California Institute of Technology

EIN: 95-1643307

Report on Audit of the Financial Statements and on Federal Awards Programs in Accordance with the OMB Uniform Guidance (exclusive of the Jet Propulsion Laboratory)

For the Year Ended September 30, 2020

California Institute of Technology Index For the Year Ended September 30, 2020

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Report of Independent Auditors

To the Board of Trustees of California Institute of Technology

Report on the Financial Statements

We have audited the accompanying financial statements of California Institute of Technology (the "Institute"), which comprise the balance sheets as of September 30, 2020 and 2019, and the related statements of activities and of cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Institute's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of California Institute of Technology as of September 30, 2020 and 2019, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.



Other Matters

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards for the year ended September 30, 2020 is presented for purposes of additional analysis as required by Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) and is not a required part of the financial statements. As described in Note 1 to the schedule of expenditures of federal awards, the accompanying schedule of expenditures of federal awards was prepared on the cash basis, which is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated, in all material respects, on the basis of accounting described in Note 1, in relation to the financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated January 27, 2021 on our consideration of the Institute's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters for the year ended September 30, 2020. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Institute's internal control over financial reporting and compliance.

Los Angeles, California January 27, 2021

Primoterbone Coopers LLP

	2020	2019
Cash and cash equivalents (Notes B and D)	\$ 46,908	\$ 6,510
Accounts and notes receivable, net		
United States government	257,618	330,288
Other	38,339	44,558
Contributions receivable, net	159,458	148,314
Investments	3,971,621	3,426,502
Prepaid expenses and other assets	215,234	206,499
Deferred United States government billings	395,130	362,768
Property, plant, and equipment, net	 1,168,276	 1,070,767
Total assets	\$ 6,252,584	\$ 5,596,206
LIABILITIES and NET ASSETS		
Liabilities:		
Accounts payable and accrued expenses	\$ 399,792	\$ 412,728
Accrued compensation and benefits	308,548	269,881
Deferred revenue and refundable advances	54,121	31,836
Annuities, trust agreements, and agency funds	89,498	88,896
Bonds and notes payable, net	1,668,052	1,176,092
Accumulated postretirement benefit obligation	 455,016	 421,899
Total liabilities	 2,975,027	2,401,332
Net assets:		
Without donor restrictions	430,676	486,982
With donor restrictions:		
Time or purpose	959,583	876,456
Perpetual	1,887,298	1,831,436
Total net assets with donor restrictions	2,846,881	2,707,892
Total net assets	3,277,557	 3,194,874
Total liabilities and net assets	\$ 6,252,584	\$ 5,596,206

California Institute of Technology Statement of Activities For the Year Ended September 30, 2020 (with summarized financial information for the year ended September 30, 2019) (Dollars in Thousands)

Potenting revenues: Turtion and fees, net of student financial aid \$40,926 \$40		Without Donor Restrictions	With Donor Restrictions	2020 Total	2019 Total
Endowment spending, distributed 33,304 123,401 156,705 149,770 Gits and pledges 33,843 49,346 83,189 72,230 Cansts and contracts:	Operating revenues:				
Gifts and pledges 33,843 49,346 83,189 72,230 Grants and contracts: 2615,146 - 2,615,146 2,682,020 United States government, Campus - direct 208,195 - 208,195 183,748 Other Campus - direct 30,974 3,610 34,584 37,084 Recovery of indirect costs and allowances 151,901 - 151,901 141,802 Sales and services 47,056 - 47,056 50,363 Other 16,709 - 16,709 9,741 Net assets released from extrictions 145,385 (145,385) - - Total operating revenues and other support 3,323,439 30,972 3,354,411 3,371,197 Operating expenses: Compensation and benefits 431,751 - 431,751 403,072 Suppose and services 126,531 - 126,531 - 126,531 139,783 Subcontracts 41,675 - 41,675 - 41,675 2,62,14 2,62,51 <	Tuition and fees, net of student financial aid	\$ 40,926	\$ -	\$ 40,926	\$ 44,379
Crants and contracts: Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,682,020 1 1 1 1 1 1 1 1 1	Endowment spending, distributed	33,304	123,401	156,705	149,770
Jet Propulsion Laboratory operations	Gifts and pledges	33,843	49,346	83,189	72,230
United States government, Campus - direct 208,195 - 208,195 183,748 Other Campus - direct 30,974 3,610 34,584 37,084 Recovery of indirect costs and allowances 151,901 - 151,901 141,862 Sales and services 47,056 - 47,056 50,363 Other 16,709 - 16,709 9,741 Net assets released from restrictions 145,385 (145,385) - - Total operating revenues and other support 3,323,439 30,972 3,354,411 3,371,197 Operating expenses: Compensation and benefits 431,751 - 431,751 403,072 Supplies and services 126,531 - 126,531 139,783 Subcontracts 41,675 - 41,675 28,352 Depreciation, accretion, and amortization 77,336 - 17,336 74,117 Utilities 16,699 - 16,699 15,780 Interest 31,672 - 31,672 29,628	Grants and contracts:				
Other Campus - direct 30,974 3,610 34,584 37,084 Recovery of indirect costs and allowances 151,901 - 151,901 141,862 50,363 Sales and services 47,056 - 47,056 50,363 Other 16,709 - 16,709 9,741 Net assets released from restrictions 145,385 (145,385) - - Total operating revenues and other support 3,323,439 30,972 3,354,411 3,371,197 Operating expenses: Compensation and benefits 431,751 - 431,751 403,072 Supplies and services 126,531 139,783 30,602 126,531 139,783 Subcontracts 41,675 - 41,675 241,675 28,352 Depreciation, accretion, and amortization 77,336 - 77,336 74,117 Utilities 16,690 16,690 15,780 11,722 29,628 Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,682,020	Jet Propulsion Laboratory operations	2,615,146	-	2,615,146	2,682,020
Recovery of indirect costs and allowances 151,901 - 151,901 141,862 Sales and services 47,056 - 47,056 50,363 Other 16,709 - 16,709 9,741 Net assets released from restrictions 145,385 (145,385) Total operating revenues and other support 3,323,439 30,972 3,354,411 3,371,197 Operating expenses: Compensation and benefits 431,751 - 431,751 403,072 Supplies and services 126,531 13,9783 139,783 139,783 141,675 - 41,675 28,352 Depreciation, accretion, and amortization 77,336 - 77,336 74,117 101 10,690 15,780 116,690 15,780 116,782 29,628 12,780 116,690 15,780 116,782 29,628 12,880 33,40,801 - 2,615,146 2,682,002 1,782 2,682,002 1,855 1,855 1,855 1,855 1,855 1,855 1,855 1,855 1,855 1,855 1,856 1,856 1,856 1,85	United States government, Campus - direct	208,195	-	208,195	183,748
Sales and services 47,056 - 47,056 50,363 Other 16,709 - 16,709 9,741 Net assets released from restrictions 145,385 (145,385) - - Total operating revenues and other support 3,323,439 30,972 3,354,411 3,371,197 Operating expenses: 2 50,231 - 431,751 403,072 Compensation and benefits 431,751 - 431,751 403,072 Supplies and services 126,531 139,783 Subcontracts 41,675 - 41,675 28,352 Depreciation, accretion, and amortization 77,336 - 77,336 74,117 Utilities 16,690 - 16,690 15,780 Interest 31,672 - 31,672 29,628 Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,682,020 Total operating expenses 3,340,801 - 3,340,801 3,340,801 3,340,801 3,340,801 1,255	Other Campus - direct	30,974	3,610	34,584	37,084
Sales and services 47,056 - 47,056 50,363 Other 16,709 - 16,709 9,741 Net assets released from restrictions 145,385 (145,385) - - Total operating revenues and other support 3,323,439 30,972 3,354,411 3,371,197 Operating expenses: 2 50,231 - 431,751 403,072 Compensation and benefits 431,751 - 431,751 403,072 Supplies and services 126,531 139,783 Subcontracts 41,675 - 41,675 28,352 Depreciation, accretion, and amortization 77,336 - 77,336 74,117 Utilities 16,690 - 16,690 15,780 Interest 31,672 - 31,672 29,628 Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,682,020 Total operating expenses 3,340,801 - 3,340,801 3,340,801 3,340,801 3,340,801 1,255	•	151,901	_	151,901	141,862
Other 16,709 - 16,709 9,741 Net assets released from restrictions 145,385 (145,385) - - Total operating revenues and other support 3,323,439 30,972 3,354,411 3,371,197 Operating expenses: Total operating expenses 3,371,197 431,751 - 431,751 40,072 Supplies and services 126,531 - 126,531 139,783 139,783 Subcontracts 41,675 - 41,675 28,352 28,352 29,628 20,211 11,77 28,352 20,211,141 11,17 11,17 11,17 11,17 11,17 11,17 11,17 11,17 12,380 12,380 13,672 13,672 29,628 12,580 13,472 29,628 12,580 13,472 20,631 41,17 11,780 11,17 11,17 11,17 12,580 13,472 29,628 12,629 12,880 12,581 14,675 29,615,146 20,682,000 20,615,146 20,682,000 20,615,146 20,682,0	•		_		
Net assets released from restrictions 145,385 (145,385) - - Total operating revenues and other support 3,323,439 30,972 3,354,411 3,371,197 Operating expenses: Compensation and benefits 431,751 - 431,751 403,072 Supplies and services 126,531 - 126,531 139,783 Subcontracts 41,675 - 431,751 20,531 139,783 Subcontracts 41,675 - 431,751 228,352 228,352 Depreciation, accretion, and amortization 77,336 - 77,336 74,117 Utilities 16,690 - 16,690 15,780 Interest 31,672 - 31,672 29,628 Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,652,146 2,752,146 </td <td>Other</td> <td></td> <td>_</td> <td></td> <td></td>	Other		_		
Compensation and benefits	Net assets released from restrictions		(145,385)	-	-
Compensation and benefits 431,751 - 431,751 403,072 Supplies and services 126,531 - 126,531 139,783 Subcontracts 41,675 - 41,675 28,352 Depreciation, accretion, and amortization 77,336 - 77,336 74,117 Utilities 16,690 - 16,690 15,780 Interest 31,672 - 31,672 29,628 Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,682,020 Total operating expenses 3,340,801 - 3,340,801 33,208,801 3,320,801 3,320,801 1,555 Results of operations (17,362) 30,972 13,610 (1,555) Non-operating changes: Investment return in excess (deficit) of endowment spending 12,380 33,208 45,588 (2,642) Endowment spending, undistributed 3,228 9,731 12,959 10,397 Gifts and pledges 6,856 71,179 78,035 59,523 Changes in fair va	Total operating revenues and other support	3,323,439	30,972	3,354,411	3,371,197
Compensation and benefits 431,751 - 431,751 403,072 Supplies and services 126,531 - 126,531 139,783 Subcontracts 41,675 - 41,675 28,352 Depreciation, accretion, and amortization 77,336 - 77,336 74,117 Utilities 16,690 - 16,690 15,780 Interest 31,672 - 31,672 29,628 Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,682,020 Total operating expenses 3,340,801 - 3,340,801 3,340,801 3,340,801 3,320,80 45,588 2,642,020 Non-operating changes: Investment return in excess (deficit) of endowment spending 12,380 33,208 45,588 2,642,020 Endowment spending, undistributed 3,228 9,731 12,959 10,397 Gifts and pledges 6,856 71,179 78,035 59,523 Changes in fair value of interest rate swap (13,561) - (13,561) (27,545)	Operating expenses:				
Supplies and services 126,531 - 126,531 139,783		431.751	_	431,751	403.072
Subcontracts 41,675 - 41,675 28,352 Depreciation, accretion, and amortization 77,336 - 77,336 74,117 Utilities 16,690 - 16,690 15,780 Interest 31,672 - 31,672 29,628 Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,682,020 Total operating expenses 3,340,801 - 3,340,801 33,208 33,208 1,555 Non-operating changes: Investment return in excess (deficit) of endowment spending 12,380 33,208 45,588 (2,642) Endowment spending, undistributed 3,228 9,731 12,959 10,397 Gifts and pledges 6,856 71,179 78,035 59,523 Changes in fair value of interest rate swap (13,561) - (13,561) (27,545) Changes in benefit obligations and related recoveries, net (17,821) - (17,821) (22,844) Interest expense (25,301) - (25,301) (13,037) <t< td=""><td>_</td><td></td><td>_</td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td></t<>	_		_		· · · · · · · · · · · · · · · · · · ·
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Utilities 16,690 - 16,690 15,780 Interest 31,672 - 31,672 29,628 Jet Propulsion Laboratory operations 2,615,146 - 2,615,146 2,682,020 Total operating expenses 3,340,801 - 3,340,801 33,340,801 - 33,40,801 33,208 45,588 (2,642) Non-operating changes: Investment return in excess (deficit) of endowment spending 12,380 33,208 45,588 (2,642) Endowment spending, undistributed 3,228 9,731 12,959 10,397 Gifts and pledges 6,856 71,179 78,035 59,523 Changes in fair value of interest rate swap (13,561) - (13,561) (27,545) Changes in benefit obligations and related recoveries, net (17,821) - (17,821) (22,844) Interest expense (25,301) - (25,301) (13,037) Redesignations, reclassifications and other (4,725) (6,101) (10,826) (13,433) Total non-operating activities			_		
Interest 31,672 - 31,672 29,628 2,615,146 - 2,615,146 2,682,020 2,615,146 - 3,340,801 3,372,752 3,40,801 - 3,340,801 3,372,752 3,972 13,610 (1,555) (1,5	•		_		
Total operating expenses 2,615,146 - 2,615,146 2,682,020 Total operating expenses 3,340,801 - 3,340,801 3,372,752 Results of operations (17,362) 30,972 13,610 (1,555) Non-operating changes:			_		
Total operating expenses 3,340,801 - 3,340,801 3,372,752 Results of operations (17,362) 30,972 13,610 (1,555) Non-operating changes: Investment return in excess (deficit) of endowment spending 12,380 33,208 45,588 (2,642) Endowment spending, undistributed 3,228 9,731 12,959 10,397 Gifts and pledges 6,856 71,179 78,035 59,523 Changes in fair value of interest rate swap (13,561) - (13,561) (27,545) Changes in benefit obligations and related recoveries, net (17,821) - (17,821) (22,844) Interest expense (25,301) - (25,301) (13,037) Redesignations, reclassifications and other (4,725) (6,101) (10,826) (13,453) Total non-operating activities (38,944) 108,017 69,073 (9,601) (Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156)			_		
Non-operating changes: Investment return in excess (deficit) of endowment spending 12,380 33,208 45,588 (2,642) Endowment spending, undistributed 3,228 9,731 12,959 10,397 Gifts and pledges 6,856 71,179 78,035 59,523 (13,561) - (13,561) (27,545)			-		
Investment return in excess (deficit) of endowment spending 12,380 33,208 45,588 (2,642)	Results of operations	(17,362)	30,972	13,610	(1,555)
Investment return in excess (deficit) of endowment spending 12,380 33,208 45,588 (2,642)	Non-onerating changes:				
Endowment spending, undistributed 3,228 9,731 12,959 10,397 Gifts and pledges 6,856 71,179 78,035 59,523 Changes in fair value of interest rate swap (13,561) - (13,561) (27,545) Changes in benefit obligations and related recoveries, net (17,821) - (17,821) (22,844) Interest expense (25,301) - (25,301) (13,037) Redesignations, reclassifications and other (4,725) (6,101) (10,826) (13,453) Total non-operating activities (38,944) 108,017 69,073 (9,601) (Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156) Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030		12.380	33,208	45.588	(2.642)
Gifts and pledges 6,856 71,179 78,035 59,523 Changes in fair value of interest rate swap (13,561) - (13,561) (27,545) Changes in benefit obligations and related recoveries, net (17,821) - (17,821) (22,844) Interest expense (25,301) - (25,301) (13,037) Redesignations, reclassifications and other (4,725) (6,101) (10,826) (13,453) Total non-operating activities (38,944) 108,017 69,073 (9,601) (Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156) Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030	, , ,				
Changes in fair value of interest rate swap (13,561) - (13,561) (27,545) Changes in benefit obligations and related recoveries, net (17,821) - (17,821) (22,844) Interest expense (25,301) - (25,301) (25,301) (13,037) Redesignations, reclassifications and other (4,725) (6,101) (10,826) (13,453) Total non-operating activities (38,944) 108,017 69,073 (9,601) (Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156) Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030	• •				
Changes in benefit obligations and related recoveries, net (17,821) - (17,821) (22,844) Interest expense (25,301) - (25,301) (13,037) Redesignations, reclassifications and other (4,725) (6,101) (10,826) (13,453) Total non-operating activities (38,944) 108,017 69,073 (9,601) (Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156) Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030			-		
Interest expense (25,301) - (25,301) (13,037) Redesignations, reclassifications and other (4,725) (6,101) (10,826) (13,453) Total non-operating activities (38,944) 108,017 69,073 (9,601) (Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156) Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030	· · · · · · · · · · · · · · · · · · ·	, ,	_		, ,
Redesignations, reclassifications and other (4,725) (6,101) (10,826) (13,453) Total non-operating activities (38,944) 108,017 69,073 (9,601) (Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156) Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030		, ,	_	, ,	
Total non-operating activities (38,944) 108,017 69,073 (9,601) (Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156) Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030	•	, ,	(6,101)	, ,	
(Decrease)/increase in net assets (56,306) 138,989 82,683 (11,156) Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030	-		<u> </u>		
Net assets at beginning of year 486,982 2,707,892 3,194,874 3,206,030	Total non-operating activities	(38,944)	108,017	69,073	(9,601)
	(Decrease)/increase in net assets	(56,306)	138,989	82,683	(11,156)
Net assets at end of year \$ 430,676 \$ 2,846,881 \$ 3,277,557 \$ 3,194,874	Net assets at beginning of year	486,982	2,707,892	3,194,874	3,206,030
	Net assets at end of year	\$ 430,676	\$ 2,846,881	\$ 3,277,557	\$ 3,194,874

