

Managers and Assets Under Management as of December 31, 2018
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	Fidelity Institutional	321,491	0.00%	4/1/2017
		Global Small Cap Equity	Wasatch	354,209,359	2.25%	1/1/2019
		Global Small Cap Equity	Wellington	401,201,889	2.54%	4/1/2017
		Global Mid-Large Cap Equity	Longview	604,718,854	3.83%	9/1/2017
		Global Mid-Large Cap Equity	QMA	716,516,352	4.54%	9/1/2017
		Global Equity - Passive	BlackRock - Alpha Tilts	1,271,526,426	8.06%	6/1/2016
		Global Equity - Passive	Legal & General	1,266,687,315	8.03%	5/1/2016
	Stabilized Growth	Public Extended Global Credit	Tortoise Credit	235,854,325	1.50%	5/1/1990
		Public Extended Global Credit	PIMCO	174,573,843	1.11%	4/1/2015
		Public Extended Global Credit	Western Asset Management	383,195,596	2.43%	7/1/2005
		Core Real Estate (Separate)	Heitman Capital	343,180,637	2.18%	11/1/1995
		Core Real Estate	Heitman Core RE Debt Fund	50,167,347	0.32%	2/1/2018
		Core Real Estate (Separate)	INVESCO Realty	28,754,099	0.18%	8/1/1998
		Core Real Estate	Cabot Ind Core	43,634,477	0.28%	8/1/2016
		Core Real Estate	H2 Core Real Estate Debt Fund	28,635,659	0.18%	9/1/2015
		Core Real Estate	INVESCO Comm Mortgage	13,555,544	0.09%	5/1/2018
		Low Volatility Equity	Robeco	486,352,765	3.08%	10/1/2016
		Low Volatility Equity	TOBAM	468,838,088	2.97%	10/1/2016
		Options-Based Equity	Gateway Investment Advisers LLC - Put-Write	631,380,089	4.00%	9/1/2016
		Options-Based Equity	Gateway Investment Advisers LLC - Non-Replication	919,959,997	5.83%	12/1/2011
		Options-Based Equity	Neuberger Berman	621,169,760	3.94%	10/1/2016
		Options-Based Equity	UBS	620,929,751	3.94%	10/1/2016
	Private Growth	Private Equity	Hamilton Lane	1,399,685,075	8.87%	11/1/1997
		Private Equity	I-Squared Global Infrastructure	16,303,147	0.10%	6/1/2015
		Private Equity	I-Squared Global Infrastructure II	12,521,067	0.08%	7/1/2018
		Private Equity	Secondary Private Equity	2,394,256	0.02%	7/1/2018
		HiTIP	Stafford	22,573,090	0.14%	5/1/2009
		HiTIP	Stafford II	4,545,897	0.03%	4/1/2017
		Non-Core Real Estate - Opportunistic	BlackSand Capital Fund I	1,973,450	0.01%	9/1/2011
		Non-Core Real Estate - Opportunistic	Blackstone Real Estate VII	15,186,401	0.10%	6/1/2012
		Non-Core Real Estate - Opportunistic	Cerberus IV	20,494,383	0.13%	1/1/2017
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund II	6,658,718	0.04%	7/1/2012
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund III	16,768,739	0.11%	1/1/2015
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund IV	399,352	0.00%	8/1/2018
		Non-Core Real Estate - Opportunistic	Lone Star Fund II	583,766	0.00%	6/1/2011
		Non-Core Real Estate - Opportunistic	Lone Star Fund VII	255,826	0.00%	6/1/2011
		Non-Core Real Estate - Opportunistic	Torchlight Debt Opportunity Fund V	28,565,117	0.18%	6/1/2015
		Non-Core Real Estate - Opportunistic	Torchlight Debt Fund VI	3,342,639	0.02%	3/1/2018
		Non-Core Real Estate - Value-Add	AG Asia Realty Fund III	27,083,080	0.17%	7/1/2016
		Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund II	1,556,359	0.01%	4/1/2008
		Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund III	5,599,522	0.04%	4/1/2012
		Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund IV	32,633,755	0.21%	6/1/2015
