real Estate - Value-Add	KKR Rep Americas II	22,448,414	0.13%	3/1/2018
	Non-Core Real Estate - Value-Add	LaSalle Income & Growth Fund VII	20,296,291	0.12%	8/1/2016
	Non-Core Real Estate - Value-Add	Mesa West RE Inc Fund III	1,644,306	0.01%	9/1/2013
	Non-Core Real Estate - Value-Add	Mesa West RE Fund IV	8,998,264	0.05%	4/1/2017
	Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund IV	16,132,991	0.09%	4/1/2012
	Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund V	23,220,326	0.13%	5/1/2015
	Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund XI	3,699,918	0.02%	9/1/2019
	Non-Core Real Estate - Value-Add	Starwood Fund XI	6,714,152	0.04%	8/1/2018
Opportunities		Lowe Enterprises	30,152,748	0.17%	1/1/2015
Principal Protection					
	US Intermediate	Bank of Hawaii	322,464,656	1.85%	11/1/2017
	US Intermediate	First Hawaiian Bank	322,705,209	1.85%	11/1/1991
	Non-US Intermediate	Eaton Vance	348,736	0.00%	6/1/1989
	Non-US Intermediate	Neuberger Global Fixed	558,938,991	3.21%	9/1/2019
Crisis Risk Offset					
	Alternative Return Capture	ARP Alternative Return Capture	229,261,188	1.32%	4/1/2019
	Alternative Return Capture	Graham Quant Macro	339,428,782	1.95%	4/1/2017
	Alternative Return Capture	Lombard Odier Risk Premia	228,217,900	1.31%	4/1/2019
	Alternative Return Capture	P/E Global Macro	306,779,721	1.76%	4/1/2017
	Systematic Trend Following	AlphaSimplex	198,090,053	1.14%	1/1/2018
	Systematic Trend Following	Aspect Core Fund	193,962,943	1.11%	4/1/2017
	Systematic Trend Following	Campbell Core Trend	197,170,708	1.13%	4/1/2017
	Systematic Trend Following	Crabell Advanced Trend	195,878,829	1.12%	4/1/2017
	Systematic Trend Following	Mount Lucas	191,124,738	1.10%	4/1/2019
	Treasury Duration Capture	Ryan Labs Long Treasury	200,000	0.00%	4/1/2017
	Treasury Duration Capture	Ryan Labs Treasury Custody	617,114,809	3.54%	10/1/2019
Real Return					
	Timber	Hancock Timber	187,736,981	1.08%	9/1/1999
	GILS	BlackRock	321,306,069	1.84%	9/1/2011
	Infrastructure	KKR Global Infrastructure II	46,315,014	0.27%	12/1/2014
All Other Assets					
	Cash Account	BNY Mellon	150,939,118	0.87%	2/1/1998
	Cash Account	Bank of Hawaii	46,565,145	0.27%	1/1/1972
	Transition Account I	BNY Mellon	5,030,970	0.03%	4/1/2002
	Transition Account II	BNY Mellon	940	0.00%	7/1/2011
	Residual Account	BNY Mellon	135,703	0.00%	6/1/2013
		Parametric Overlay	415,172,899	2.38%	6/1/2019
Closing Accounts					
	World ex-US Equity	Franklin Templeton	665,028	0.00%	11/1/2011
	World ex-US Equity	JP Morgan Chase	332,306	0.00%	9/1/2005
	World ex-US Equity	Mercator Asset Mgt LP	240,220	0.00%	12/1/2003
	Emerging Markets Equity	QMA	1	0.00%	12/1/2011
	Non-US Intermediate	PIMCO	2,523	0.00%	3/1/1979
	Global Small Cap Equity	Fidelity Institutional	168,877	0.00%	4/1/2017
Total Fund Value			17,422,484,972	100.00%	

Source: BNY Mellon