California Institute of Technology Statement of Activities For the Year Ended September 30, 2019 (Dollars in Thousands)

	Without Donor Restrictions		Donor Donor		2019 Total
Operating revenues:					
Tuition and fees, net of student financial aid	\$	44,379	\$	-	\$ 44,379
Endowment spending, distributed		33,764		116,006	149,770
Gifts and pledges		23,194		49,036	72,230
Grants and contracts:					
Jet Propulsion Laboratory operations	2,6	82,020		-	2,682,020
United States government, Campus - direct	1	83,748		-	183,748
Other Campus - direct		30,721		6,363	37,084
Recovery of indirect costs and allowances	1	41,862		-	141,862
Sales and services		50,363		-	50,363
Other		9,741		-	9,741
Net assets released from restrictions	1	49,610		(149,610)	
Total operating revenues and other support	3,3	49,402		21,795	3,371,197
Operating expenses:					
Compensation and benefits	4	03,072		-	403,072
Supplies and services	1	39,783		-	139,783
Subcontracts		28,352		-	28,352
Depreciation, accretion, and amortization		74,117		-	74,117
Utilities		15,780		-	15,780
Interest		29,628		-	29,628
Jet Propulsion Laboratory operations	2,6	82,020		-	2,682,020
Total operating expenses	3,3	72,752			3,372,752
Results of operations	(23,350)		21,795	 (1,555)
Non-operating changes:					
Investment return in (deficit) excess of endowment spending	(13,073)		10,431	(2,642)
Endowment spending, undistributed	(3,239		7,158	10,397
Net assets released from restrictions		-		-	-
Gifts and pledges		11,454		48,069	59,523
Changes in fair value of interest rate swap		27,545)		-	(27,545)
Changes in benefit obligations and related recoveries, net		22,844)		_	(22,844)
Interest expense		13,037)		_	(13,037)
Redesignations, reclassifications and other		11,231)		(2,222)	(13,453)
Redesignations, reclassifications and other		11,231)		(2,222)	 (13,733)
Total non-operating activities	(73,037)		63,436	 (9,601)
(Decrease)/Increase in net assets	(96,387)		85,231	(11,156)
Net assets, beginning of year	5	83,369		2,622,661	 3,206,030
Net assets, end of year	\$ 4	86,982	\$	2,707,892	\$ 3,194,874

California Institute of Technology Statements of Cash Flows For the Years Ended September 30, 2020 and 2019 (Dollars in Thousands)

		2020		2019
Cash flows from operating activities:				
Increase/(decrease) in net assets	\$	82,683	\$	(11,156)
Adjustments to reconcile change in net assets to				
net cash used in operating activities:				
Depreciation, accretion, and amortization		77,336		74,117
Changes in postemployment benefit obligations		60,885		95,220
Contributions restricted for long-term investment and capital projects		(67,421)		(37,377)
Realized and unrealized gains on investments and swap		(148,851)		(68,590)
Other non-cash items		(16,715)		(11,087)
Changes in assets and liabilities:				
Accounts and notes receivable, net		73,018		505
Contributions receivable, net		(11,564)		(13,045)
Prepaid expenses and other assets		(15,476)		(5,875)
Deferred United States government billings		(32,362)		(45,949)
Accounts payable and accrued expenses		(36,234)		(14,517)
Accrued compensation and benefits		38,667		12,579
Deferred revenue, refundable advances, and agency funds		22,830		(3,373)
Accumulated postretirement benefit obligation		(27,768)		(30,853)
Net cash used in operating activities		(972)		(59,401)
Cash flows from investing activities:				
Purchases of investments	((1,078,791)		(797,922)
Proceeds from sales and maturities of investments		706,596		964,447
Purchases of property, plant, and equipment		(161,456)		(139,386)
Proceeds from sale of property, plant, and equipment		10,308		4,905
Net cash provided by (used in) investing activities		(523,343)		32,044
Cash flows from financing activities:				
Contributions restricted for long-term investment and capital projects		69,045		92,941
Investment return restricted for long-term investment and capital projects		710		632
Cash received under annuity and trust agreements		10,007		6,034
Cash payments made under annuity and trust agreements		(6,766)		(6,204)
Net repayments of short-term debt		(2,643)		(65,710)
Proceeds from issuance of bonds		494,360		
Net cash provided by financing activities		564,713		27,693
Net change in cash and cash equivalents		40,398		336
Cash and cash equivalents at beginning of year		6,510		6,174
Cash and cash equivalents at end of year	\$	46,908	\$	6,510
		_	_	_

A. Description of California Institute of Technology

California Institute of Technology (the "Institute") is a private, not-for-profit institution of higher education based in Pasadena, California. Founded in 1891, the Institute provides education and training services, primarily for students at the undergraduate, graduate, and postdoctoral levels, and performs research, training, and other services under grants, contracts, and similar agreements with sponsoring organizations, primarily departments and agencies of the government of the United States of America.

B. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying financial statements include the accounts of the Institute's main campus and satellite facilities ("Campus"), as well as the Jet Propulsion Laboratory ("JPL"), a Federally Funded Research and Development Center managed by the Institute for the National Aeronautics and Space Administration ("NASA").

The Institute manages JPL under a cost-reimbursable contract with NASA. JPL's land, buildings, and equipment are owned by the United States government and are excluded from the Institute's financial statements. Receivables and liabilities arising from JPL's operations are reflected in the Institute's balance sheets. The direct costs of JPL's operations and the related reimbursement of those costs are reflected separately in the statements of activities.

The Institute's financial statements have been prepared on the accrual basis of accounting, in accordance with accounting principles generally accepted in the United States of America ("GAAP").

Net Assets

Under GAAP, the Institute classifies its resources for reporting purposes in two categories based on the existence or absence of donor-imposed restrictions. Those categories, and descriptions of the types of transactions affecting each category, follow:

- The category "Net assets without donor restrictions" consists of those net assets not subject to donor-imposed restrictions. Activities that affect this category generally consist of fees for services, research revenues, and related expenses associated with the Institute's operating activities, as well as activities related to funds functioning as endowment and certain philanthropic support. Contributions not subject to donor-imposed restrictions and donor-restricted contributions that are received and either spent, or deemed spent, for the restricted purpose within the same year are reported as increases to net assets without donor restrictions.
 - "Net assets without donor restrictions" include certain funds that are board-designated as functioning as endowment. There are no other board-designated funds.
- The category "Net assets with donor restrictions" includes both net assets that are subject to donor-imposed time or purpose restrictions that are expected to be met and those subject to donor-imposed perpetual restrictions. Net assets with donor-imposed restrictions that are expected to be met include endowment investment returns that have not yet been appropriated

for expenditures, certain funds restricted for capital projects, and certain life income and annuity funds. The Institute meets such donor restrictions through the passage of time, the appropriation of endowment earnings, placing gift-funded capital projects into service, and/or the Institute's incurrence of expenditures or other payments. When such restrictions are met, the related net assets are released to net assets without donor restrictions.

Net assets with donor restrictions that are subject to perpetual restrictions include endowment gifts, related contributions receivable, and certain charitable life income and annuity funds for which donors have stipulated that the original value of their contributions and, if applicable, certain subsequent accumulations, be held in perpetuity.

For additional disclosures of the Institute's net assets, refer to Note H.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications

Certain prior year amounts for the year ended September 30, 2019 have been reclassified to conform to the current year presentation.

Cash and Cash Equivalents

Cash and cash equivalents include bank account balances, investments in money market funds, and direct short-term investments that have remaining maturities of three months or less when purchased. Bank account balances at September 30, 2020 and 2019 were \$46,908 and \$6,510, respectively. The Institute classifies cash equivalents held as part of the investment portfolios as short-term investments. Such investments are not included in the line item "Cash and cash equivalents" in the Statements of Cash Flows. At September 30, 2020 and 2019, short-term investments, as disclosed in Note D, included \$293,777 and \$347,271, respectively, in cash equivalents. Carrying amounts of cash equivalents approximate fair value due to the relatively short maturities of these instruments.

Accounts and Notes Receivable

Accounts receivable under contracts and grants are carried at cost, less an immaterial allowance for doubtful accounts. Net accounts receivable under contracts and grants totaled \$273,899 and \$344,834 at September 30, 2020 and 2019, respectively. Activity in the allowance accounts was not significant during the years ended September 30, 2020 and 2019. The carrying value of net accounts receivable approximates fair value.

At September 30, 2020 and 2019, the Institute held aggregate accounts receivable from students and employees of \$828 and \$2,582, respectively, and loans receivable from students of \$5,388 and \$5,718, respectively. Both accounts and loans receivable are carried at cost, and only minor amounts of these receivables are expected to become uncollectible.

Investments

Investments are carried at fair value as discussed in Note K. Purchases and sales of securities are recorded on trade dates, and realized gains and losses are determined based on the average cost of securities sold. Accounts receivable included \$15,843 and \$21,712 and accounts payable included \$1,045 and \$602 related to investment transactions not yet settled at September 30, 2020 and 2019, respectively.

Short-term investments included \$55,799 and \$46,109 held by the counterparty to the Institute's interest rate swap at September 30, 2020 and 2019, respectively, as collateral in accordance with the terms of the swap agreement.

The Institute also directly transacts in options to manage equity and foreign exchange risks of certain investments. The fair value of options is included in the line item "Investments" in the balance sheets and is classified as derivatives in disclosures of investments. Changes in the fair value of options are reported in investment return. The Institute does not designate any of these derivative instruments as hedging instruments under GAAP. Further disclosure of the fair value of derivatives is reported in Note K.

Property, Plant, and Equipment

Property, plant, and equipment is recorded at the cost of construction, acquisition, or fair value of contributed assets at the date of gift. Interest costs related to debt used for construction of assets are capitalized and included in the cost of construction. Depreciation on all assets subject to depreciation is calculated over the estimated useful lives as defined for each class of depreciable asset, which range from three to fifty years, using the straight-line method. Depreciation on buildings and building improvements is calculated based on the useful lives of each major building component. The Institute provides for the renewal and replacement of assets from various sources set aside for this purpose.

The Institute routinely acquires or constructs equipment under federally and non-federally funded research awards. The costs of such assets for which title does not ultimately transfer to the Institute are charged to expense.

The Institute's conditional asset retirement obligations are primarily related to removal and disposal of asbestos and removal of buildings and improvements from leased property. Asset retirement cost, net of accumulated depreciation, was \$10,648 and \$11,042 at September 30, 2020 and 2019, respectively, and is included in the line item "Property, plant, and equipment, net" in the balance sheets. Conditional asset retirement obligations were \$27,293 and \$26,664 at September 30, 2020 and 2019, respectively, and are included in the line item "Accounts payable and accrued expenses" in the balance sheets.

Annuities, Trust Agreements, and Agency Funds

The Institute's split-interest agreements with donors consist primarily of charitable gift annuities and charitable remainder trusts for which the Institute serves as trustee. For irrevocable agreements, assets contributed are included in investments at fair value and totaled \$116,763 and \$114,188 at September 30, 2020 and 2019, respectively. Contribution revenue is recognized at the date each trust is established after recording liabilities for the actuarially-determined present value of the estimated future payments to be made to beneficiaries. Actuarial liabilities are discounted at an appropriate credit risk-adjusted rate determined at the inception of each agreement. Discount rates on split-

interest agreements range from 0.6% to 10.6% per annum. The liabilities are adjusted during the terms of the agreements for changes in the fair value of the assets, accretion of discounts, and other changes in the estimates of future benefits. The 2012 Individual Annuity Reserving (IAR) table was used for the years ended September 30, 2020 and 2019. Split-interest agreement liabilities totaled \$66,404 and \$66,305 at September 30, 2020 and 2019, respectively, and are included in liabilities for "Annuities, trust agreements, and agency funds" in the balance sheets and classified in Level 3 of the valuation hierarchy described in Note K.

The Institute is also the trustee for certain revocable agreements. Assets contributed are included in Institute investments at fair value, and amounts equal to the value of assets are included in liabilities for "Annuities, trust agreements, and agency funds" in the balance sheets. Total assets and liabilities for revocable agreements were \$6,639 and \$6,680 at September 30, 2020 and 2019, respectively.

The Institute held assets totaling \$16,455 and \$15,911 in agency funds on behalf of other entities at September 30, 2020 and 2019, respectively. The assets held are primarily included in the line item "Investments" in the balance sheets. The corresponding liability, which is equal to assets held, is included in "Annuities, trust agreements, and agency funds" in the balance sheets.

Beneficial Interests

The Institute is the beneficiary of both charitable remainder and perpetual trusts held and administered by others and interests in certain estates bequeathed by donors. The fair value of the Institute's interests in charitable and perpetual trusts is estimated by multiplying the Institute's percentage interest by the fair value of trust assets at the time that receipt of such interests is both probable and reasonably estimable. The value of the Institute's interests in such trusts is adjusted for changes in the fair values of the underlying assets. Distributions from perpetual trusts are recorded as revenue when contributed by the trustee. Interests in estates are recognized based on estimates of cash flows from estate settlements at the time such cash flows are probable and reasonably estimable. Beneficial interests totaled \$27,077 and \$29,639 at September 30, 2020 and 2019, respectively, and are included in the line item "Prepaid expenses and other assets" in the balance sheets.

Compensated Absences

Institute employees are entitled to paid vacation based upon length of service and other factors. Certain employees also accrue benefits related to sick leave. The Institute records a liability for these benefits that employees have earned but not yet taken. At September 30, 2020 and 2019, accrued compensated absences of \$120,408 and \$99,230, respectively, are included in the line item "Accrued compensation and benefits" in the balance sheets. Other compensated absences do not accumulate and are treated as current-period costs.

Workers' Compensation Insurance

The Institute provides workers' compensation insurance to its employees. Liabilities for the Institute's retained risk related to such coverage are determined by an actuary and are included in the line item "Accrued compensation and benefits" in the balance sheets. At September 30, 2020 and 2019, liabilities for workers' compensation were \$13,047 and \$12,446, respectively.

Revenue Recognition

The Institute's revenue recognition policies are as follows:

- Investment return Investment transactions are recorded on the trade date. Investment income and realized and unrealized gains and losses, net of investment fees, are reported as increases or decreases to the appropriate net asset category.
- Gifts Unconditional contributions, including promises to give, are recorded as revenues in the year received. Noncash gifts are recorded at fair value using quoted market prices, market prices for similar assets, independent appraisals, or as estimated by Institute management. Gift revenue from contributions to be collected in the form of securities or other investments is adjusted at each year end to reflect the year-end value of securities and/or investments to be contributed.

Conditional contributions, which are characterized by both the presence of one or more donor-imposed barriers to the Institute's entitlement to promised resources and the donor's right of return of funds or the right to be released of obligations to transfer assets in the future, are recorded when the Institute overcomes such barriers. Barriers may include performance-related stipulations, limitations on the Institute's discretion over the use of awarded funds, and/or other stipulations related to the purpose of the contribution. Conditional contributions, undiscounted, totaled \$57,326 and \$67,394, and advance payments on such contributions totaled \$3,274 and \$4,250, at September 30, 2020 and 2019, respectively. Substantially all conditional contributions include educational and research donor-imposed purpose or time restrictions. Advance payments are recorded in deferred revenues.