		Non-Core Real Estate - Value-Add	AG Europe Realty II	22,274,653	0.14%	5/1/2018
		Non-Core Real Estate - Value-Add	Almanac VI	5,661,694	0.04%	11/1/2012
		Non-Core Real Estate - Value-Add	Almanac VII	28,070,637	0.18%	4/1/2015
		Non-Core Real Estate - Value-Add	Almanac VIII	125,785	0.00%	1/1/2019
		Non-Core Real Estate - Value-Add	BlackRock Asia IV	31,474,779	0.20%	7/1/2017
		Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value Fund VI	66,900	0.00%	10/1/2012
		Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value Fund VII	5,492,771	0.03%	5/1/2015
		Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value B	39,202,831	0.25%	10/1/2017
		Non-Core Real Estate - Value-Add	DRA GR INC X	19,688,426	0.12%	2/1/2017
		Non-Core Real Estate - Value-Add	H2 CP (RE Debt)	20,766,275	0.13%	11/1/2016
		Non-Core Real Estate - Value-Add	Kayne Anderson V	15,344,958	0.10%	6/1/2018
		Non-Core Real Estate - Value-Add	KKR Rep Americas II	12,906,232	0.08%	3/1/2018
		Non-Core Real Estate - Value-Add	LaSalle Income & Growth Fund VII	20,661,454	0.13%	8/1/2016
		Non-Core Real Estate - Value-Add	Mesa West RE Inc Fund III	2,833,282	0.02%	9/1/2013
		Non-Core Real Estate - Value-Add	Mesa West RE Fund IV	6,081,911	0.04%	4/1/2017
	Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund IV	17,157,133	0.11%	4/1/2012	
	Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund V	16,066,480	0.10%	5/1/2015	
	Non-Core Real Estate - Value-Add	Starwood Fund XI	1,861,089	0.01%	8/1/2018	
	Opportunities		Lowe Enterprises	28,923,080	0.18%	1/1/2015
	Principal Protection	US Intermediate	Bank of Hawaii	365,144,085	2.31%	11/1/2017
		US Intermediate	First Hawaiian Bank	366,554,894	2.32%	11/1/1991
		Non-US Intermediate	Eaton Vance	650,631,719	4.12%	6/1/1989
	Crisis Risk Offset	Alternative Return Capture	Graham Quant Macro	219,558,142	1.39%	4/1/2017
		Alternative Return Capture	Mellon Risk Premia	99,590,732	0.63%	1/1/2018
		Alternative Return Capture	P/E Global Macro	213,383,858	1.35%	4/1/2017
Alternative Return Capture		Welton MultiQuant	111,875,392	0.71%	4/1/2017	
Systematic Trend Following		AlphaSimplex	237,550,576	1.51%	1/1/2018	
Systematic Trend Following		Aspect Core Fund	226,455,535	1.44%	4/1/2017	
Systematic Trend Following		Campbell Core Trend	229,050,011	1.45%	4/1/2017	
Systematic Trend Following		Crabel Advaned Trend	234,046,077	1.48%	4/1/2017	
Treasury Duration Capture		Ryan Labs Long Treasury	541,386,119	3.43%	4/1/2017	
Real Return		Timber	Hancock Timber	185,799,191	1.18%	9/1/1999
	GILS	BlackRock	288,768,219	1.83%	9/1/2011	
	Infrastructure	KKR Global Infrastructure II	43,064,193	0.27%	12/1/2014	
All Other Assets	Cash Account	BNY Mellon	126,756,644	0.80%	2/1/1998	
	Cash Account	Bank of Hawaii	41,251,900	0.26%	1/1/1972	
	Transition Account I	BNY Mellon	10,561,315	0.07%	4/1/2002	
	Transition Account II	BNY Mellon	923	0.00%	7/1/2011	
	Residual Account	BNY Mellon	88,626	0.00%	6/1/2013	
Closing Accounts	World ex-US Equity	Franklin Templeton	1,076,276	0.01%	11/1/2011	
	World ex-US Equity	JP Morgan Chase	690,453	0.00%	9/1/2005	
	World ex-US Equity	Mercator Asset Mgt LP	610,395	0.00%	12/1/2003	
	Emerging Markets Equity	QMA	1,921	0.00%	12/1/2011	
	Non-US Intermediate	PIMCO	40,402	0.00%	3/1/1979	
Total Fund Value			15,773,085,272	100.00%		

Source: BNY Mellon