- Grants and Contracts, Campus Revenues from grants and cooperative agreements designated for research generally are accounted for as contributions due to the lack of a commercial objective on the part of the sponsor. Such contributions generally are considered conditional due to the inclusion of barriers requiring adherence to specific costing principles and return-of-funds provisions. Generally, barriers to entitlement are removed, and revenue recognized, as allowable expenditures are incurred under such agreements. Cash and other assets received in excess of such expenditures or otherwise subject to conditions are recorded as deferred revenue. Conditional contributions related to sponsored research, undiscounted, totaled \$220,546 and \$224,225 at September 30, 2020 and 2019, respectively, and are not recorded in the financial statements. The Institute includes in conditional contributions only the unexpended portions of sponsored awards that the Institute has the right to expend without further action from the sponsor and/or a funding agency. Advance payments related to sponsored research totaled \$10,277 and \$10,156 at September 30, 2020 and 2019, respectively.
- Recovery of indirect costs and allowances Substantially all Campus United States government grants and contracts provide for the reimbursement of indirect facilities and administrative costs and the recovery of graduate student tuition remission based on rates negotiated with the Office of Naval Research, the Campus' federal cognizant agency for negotiation and approval of such rates. Such reimbursements generally are recognized as related direct costs are incurred on applicable awards. Recoveries of such facilities and administrative costs were \$92,867 and \$90,974 for the years ended September 30, 2020 and 2019, respectively.

• *Other* – Rental revenues from leased properties and miscellaneous gains and losses are recognized as earned. See Note L for additional information on leases.

Recognition of revenue from contracts with customers occurs as the Institute satisfies one or more performance obligations, which are promises in a contract to transfer a distinct good or service to a customer. The timing of billings, cash collections, and revenue recognition may result in contract assets and contract liabilities (deferred revenues) in the balance sheets. A description of the Institute's revenues from contracts with customers and contract assets and liabilities follows:

• Tuition and fees – All student tuition and fees and undergraduate room and board charges are recorded, net of applicable financial aid, as revenues during the year the related academic or other services are rendered. Such charges totaled \$127,918 and \$127,613, and financial aid totaled \$86,992 and \$83,234 for the years ended September 30, 2020 and 2019, respectively.

Payments received in advance of academic terms are recorded as deferred revenue. Total deferred revenue related to tuition, fees, room, and board was \$8,226 and \$10,669, and accounts receivable related to tuition, fees, room, and board was \$494 and \$1,779 at September 30, 2020 and 2019, respectively. Substantially all deferred revenue balances at September 30, 2019 were recognized as revenue during the fiscal year ended September 30, 2020, as performance obligations to provide instruction, room, and board were satisfied.

Jet Propulsion Laboratory operations - The Institute's performance obligations under its costreimbursable contract with NASA for JPL (the "JPL Contract") are contained within separately
identifiable, individually NASA-approved task orders created under the JPL Contract. The task
order is NASA's stipulated method of planning, funding, and monitoring costs under the JPL
Contract. The various task orders specify distinct scientific, engineering, and research scopes,
from which NASA benefits directly or in combination with other work performed under the JPL
Contract.

The Institute satisfies its performance obligations under the JPL Contract on an over-time basis as it incurs allowable direct costs under authorized funded task orders, and therefore recognizes revenue as such costs are incurred. All goods and services furnished under the JPL Contract, which are measured by allowable costs incurred, immediately accrue to the benefit of NASA. NASA simultaneously receives and consumes the benefits of any services provided, obtains title to any assets purchased, and, by contract, prohibits the Institute from directing any alternative use of assets created under the JPL Contract.

The Institute has a right to immediate reimbursement from NASA when allowable incurred costs are paid. The Institute collects its reimbursements under the JPL Contract through a letter of credit arrangement. JPL accounts receivable totaled \$229,279 and \$305,060 at September 30, 2020 and 2019, respectively.

The Institute records contract assets equal to costs incurred under, but not yet billed to, the JPL Contract. Such costs, which are not billable to NASA until paid, are equal to the total of the unfunded portion of the accumulated postretirement benefit obligation, accrued vacation, and accrued workers' compensation liabilities and are described further in Note E. At September 30, 2020 and 2019, there were no deferred revenue or other contract liability balances related to JPL.

Under the JPL Contract, the Institute also receives an annual negotiated reimbursement in lieu of indirect costs ("lump sum") and an annual fixed performance fee, which totaled \$59,034 and \$50,888 for the years ended September 30, 2020 and 2019, respectively. These recoveries are recorded on an over-time basis ratably over each fiscal year and are included in the line item "Recovery of indirect costs and allowances" in the statements of activities. The JPL Contract has no material variable consideration and no significant financing component.

The current JPL Contract began October 1, 2018, and has a five-year term. At September 30, 2020, reimbursements of all costs under the contract over the five-year term were subject to an aggregate total of fifteen billion dollars. The Institute may be awarded up to five additional years under the contract based upon annual NASA evaluations of its performance. The first evaluation is complete and JPL earned two option years. NASA has not yet formally extended the contract.

The value of the Institute's future performance obligations under the JPL Contract is subject to change according to NASA's priorities and the results of JPL's scientific and engineering initiatives. Such performance obligations are subject to the availability of future NASA funding and, in certain cases, the future renewal or extension of the JPL Contract. Based upon the JPL Contract's maximum cost limit, the maximum remaining obligation to potentially be authorized under the JPL Contract was \$9,562,765 and \$12,249,006 at September 30, 2020 and 2019, respectively.

• Sales and services - Ancillary inflows from graduate housing, royalties, non-degree-granting educational activities, retail operations, and other agreements with customers are recorded as the Institute satisfies the related performance obligations. Generally, payment is due at the time goods or services are provided. There were no material deferred revenue or accounts receivable balances related to sales and services revenues at September 30, 2020 and 2019.

Campus recorded \$47,585 and \$29,115 in direct revenues from sponsored research activities accounted for as contracts with customers for the years ended September 30, 2020 and 2019, respectively. Those direct revenues are combined with conditional contribution revenues from either United States government or other Campus grants in the statements of activities. Related recoveries according to applicable indirect cost rates of \$11,448 and \$8,419 are included in the line item "Recovery of indirect costs and allowances" in the statements of activities for the years ended September 30, 2020 and 2019, respectively. There were no material deferred revenue or accounts receivable balances related to these contracts at September 30, 2020 and 2019.

Expenses

Campus expenses are reported in the statements of activities by natural classification. Institute expenses by functional classification were as follows for the years ended September 30, 2020 and 2019:

		Can	ipus Pi	rogram Acti	vities							
	Instr	uction and										
		cademic	0	rganized	Au	ıxiliary		titutional		JPL		
September 30, 2020	S	Support	R	esearch	Ent	erprises	S	upport	0	perations		Total
Operating expenses:												
Compensation and benefits	\$	208,163	\$	145,358	\$	11,686	\$	66,544	\$	1,267,668	\$	1,699,419
Supplies and services		55,903		48,238		11,178		11,212		349,924		476,455
Subcontracts		2,041		39,634		-		-		984,341		1,026,016
Depreciation and amortization		27,637		37,671		8,449		3,579		-		77,336
Utilities		6,258		8,785		613		1,034		13,213		29,903
Interest		12,098		13,710		5,043		821		-		31,672
Total functional expenses	\$	312,100	\$	293,396	\$	36,969	\$	83,190	\$	2,615,146	\$	3,340,801
Non-operating expenses:												
Interest							\$	25,301			\$	25,301
Net periodic benefit costs								593	\$	(9,148)		(8,555)
		Can	ipus Pi	rogram Acti	vities							
	Instr	uction and										
	A	cademic	0	rganized	Au	ıxiliary	Inst	titutional		JPL		
September 30, 2019	8	Support	R	esearch	Ent	erprises	S	upport	Operations		Total	
Operating expenses:												
Compensation and benefits	\$	197,812	\$	133,570	\$	12,036	\$	59,654	\$	1,191,476	\$	1,594,548
Supplies and services		60,315		43,790		13,514		22,164		389,356		529,139
Subcontracts		1,686		26,666		-		-		1,089,198		1,117,550
Depreciation and amortization		28,992		33,465		8,014		3,646		-		74,117
Utilities		6,383		7,877		563		957		11,990		27,770
Interest		11,283		12,615		5,025		705		-		29,628
Total functional expenses	\$	306,471	\$	257,983	\$	39,152	\$	87,126	\$	2,682,020	\$	3,372,752
Non-operating expenses:												
Interest							\$	13,037			\$	13,037
Net periodic benefit costs								(172)	\$	(9,271)		(9,443)

Institutional Support expenses include certain costs related to the administration of the Institute's contract with NASA for the operation of JPL. NASA reimbursed Caltech \$28,034 and \$19,888 for the years ended September 30, 2020 and 2019, respectively, related to such costs. These amounts represent the annual negotiated reimbursement in lieu of indirect costs ("lump sum") as described in the NASA Contract.

Auxiliary Enterprises expenses include the costs associated with revenue-generating supporting services, including undergraduate room and board, graduate and faculty housing, retail stores, and dining facilities.

Facilities operation and maintenance costs incurred centrally are allocated back to the functional expense classifications as follows: Depreciation related to buildings and improvements and other central facilities' operating costs are allocated based on square footage occupancy of Institute facilities, equipment depreciation is allocated based on average equipment purchases attributed to each classification, and interest expense on external debt, net of amounts capitalized, is allocated to categories that benefit from the proceeds of such debt based on occupancy.

Operating and Non-operating Activities

The statements of activities report the changes in net assets from the Institute's operating and non-operating activities. Operating activities exclude investment return in excess/deficit of endowment spending; endowment spending available but not distributed to operations; revenues and releases from restrictions related to gifts for construction, endowments, and annuity and trust agreements; changes in postemployment benefit obligations that are not otherwise recognized in operating expenses and related reimbursements; changes in fair value of interest rate swaps; interest expense related to any bonds issued for which the proceeds have not yet been used for capital projects, for refunding of other bonds, and for operating purposes; net gains or losses on nonrecurring transactions; actuarial adjustments related to annuity and trust agreements; gains and losses on retirement of indebtedness; and donor redesignations and other reclassifications of net assets.

Tax Status

Except as noted below, the Institute is generally exempt from federal taxes on income related to its charitable purpose under the provisions of IRC Section 501(c)(3) and from California and other state income taxes under corresponding state laws. The Institute is subject to both federal and state income taxes on income from certain activities not substantially related to its exempt purpose. At September 30, 2020 and 2019, the Institute maintained a full valuation allowance on its deferred tax assets. The valuation allowance reduced net deferred tax assets, which are primarily due to tax losses from certain investment activities, to a value of \$0. Based on its analysis of the uncertainties surrounding both the timing and amounts of potential future net taxable income, the Institute has assumed that it is more likely than not that the Institute will not realize the deferred tax assets. The Institute has not provided for any uncertain tax positions at September 30, 2020 and 2019.

The Federal Tax Cuts and Jobs Act ("TCJA") of 2017 includes several provisions that impact the Institute, including an excise tax on net investment income and revised methods for calculating unrelated business income. Based on its understanding of the TCJA and available guidance, the Institute had no material deferred tax liabilities or income taxes payable at September 30, 2020 and 2019.

Related Party Transactions

Members of the Institute's Board of Trustees and senior management may, from time to time, be associated, either directly or indirectly, with entities doing business with the Institute. These transactions are conducted in the normal course of business and in accordance with the Institute's policies and procedures governing potential conflicts of interest.

Accounting Pronouncements Adopted

During the year ended September 30, 2020, the Institute adopted Accounting Standards Update ("ASU") 2016-15, Classification of Certain Cash Receipts and Cash Payments, and ASU 2016-18, Restricted Cash: a Consensus of the FASB Emerging Issues Task Force. The adoption of these ASU's had no material changes to the presentation of the Institute's financial statements.

Effective at the beginning of the fiscal year ended September 30, 2020, the Institute also adopted ASU 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.* ASU 2017-07 resulted in the bifurcation of net periodic cost related to postretirement benefits into service costs, which is reported within operations, and other components, which must be reported outside of operations. The adoption of ASU 2017-07 had no effect on changes in the Institute's net assets.

The Institute implemented ASU 2017-07 on the required retrospective basis. The impact of the adoption of ASU 2017-07 on changes in the net asset classification "Net assets without donor restrictions" in the financial statements for the year ended September 30, 2019 is as follows:

				0	ther		
	Originally	A	ASU 2017-07	Rep	orting		
	Reported		Adjustments	Reclass	sifications	As	Reported
Operating revenues:							
Jet Propulsion Laboratory operations	\$ 2,744,953	\$	-	\$	(62,933)	\$	2,682,020
Total operating revenues and other support	3,412,335		-		(62,933)		3,349,402
Operating expenses:							
Compensation and benefits	402,900		172		-		403,072
Jet Propulsion Laboratory operations	2,744,953		9,271		(72,204)		2,682,020
Total operating expenses	3,435,513		9,443		(72,204)		3,372,752
Results of operations	(23,178)		(9,443)		9,271		(23,350)
Non-operating changes:							
Changes in benefit obligations and related recoveries, net	(23,016)		9,443		(9,271)		(22,844)
Total non-operating activities	(73,209)		9,443		(9,271)		(73,037)
1 0	())		-, -		().)		(-))

In connection with the implementation of ASU 2017-07, the Institute reclassified the presentation of certain JPL-related postretirement benefit costs and related recoveries in the Statement of Activities

for the year ended September 30, 2019 in order to enhance the usefulness and comparability of the financial statements. The Institute reclassified the presentation of non-periodic changes in benefit obligations related to JPL from the expense line item "Jet Propulsion Laboratory operations" to the non-operating line item "Changes in benefit obligations and related recoveries, net." The Institute also reclassified both recoveries related to those non-periodic changes in benefit obligations and those recoveries related to net periodic benefit costs other than service costs from the revenue line item "Jet Propulsion Laboratory operations" to the non-operating line item "Changes in benefit obligations and related recoveries, net," as any such costs related to JPL are recoverable from NASA. Further information regarding the components of non-operating changes in benefit obligations are disclosed in Note I to these financial statements.

In accordance with a practical expedient offered by ASU 2017-07, the Institute used components of net periodic benefit cost and other changes in benefit obligations originally disclosed in the September 30, 2019 financial statements to prepare the retrospective disclosures of prior-year information in these financial statements.

New Accounting Pronouncements

In February 2016, FASB issued ASU 2016-02 regarding accounting for leases. ASU 2016-02 requires recognition of rights and obligations arising from lease contracts as assets and liabilities on the balance sheets. ASU 2016-02 is effective for the Institute's fiscal year ending September 30, 2021. The Institute does not expect the adoption of this standard to result in material changes to its financial statements or disclosures.

In August 2018, FASB issued ASU 2018-13 regarding certain changes to the disclosure requirements for fair value measurements. ASU 2018-13 is effective for the Institute's fiscal year ending September 30, 2021. The Institute is evaluating the impact this standard may have on its financial statements and disclosures.

Other Reporting Matters

In March 2020, the World Health Organization declared a pandemic, the United States declared a national emergency, and both the State of California and the County of Los Angeles ordered significant restrictions on businesses and the public in response to the emergence of a novel coronavirus (COVID-19). As a result, the Institute suspended many Campus and JPL activities and instituted remote instruction and work arrangements for a significant portion of its students, faculty, and staff. The Institute continues to focus its pandemic response, planning, and decision-making processes on the Institute's top priorities of health and safety, continuity of research and instruction, and faculty and student recruitment and retention. Pandemic-related facilities closures and remote work and instruction have caused reductions in auxiliary revenues, and increased health and safety measures have increased certain expenses. In response, the Institute has reduced the size of its workforce, restricted hiring of new positions, and restricted faculty and staff travel. The full extent of the impact of COVID-19 on the Institute's finances is uncertain and will depend on the duration and depth of the pandemic and therefore cannot be determined at this time.

C. Contributions Receivable, net

Contributions receivable consists of unconditional promises to give to the Institute in the future. Individual contributions receivable are initially recorded at fair value, including discounts to present

values of the future cash flows at appropriate credit risk-adjusted rates, and are classified in Level 3 of the valuation hierarchy described in Note K. Discount rates on outstanding contributions receivable at September 30, 2020 and 2019 range from 0.74% to 3.53%.

Collections of contributions receivable were expected as follows at September 30, 2020 and 2019:

	2020			2019
Within one year	\$	43,514	\$	37,013
Between one year and five years		102,300		98,258
More than five years		22,100		20,213
Gross contributions receivable Less:		167,914		155,484
Unamortized discounts		8,215		7,028
Allowance for uncollectible contributions		241		142
Net contributions receivable	\$	159,458	\$	148,314

Net contributions receivable carried the following donor-imposed restrictions at September 30, 2020 and 2019:

	2020			2019		
Endowment	\$	61,170	\$	73,403		
Building and building improvements		14,055		-		
Other purpose and/or time restrictions		84,233		74,911		
Net contributions receivable	\$	159,458	\$	148,314		

At September 30, 2020 and 2019, net promises totaling \$84,949 and \$106,029, respectively, were due from Institute trustees, their estates, and charitable entities founded by Institute trustees.

D. Investments

Investments consisted of the following at September 30, 2020 and 2019:

	2020	2019
Short-term investments	\$ 295,037	\$ 348,320
Fixed-income securities	162,102	119,746
Equity securities	1,631,221	1,216,463
Alternative investments:		
Alternative securities	912,146	827,156
Private equity	623,861	528,937
Real assets	346,804	379,139
Derivatives, net	450	6,741
Total investments	\$ 3,971,621	\$ 3,426,502

The Institute engages a number of outside investment managers to manage portions of its investment portfolios, which include an investment pool and other separately managed portfolios.

Below is a description of the holdings included within each investment classification:

- *Short-term investments* consist primarily of cash equivalents invested in prime, U.S. government, and government agency money-market funds.
- Fixed-income securities consist primarily of debt instruments issued by corporate or sovereign entities in both U.S. and foreign markets and investments in funds that hold such instruments.
- Equity securities consist primarily of investments in publicly traded corporate equities in globally diversified public markets, including domestic markets, developed international markets, emerging markets, and investments in funds that hold such investments. Investment managers invest according to each manager's particular investment strategy.
- Alternative securities consist primarily of investments other than private equity funds and real assets funds in which redemption options and/or distributions are determined by the respective investment managers. Alternative securities managers pursue returns through a variety of strategies, such as high yield and distressed credit, long/short equity, event-driven, and relative value. Managers invest and trade in various securities and financial instruments, including publicly traded and privately issued common and preferred shares of domestic and foreign companies, corporate debt, bonds, swaps, options, futures contracts and commodities.

- Private equity consists primarily of investments in limited partnership interests that invest
 primarily in the securities of privately held companies. Investment managers utilize leveraged
 buyout and venture capital strategies in a wide variety of industries and company sizes.
 Distributions from these investments are made either in-kind as distributions of publicly
 tradeable equity securities after initial public offerings, or in cash after liquidation of the
 underlying securities by the investment managers.
- Real assets consist primarily of investments in limited partnerships that invest in foreign and/or domestic real estate and/or energy sectors and/or domestic timber industries. Real estate consists primarily of illiquid investments in residential and commercial real estate assets, projects or land, and notes receivable secured by real estate. Such holdings are either held directly or in partnership funds. Energy holdings consist primarily of illiquid investments in oil and gas exploration and production or materials mining businesses, as well as related oil and gas services businesses, held in limited partnerships. Timber holdings consist primarily of illiquid investments in timber land and harvesting businesses held in limited partnerships.
- *Derivatives*, *net* consist of options and futures in which the Institute directly transacts to manage equity and foreign exchange risks of certain investments.

Investments were held as follows at September 30, 2020 and 2019:

		2020		2019
Investment pool	\$	3,062,568	\$	2,970,917
Separately invested endowments		45,681		30,610
Trusts, annuities, and other		863,372		424,975
Total investments	\$	2 071 621	\$	2 126 502
Total filves thems	<u> </u>	3,971,621	Þ	3,426,502

At September 30, 2020 and 2019, endowment investments were \$3,085,500 and \$2,987,001, respectively. At September 30, 2020 and 2019, other investments included \$16,544 and \$7,620, respectively, held in separately invested accounts as required by donors and/or sponsors.

Investment return, which consists of interest and dividend income and net realized and unrealized gains and losses, net of fees, was \$215,252 and \$157,525 for the years ended September 30, 2020 and 2019, respectively.

E. Deferred United States Government Billings

The Institute's contract with NASA provides for the reimbursement of certain employee benefit costs incurred but not yet billed to the JPL contract. Therefore, the Institute has recorded deferred United States government billings related to the unfunded postretirement benefit obligation, accrued vacation, and workers' compensation liabilities attributable to JPL, as the Institute is able to recover these amounts through future charges to JPL contracts. Although these deferred billing amounts may

not be currently funded, and therefore may need to be funded as part of future NASA budgets, the Institute has the contractual right to require that such funding be made available at the time these employee benefit liabilities become payable by the Institute.

Deferred United States government billings related to deferred reimbursements of the following liabilities at September 30, 2020 and 2019:

	2020			2019
Unfunded postretirement benefit obligation	\$	291,982	\$	277,522
Accrued vacation		99,006		81,322
Accrued worker's compensation expense		4,142		3,924
Total deferred United States				
government billings	\$	395,130	\$	362,768

F. Property, Plant, and Equipment, net

Property, plant, and equipment consisted of the following at September 30, 2020 and 2019:

	2020			2019
Land and land improvements	\$	83,950	\$	73,256
Buildings and building improvements		1,294,631		1,271,906
Equipment		650,183		600,825
Construction in progress		278,969		193,459
Less: accumulated depreciation		(1,139,457)		(1,068,679)
Total property, plant, and equipment, net	\$	1,168,276	\$	1,070,767

Depreciation expense for the years ended September 30, 2020 and 2019 was \$75,947 and \$72,805, respectively.

G. Bonds and Notes Payable

Bonds and notes payable are uncollateralized, general obligations of the Institute and consisted of the following at September 30, 2020 and 2019:

				Interest rate	Outs						ındin	0
			Maturity	2020 / 2019		2020		2019				
Bonds payable:												
Taxable bonds (interest rates listed at coupon): Series 2019			2110	2 (50/	\$	500,000	\$					
			2119	3.65%	Ф	150,000	Ф	150,000				
Series 2016			2116	4.28%								
Series 2015			2045	4.32%		400,000 350,000		400,000 350,000				
Series 2011			2111	4.70%		330,000		330,000				
California Educational Facilities Authority (CEFA)												
tax-exempt revenue bonds, with variable rates (prior to being												
synthetically fixed through swap agreements, where applicable):												
2006 Series A			2036	0.11% / 1.33%		82,500		82,500				
2006 Series B			2036	0.12% / 1.34%		82,500		82,500				
Series 1994			2024	0.12% / 1.34%		30,000	_	30,000				
Total bonds payable, gross						1,595,000		1,095,000				
Unamortized original issue premiums/discounts												
and issuance costs, net					_	(15,948)	_	(10,551)				
Total bonds payable, net						1,579,052		1,084,449				
Notes payable:	N	T aximum										
Variable rate facilities:												
General working capital and capital projects:												
JPMorgan Chase revolving bank credit facility	\$	100,000	2022	0.53% / 2.17%		14,000		20,000				
U.S. Bank revolving bank credit facility		100,000	2023	0.64% / 2.56%		25,000		25,800				
U.S. Bank revolving bank credit facility		50,000	None	0.54% / -		50,000		-				
JPMorgan Chase revolving bank credit facility		50,000	2021	-		-		-				
City National Bank revolving bank credit facility		50,000	2021	-		-		-				
Wells Fargo revolving bank credit facility		50,000	2020	- / 2.37%		-		45,843				
Bank of New York Mellon money market loan program		50,000	2020	-		-		-				
Supplemental liquidity for variable rate debt:												
Northern Trust revolving bank credit facility		50,000	2022	-		-		-				
Northern Trust revolving bank credit facility		50,000	2020	-		-		-				
TD Bank revolving bank credit facility		50,000	2022	-	_	-		-				
Total notes payable						89,000		91,643				
Total bonds and notes payable, net					\$	1,668,052	\$	1,176,092				
					_		_					

As of September 30, 2020, the Institute had eight unsecured revolving lines of credit available (collectively, the "Lines of Credit"). Maturity dates for individual advances made under the Lines of Credit are determined at the time advances are made. At September 30, 2020 and 2019, the Institute had internally-mandated aggregate borrowing limits for the Lines of Credit as follows: \$100,000 for borrowings to finance working capital, \$100,000 for borrowings to finance acquisitions of real estate and temporary funding for capital projects, and \$200,000 for borrowings to preserve liquidity.

The \$50,000 line of credit from U.S. Bank is uncommitted.

The Wells Fargo revolving line of credit with a permitted maximum draw of \$50,000 expired on June 30, 2020. In addition, the \$50,000 Bank of New York Mellon unsecured revolving money market loan program was terminated on April 15, 2020.

During the year ended September 30, 2020, the Institute established two new revolving bank credit facilities: One with JPMorgan Chase, with a permitted maximum draw of \$50,000 and another with City National Bank, with a permitted maximum draw of \$50,000. Both facilities mature in 2021.

Subsequent to September 30, 2020, the Institute extended its \$50,000 revolving line of credit with Northern Trust originally maturing in 2020 to mature in 2021 and extended its \$50,000 revolving line of credit with Northern Trust originally maturing in 2022 to mature in 2023.

The Institute is required to comply with financial covenants in certain line of credit agreements, including maintaining minimum ratios of unrestricted cash and investments to total adjusted debt outstanding. As of September 30, 2020, the Institute was in compliance with all of its required financial covenants.

Under certain circumstances, the CEFA Series 1994, 2006 Series A, and 2006 Series B variable rate revenue bonds, which have contractual maturities commencing in 2024, could fail to be remarketed, requiring the Institute to repurchase the outstanding bonds totaling approximately \$195,000. Therefore, those bonds have been classified as repayable in the year ending September 30, 2020 in the following table.

Future principal repayments on bonds and notes payable were as follows at September 30, 2020:

Year Ending September 30	Amount			
2021	\$ 284,000			
2022	-			
2023	-			
2024	-			
2025	-			
Thereafter	 1,400,000			
Total	\$ 1,684,000			

The Institute uses an interest rate swap to manage the interest rate exposure of the 2006 Series A and B variable rate revenue bonds. Under the terms of the agreement, which expires October 1, 2036, the Institute pays the counterparty a fixed interest rate of 3.549% and receives a variable rate, equal to 67% of one-month LIBOR (resulting in a rate of approximately 0.10% at September 30, 2020), on a \$165,000 underlying notional principal amount.

The interest rate swap is recorded at fair value, which is the estimated amount that the Institute would receive or pay to terminate the agreement, taking into account current interest rates. The fair value of the swap was a liability of \$76,091 and \$62,530 at September 30, 2020 and 2019, respectively, and is included in the line item "Accounts payable and accrued expenses" in the balance sheets. Costs of regular settlements with the counterparty of \$4,787 and \$3,202 during the years ended September 30, 2020 and 2019, respectively, are included in the expense line item "Interest" in the statements of activities. Changes in the swap's fair value during the years ended September 30, 2020 and 2019 resulted in unrealized losses of \$13,561 and \$27,545, respectively, which are included in non-operating changes in net assets in the statements of activities.

H. Net Assets

Net Assets with Donor Restrictions

The Institute's net assets with donor restrictions were held as follows at September 30, 2020 and 2019:

	2020		2019
Time or purpose:			
Endowment	\$	674,849	\$ 637,888
Contributions receivable		98,288	74,910
Education and research funds		156,080	134,121
Life income and annuity funds		30,366	29,537
Total net assets with time or purpose restrictions	\$	959,583	\$ 876,456
Perpetual:			
Endowment	\$	1,763,554	\$ 1,693,783
Contributions receivable		61,170	73,404
Life income and annuity funds		43,234	45,221
Student loan funds		19,340	19,028
Total net assets with perpetual restrictions	\$	1,887,298	\$ 1,831,436
Total net assets with donor restrictions	\$	2,846,881	\$ 2,707,892

Endowment Net Assets (including Funds Functioning as Endowment)

Endowment net assets constitute the largest component of the Institute's net assets and are comprised of more than 1,000 donor-restricted and board-designated funds held primarily for long-term investment that supports educational, research, and general operating activities of the Institute. All endowment assets are held in a consolidated investment pool unless special considerations or donor

stipulations require that they be invested separately. Gift annuities, beneficial interests, contributions receivable, and unexpended endowment distributions are not considered endowment net assets.

Pursuant to its interpretation of the Uniform Prudent Management of Institutional Funds Act ("UPMIFA") as enacted in California, the Institute classifies the following as net assets with donor restrictions that are perpetual in nature: the original value of initial gifts to permanent endowments, the original value of subsequent gifts to permanent endowments, and the value of accumulations to permanent endowments made in accordance with the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portions of donor-restricted endowment funds for which the remaining donor restrictions are not perpetual in nature, and which consist primarily of accumulated investment return, are considered donor-restricted as to purpose until those amounts are appropriated for expenditure by the Institute in a manner consistent with the standard of prudence prescribed by UPMIFA and by Institute policies, and are expended accordingly.

The Institute's endowment (including funds functioning as endowment) spending policy includes a Board of Trustees-approved endowment spending formula that takes into consideration the prior year's allowed formulaic spending, inflation factors, and endowment growth. In accordance with UPMIFA, the policy also includes the following factors for consideration by the Board of Trustees when determining the annual amount to be made available for distribution to the operating budget each year:

- The purposes of donor-restricted endowment funds
- The duration and preservation of such funds
- General economic conditions
- Possible effects of inflation and deflation
- The expected total return from investment income and the appreciation of investments
- Other resources of the Institute
- The investment policies of the Institute

Any excess of endowment spending over current-year investment income and gains/(losses) is funded by prior years' accumulated investment return. The Institute appropriates endowment funds for expenditures based on authorized spending rates and, if applicable, the incurrence of specific expenditures in accordance with donor-imposed purpose restrictions.

The Institute invests endowment assets targeted to earn an average annual total return that exceeds inflation by at least the amount required to support the endowment spending. Total return includes both capital appreciation/depreciation (realized and unrealized gains/losses) and investment income (including interest, dividends, and royalties). The Institute targets a diversified asset allocation, including, but not limited to, investments in public markets, private equity, real assets, and alternative investments, within risk constraints deemed to be prudent.

The portion of endowment available for spending that is transferred to operating accounts each year is shown as "Endowment spending, distributed" in the statements of activities. Any endowment spending available for expenditure but not distributed remains invested in the Institute's endowment and is included in non-operating changes to net assets in the statements of activities.

Endowment net assets consisted of the following at September 30, 2020 and 2019:

September 30, 2020	Donor Do		Donor		With Donor Restrictions		Total
Donor-restricted endowment funds	\$	-	\$	2,435,809	\$ 2,435,809		
Board-designated endowment funds		662,188		2,594	664,782		
Total endowment net as sets	\$	662,188	\$	2,438,403	\$ 3,100,591		
September 30, 2019							
Donor-restricted endowment funds	\$	-	\$	2,329,077	\$ 2,329,077		
Board-designated endowment funds		654,989		2,594	657,583		
Total endowment net assets	\$	654,989	\$	2,331,671	\$ 2,986,660		

Changes in endowment net assets for the years ended September 30, 2020 and 2019 were as follows:

	Without Donor		With Donor		
	Res	strictions	Restrictions		Total
October 1, 2018	\$	678,678	\$	2,227,520	\$ 2,906,198
Investment return, net		15,955		133,403	149,358
Contributions and pledge payments		-		93,949	93,949
Additions to board-designated endowments		35,347		-	35,347
Available for expenditure		(37,003)		(123,164)	(160,167)
Redesignations, reclassifications, and other		(37,988)		(37)	 (38,025)
September 30, 2019	\$	654,989	\$	2,331,671	\$ 2,986,660
Investment return, net		46,581		166,941	213,522
Contributions and pledge payments		-		66,725	66,725
Additions to board-designated endowments		10,387		-	10,387
Available for expenditure		(36,532)		(133,132)	(169,664)
Redesignations, reclassifications, and other		(13,237)		6,198	 (7,039)
September 30, 2020	\$	662,188	\$	2,438,403	\$ 3,100,591

The line item "Redesignations, reclassifications, and other" in the table above includes the effects of changes in donor-imposed restrictions or Institute designations and certain endowment management costs.

Under Accounting Standards Codification 958, for accounting purposes the Institute must maintain the historical values of underwater donor-restricted endowment funds as net assets subject to donor restrictions that are perpetual in nature. Deficiencies in fair value of such funds relative to their historical values reduce the portion of net assets with donor restrictions that is subject to time and/or purpose restrictions, and diminish with fair value appreciation. The aggregate deficiencies in fair value relative to historical cost for underwater endowments at September 30, 2020 and 2019 were as follows:

	2020	2019		
Aggregate historical value	\$ 226,303	\$	249,575	
Aggregate fair value	213,840		234,883	
Aggregate deficiency	\$ (12,463)	\$	(14,692)	

The Institute's endowment spending policy and applicable laws permit the appropriation of endowment spending from underwater funds unless prohibited by donor-imposed restrictions. During the years ended September 30, 2020 and 2019, the Institute appropriated spending of \$12,052 and \$12,291, respectively, from certain underwater funds in accordance with the policy, so as not to suspend certain Institute programs. The policy requires the Institute's management to monitor and approve spending from underwater funds annually on a fund-by-fund basis and to report annually to the Board of Trustees regarding underwater funds.

I. Postretirement and Postemployment Benefits

Postretirement Health and Life Insurance

The Institute provides postretirement health and life insurance benefit plans to eligible retirees and their dependents. The Institute's obligation related to these benefits is actuarially determined based on a September 30 measurement date. The Institute also provides defined contribution retirement plans, which are described at the end of this note.

Components of the funded status of postretirement benefits reported in the Institute's balance sheets and changes therein were as follows for the years ended September 30, 2020 and 2019. Additional detail regarding the JPL and Campus-related portions of the funded status of postretirement benefits is provided at the end of this note.

	2020		20	
Change in the accumulated postretirement benefit obligation:				
Benefit obligation at beginning of year	\$	545,658	\$	455,830
Service cost		16,285		12,625
Interest cost		17,795		19,627
Benefits paid		(14,142)		(14,258)
Actuarial loss		51,496		71,834
Benefit obligation at end of year		617,092		545,658
Changes in plan assets:				
Fair value of plan assets at beginning of year		123,759		98,298
Return on plan assets		16,961		5,684
Employer contributions		35,498		34,035
Benefits paid		(14,142)		(14,258)
Fair value of plan assets at end of year		162,076		123,759
Funded status	\$	(455,016)	\$	(421,899)

Benefits for campus retirees and their dependents are funded on a pay-as-you-go basis. Benefits for JPL retirees and their dependents are funded by NASA according to an accrual accounting approach based on the Federal Acquisition Regulation. JPL-related contributions in excess of benefits paid are held in a trust for the benefit of JPL retirees and are invested according to the related plan's investment policies. At September 30, 2020 and 2019, trust investments consisted of short-term investments and non-publicly traded collective trust funds and mutual funds. Short-term investments are classified in level 1 of the valuation hierarchy described in Note K, and the collective trust funds and mutual funds, which have readily determinable fair values, are classified within level 2 of that hierarchy.

Trust investments were held as follows at September 30, 2020 and 2019:

	2020	2019		
Short-term investments	\$ 2,138	\$	271	
Collective trust funds	47,840		36,693	
Mutual funds	 112,098		86,795	
Total investments	\$ 162,076	\$	123,759	

Net periodic postretirement benefit cost ("NPBC"), or the amount recorded as expense related to postretirement health and life insurance benefits attributable a particular year, was as follows for the years ended September 30, 2020 and 2019:

	2020		2019
Components of net periodic postretirement benefit cost:			
Service cost	\$ 16,285	\$	12,625
Other components:			
Interest cost	17,795		19,627
Expected return on plan assets	(7,650)		(5,897)
Amortization of prior year service credit	(26,305)		(26,305)
Amortization of loss	 7,605		3,132
Total other components	(8,555)		(9,443)
Net periodic benefit cost	\$ 7,730	\$	3,182

The statements of activities include both the components of NPBC and the effects of changes in funded status that are not otherwise recognized in NPBC. For the years ended September 30, 2020 and 2019, service costs related to Campus totaling \$4,441 and \$3,562, respectively, are included in the financial statement line item "Compensation and benefits," and service costs related to JPL totaling \$11,844 and \$9,063, respectively, are included in the financial statement line item "Jet Propulsion Laboratory operations."

For the years ending September 30, 2020 and 2019, the following are included in the non-operating statement of activities line item "Changes in benefit obligations and related recoveries, net":

	2020		2019	
Other components of NPBC, Campus	\$	(593)	\$ 172	
Other components of NPBC, JPL		9,148	9,271	
Non-periodic changes in obligation, Campus		(17,228)	(23,016)	
Non-periodic changes in obligation, JPL		(43,657)	(72,204)	
JPL Contract recoveries		34,509	62,933	
Changes in benefit obligation and other				
recoveries, net	\$	(17,821)	\$ (22,844)	

Non-periodic changes in the benefit obligation for both Campus and JPL represent changes in the benefit obligation not otherwise recognized in NPBC. JPL contract revenue equal to the sum of JPL's other components of NPBC and non-periodic changes in the benefit obligation related to JPL is included as an offsetting recovery, as any costs associated with JPL are contractually recoverable from NASA.

At September 30, 2020 and 2019, the differences recognized in net assets without donor restrictions between cumulative net periodic postretirement benefit cost, less cumulative contributions, and funded status were as follows:

	2020	2019		
Prior service credit	\$ (18,876)	\$	(25,253)	
Net loss	50,591		39,740	
Cumulative amounts recognized in net assets				
without donor restrictions	\$ 31,715	\$	14,487	

Any actuarial deferrals resulting from changes in the accumulated postretirement benefit obligation are amortized over the average future working lifetime of Institute employees. An estimated prior service credit of \$26,305 and estimated actuarial loss of \$9,247 will be amortized into net periodic benefit cost during the year ending September 30, 2021.

The following weighted-average assumptions were used to determine the Institute's net periodic benefit cost under the plans for the years ended September 30, 2020 and 2019:

	2020	2019		
Discount rate	3.30%	4.40%		
Discount rate for service cost	3.40%	4.40%		
Expected return on plan assets	5.75%	5.50%		
Health care cost trend rate	7.00%	7.25%		

To develop the expected long-term rates of return on assets noted above, the Institute considers the historical returns and future expectations for each asset class, as well as the asset allocation of the retirement plan's investment portfolio. Estimated future returns are based on expected returns for various asset categories. The evaluation of the historical and future returns resulted in the selection of 5.75% and 5.50%, respectively, for the years ended September 30, 2020 and 2019.

The following weighted-average assumptions were used to determine the Institute's obligation under the plans at September 30, 2020 and 2019:

	2020	2019	
Discount rate	3.00%	3.30%	
Discount rate for service cost	3.30%	3.40%	
Health care cost trend rate	6.75%	7.00%	

The Institute's postretirement medical benefit plans provide a substantial portion of the Institute's retirees and their eligible dependents annual awards of defined-dollar credits that are available to be used by retirees for medical premiums and other eligible medical expenses. The defined dollar credits may be changed in future years at the Institute's discretion. Certain grandfathered retirees and eligible dependents remain eligible for future medical benefits at no cost through an Institute-sponsored plan. The cost of these benefits is expected to increase in the future based on health care cost trend rates. The assumed health care cost trend rate is a 7.00% increase in 2020, after which annual rates of increase are assumed to decrease approximately 0.25% per year until 2030, after which healthcare cost is assumed to increase 4.25% annually in all future years. The effects of changes in these rates are not expected to be material to the benefit obligation or to related amounts recoverable from NASA.

At September 30, 2020, the estimated future benefit payments are as follows:

Year Ending September 30 Camp		ampus	ous JPL			Total		
2021	\$	4,773	\$	13,737	\$	18,510		
2022		5,036		14,172		19,208		
2023		5,299		14,658		19,957		
2024		5,589		15,170		20,759		
2025		5,916		15,725		21,641		
2026-2030		34,164		87,714		121,878		

Additional detail regarding the JPL and Campus-related portions of the funded status of postretirement benefits and changes therein for the years ended September 30, 2020 and 2019 is as follows:

	Campus		JPL		Total	
September 30, 2020						
Benefit obligation at end of year	\$	163,034	\$	454,058	\$	617,092
Fair value of plan assets at end of year		-		162,076		162,076
Funded status	\$	(163,034)	\$	(291,982)	\$	(455,016)
September 30, 2019						
Benefit obligation at end of year	\$	144,377	\$	401,281	\$	545,658
Fair value of plan assets at end of year		-		123,759		123,759
Funded status	\$	(144,377)	\$	(277,522)	\$	(421,899)

Defined Contribution Program

The Institute provides a defined contribution retirement program for eligible academic and administrative employees. Contributions to Internal Revenue Code "IRC" Section 403(b) defined contribution plans for the years ended September 30, 2020 and 2019 were \$29,220 and \$27,410,

respectively, for the Campus and \$100,104 and \$95,709, respectively, for JPL. The Institute has no assets or liabilities related to these plans.

At September 30, 2020 and 2019, the balance sheet line item "Prepaid expenses and other assets" included \$115,459 and \$104,003, respectively, in assets held pursuant to IRC section 457 defined contribution retirement plans. These assets are invested with external investment managers and are stated at fair value as further described in Note K. The Institute's liabilities related to these funds were \$114,775 and \$103,432 at September 30, 2020 and 2019, respectively, and are included in the line item "Accrued compensation and benefits" in the balance sheets.

J. Liquidity and Funds Available for General Expenditure

The Institute manages its financial assets and liquidity resources in order to provide cash for payment of general expenditures, such as operating expenses, construction costs, and principal payments on debt. Financial assets classified below as available for general expenditure within one year, computed in accordance with Accounting Standards Codification 958, are those that are considered both convertible to cash and free of donor-imposed and/or contractual restrictions that would limit or prevent the use of such cash to fund general expenditures.

At September 30, 2020 and 2019, the Institute's financial assets and liquidity resources available for general expenditure within one year were as follows:

	2020		2019	
Financial assets available within one year:				
Cash and cash equivalents	\$	46,908	\$	6,510
Accounts and notes receivable, net		290,556		368,827
Expected pledge payments available for operations		23,687		19,962
Other investments		619,160		239,234
Investments and gains subject to subsequent year's endowment spending		167,556		161,455
Total		1,147,867		795,988
Liquidity resources:				
Committed lines of credit	\$	450,000	\$	400,000
Less: current borrowings under lines of credit		(89,000)		(91,643)
Total		361,000		308,357
Total financial assets and liquidity resources available				
within one year	\$	1,508,867	\$	1,104,345

As detailed in Note G, the Institute maintains certain internally imposed limits on the use of its lines of credit for operating, liquidity, and construction purposes. Those limits may be changed with the concurrence of the Institute's Board of Trustees and therefore, such internally imposed limits have been omitted from the Institute's determination of available liquidity resources.

Under the Institute's cash management policies, cash received from endowment spending related to either funds functioning as endowment or donor-restricted endowments is available for appropriate general expenditure. Endowment spending distributed from donor-restricted endowments is reflected in the Institute's records as net assets with donor restrictions until the expenditures actually are incurred; such expenditures are funded by available financial assets and/or liquidity resources at the time they are paid.

Although the Institute does not normally intend to use endowment resources in excess of amounts appropriated annually according to its endowment spending policy, at September 30, 2020 and 2019, the Institute had \$662,188 and \$654,989, respectively, in funds functioning as endowment and included in net assets without donor restrictions that were available for general expenditure, subject to the concurrence of the Board of Trustees. Various redemption restrictions on underlying endowment investments could reduce the amount of cash immediately available from a redemption of a significant amount of funds functioning as endowment.

As noted in Note L, the Institute was committed to fund certain construction and services contracts from available financial assets and liquidity resources in the amount of \$111,483 at September 30, 2020.

K. Fair Value

Fair value under GAAP is defined as the price that the Institute would receive upon selling an asset or would pay to settle a liability in an orderly transaction between market participants. The Institute evaluates the fair value of financial instruments using an established hierarchy that ranks the inputs to valuation techniques used to measure fair value. Inputs refer broadly to the assumptions that market participants would use in such fair value determinations, including assumptions regarding various risks. A financial instrument's level within the fair value hierarchy is based on the least-transparent level of any input that is significant to the fair value measurement. The classification of financial instruments within the hierarchy is based upon the transparency of the inputs to valuation techniques used to measure fair value and does not necessarily correspond to the Institute's perceived risk of those instruments. The three levels of the fair value hierarchy are described below.

Level 1 fair value measurements are based upon unadjusted quoted prices for identical assets or liabilities in active, accessible markets. Market price data is generally obtained from exchange dealer markets.

Level 2 fair value measurements are generally based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the instruments. Inputs to Level 2 measurements include, but are not limited to, interest rates, credit risk adjustments, and prices

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for similar instruments, and are obtained from various sources, including market participants, dealers, and brokers.

Level 3 fair value measurements are those that use significant inputs that are unobservable. Assets and liabilities included in Level 3 primarily consist of investments in real assets that are valued by investment managers or the Institute using industry-standard methodologies, independent appraisals, and Institute models. The Institute regularly monitors the adequacy of these fair value measurements. Fair value measurements derived using specific unobservable quantitative inputs developed by the Institute were not significant for the years ended September 30, 2020 and 2019.

The Institute generally uses net asset value ("NAV") as a practical expedient to determine the fair value of investments in funds that do not have readily determinable fair values and either have certain specific attributes of investment companies or prepare their financial statements consistent with the measurement principles of investment companies. For these funds, NAVs are determined by each fund's general partner or investment manager and are based on appraisals or other estimates that include considerations such as the cost of the fund's securities, prices of recent significant placements of securities of the same issuer, and subsequent developments concerning the companies to which the securities relate. The fair value of investments valued at NAV as a practical expedient are excluded from the fair value hierarchy.

The following is a summary of the fair value of the Institute's financial instruments according to fair value level or NAV at September 30, 2020 and 2019:

							2020			
		Level 1]	Level 2	I	Level 3		NAV		Total
September 30, 2020										
Investments:										
Short-term investments	\$	295,037	\$	-	\$	-	\$	-	\$	295,037
Fixed-income securities		104,324		57,778		-		-		162,102
Equity securities		520,904		509,645		40,309		560,363		1,631,221
Alternative investments:										
Alternative securities		-		-		-		912,146		912,146
Private equity		-		-		50,008		573,853		623,861
Real assets		-		585		151,067		195,152		346,804
Derivative assets		450		-		-		-		450
Total investments	\$	920,715	\$	568,008	\$	241,384	\$	2,241,514	\$	3,971,621
Other assets and liabilities:										
Beneficial interests	\$	-	\$	-	\$	27,077	\$	-	\$	27,077
Defined contribution plan assets		48,921		33,368		33,170		-		115,459
Defined contribution plan liabilities		(48,370)		(33,271)		(33,134)		-		(114,775)
Interest rate swap		-		(76,091)		-		-		(76,091)
										2019
		Laval 1	1	Lovel 2		form 3		NAV		
Santambar 30, 2010		Level 1]	Level 2]	Level 3		NAV		Total
September 30, 2019		Level 1]	Level 2	1	Level 3		NAV		
Investments:				Level 2		Level 3	¢	NAV	¢	Total
Investments: Short-term investments	\$	348,320	\$	-	\$	Level 3	\$	NAV -	\$	Total 348,320
Investments: Short-term investments Fixed-income securities		348,320 29,138		- 90,608		- -	\$	- -	\$	Total 348,320 119,746
Investments: Short-term investments Fixed-income securities Equity securities		348,320		-		- - - 36,798	\$	NAV 392,264	\$	Total 348,320
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments:		348,320 29,138		- 90,608		- -	\$	- - 392,264	\$	348,320 119,746 1,216,463
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities		348,320 29,138		- 90,608		- - 36,798	\$	- - 392,264 827,156	\$	348,320 119,746 1,216,463 827,156
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities Private equity		348,320 29,138		90,608 300,147		- 36,798 - 56,890	\$	- - 392,264 827,156 472,047	\$	348,320 119,746 1,216,463 827,156 528,937
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities Private equity Real assets		348,320 29,138 487,254		90,608 300,147 - - 15,312		- 36,798 - 56,890 148,894	\$	392,264 827,156 472,047 214,933	\$	348,320 119,746 1,216,463 827,156 528,937 379,139
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities Private equity Real assets Derivative assets	\$	348,320 29,138 487,254 - - - 6,741	\$	90,608 300,147 - - 15,312	\$	- 36,798 - 56,890 148,894 -	_	392,264 827,156 472,047 214,933		348,320 119,746 1,216,463 827,156 528,937 379,139 6,741
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities Private equity Real assets		348,320 29,138 487,254		90,608 300,147 - - 15,312		- 36,798 - 56,890 148,894	_	392,264 827,156 472,047 214,933	\$	348,320 119,746 1,216,463 827,156 528,937 379,139
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities Private equity Real assets Derivative assets	\$	348,320 29,138 487,254 - - - 6,741	\$	90,608 300,147 - - 15,312	\$	- 36,798 - 56,890 148,894 -	_	392,264 827,156 472,047 214,933		348,320 119,746 1,216,463 827,156 528,937 379,139 6,741
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities Private equity Real assets Derivative assets Total investments	\$	348,320 29,138 487,254 - - - 6,741	\$	90,608 300,147 - - 15,312	\$	- 36,798 - 56,890 148,894 -	_	392,264 827,156 472,047 214,933		348,320 119,746 1,216,463 827,156 528,937 379,139 6,741
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities Private equity Real assets Derivative assets Total investments Other assets and liabilities:	\$	348,320 29,138 487,254 - - - 6,741	\$	90,608 300,147 - 15,312 - 406,067	\$	- 36,798 - 56,890 148,894 - 242,582	\$	392,264 827,156 472,047 214,933	\$	348,320 119,746 1,216,463 827,156 528,937 379,139 6,741 3,426,502
Investments: Short-term investments Fixed-income securities Equity securities Alternative investments: Alternative securities Private equity Real assets Derivative assets Total investments Other assets and liabilities: Beneficial interests	\$	348,320 29,138 487,254 - - - 6,741 871,453	\$	90,608 300,147 - - 15,312 - 406,067	\$	- 36,798 - 56,890 148,894 - 242,582	\$	392,264 827,156 472,047 214,933	\$	348,320 119,746 1,216,463 827,156 528,937 379,139 6,741 3,426,502

The fair value of assets held in trust for postretirement benefit plans, as disclosed in Note J, is excluded from the tables above.

At September 30, 2020 and 2019, additional detail regarding the Institute's investments valued using NAV by major investment category was as follows:

, ,		legory w	U	nfunded	Normally Allowable	Redemption Notice Period in	Lives in
	Fa	air Value	Con	nmitments	Redemption Frequency	days	ye ars
September 30, 2020							
Equity securities:							
Quarterly or less	\$	171,689	\$	-	Quarterly or less	60 to 180	-
Greater than quarterly		388,159		-	Annually to triennially	60 to 120	-
Not actionable		515		-	Not actionable	-	-
Alternative investments:							
Alternative securities							
Quarterly or less		197,354		-	Quarterly or less	30 to 150	-
Greater than quarterly		465,556		-	Semi-annually to triennially	60 to 180	-
Not actionable		249,236		161,961	Not actionable	-	up to 16
Private equity							
Greater than quarterly		26,501		719	Every four years	270	-
Not actionable		547,352		199,372	Not actionable	-	up to 10
Real assets		195,152		140,583	Not actionable	-	up to 12
Total	\$	2,241,514	\$	502,635			
	Fa	air Value		nfunded nmitments	Normally Allowable Redemption Frequency	Re de mption Notice Period in days	Lives in years
September 30, 2019					1 1 1	v	v
Equity securities:							
Quarterly or less	\$	71,871	\$	-	Quarterly or less	90 to 180	-
Greater than quarterly		320,393		-	Annually to triennially	60 to 120	-
Alternative investments:					, ,		
Alternative securities							
Quarterly or less		154,091		-	Quarterly or less	60 to 90	-
Greater than quarterly		447,855		-	Semi-annually to triennially	60 to 180	-
Not actionable		225,210		147,415	Not actionable	-	up to 16
Private equity							•
Greater than quarterly		10,694		8,503	Every four years	270	-
Not actionable		461,353		187,594	Not actionable	-	up to 10
Real assets		214,933		125,205	Not actionable	-	up to 12
Total	\$	1,906,400	\$	468,717			

In addition to the unfunded commitments noted above, at September 30, 2020 and 2019, the Institute was committed to invest an additional \$34,569 and \$38,396, respectively, in investments classified within the fair value hierarchy over approximately the next ten years. All such investment commitments are expected to be funded from existing or forecasted investment assets.

The methods described above may produce fair value calculations that might not be indicative of net realizable value or reflective of future fair values and do not include potential transaction costs or discounts or premiums, if any. Alternative investments may not be readily marketable or redeemable, and may contain penalties for early withdrawal from the related funds. Furthermore, while the Institute believes its valuation methods are appropriate and consistent with those of other market participants, the use of different methodologies and/or assumptions to determine fair values of certain financial instruments could result in different estimates of fair value.

The following table is a summary of changes in the fair values of the Institute's Level 3 assets for the years ended September 30, 2020 and 2019:

	eginning Balance		ifts and rchases		ales and aturities	ealized n/(Loss)		ealized n/(Loss)	Endir	ng Balance
September 30, 2020										
Investments:										
Equity securities	\$ 36,798	\$	2,847	\$	(205)	\$ (4,622)	\$	5,491	\$	40,309
Alternative investments:										
Private equity	56,890		262		(12,680)	10,905		(5,369)		50,008
Real assets	 148,894		4,966		(6,753)	49		3,911		151,067
Total investments	\$ 242,582	\$	8,075	\$	(19,638)	\$ 6,332	\$	4,033	\$	241,384
Other assets:										
Beneficial interests	\$ 29,639	\$	11,420	\$	(13,849)	\$ -	\$	(133)	\$	27,077
Defined contribution plans	32,622		3,908		(4,143)	-		783		33,170
	eginning Balance	_	afts and	-	ales and laturities	Realized in/(Loss)	_	realized in/(Loss)	End	ing Balance
September 30, 2019 Investments:										
Equity securities	\$ 35,053	\$	5,000	\$	(92,034)	\$ 74,491	\$	14,288	\$	36,798
Alternative investments:										
Private equity	53,360		-		(239)	-		3,769		56,890
Real assets	164,833		8,065		(18,827)	959		(6,136)		148,894
Total investments	\$ 253,246	\$	13,065	\$	(111,100)	\$ 75,450	\$	11,921	\$	242,582
Other assets:										
Beneficial interests	\$ 32,114	\$	5,832	\$	(8,722)	\$ -	\$	415	\$	29,639
Defined contribution plans	30,621		2,564		(1,511)	-		948		32,622

California Institute of Technology Notes to Financial Statements September 30, 2020 and 2019 (Dollars in Thousands)

The Institute classifies defined contribution plan liabilities in the fair value hierarchy based upon the investments of the related plan assets. Accordingly, liabilities classified within Level 3 approximate the value of plan investments that also are classified within Level 3, and increase or decrease in value according to contributions, withdrawals, vesting, and investment performance.

The Institute records transfers into the fair value hierarchy and/or between levels therein in the current fiscal year when there is a change in circumstances that affects the liquidity of the assets and/or the ability to observe and measure the fair value. The Institute records such transfers based on the market value at the beginning of the reporting period. During the years ended September 30, 2020 and 2019, there were no material transfers in or out of Level 3. During the years ended September 30, 2020 and 2019, there were transfers of \$0 and \$127,143, respectively, into Level 2 from the NAV classification. All of these transfers are included in Gifts and Purchases in the tables above.

During the years ended September 30, 2020 and 2019, unrealized losses of \$173 and unrealized gains of \$523, respectively, related to Level 3 assets were recorded in the non-operating line item "Gifts and pledges" in the statement of activities. All other realized and unrealized gains related to Level 3 investments were recorded in the non-operating line item "Investment return in excess (deficit) of endowment spending" in the statement of activities. Unrealized gains included in the statements of activities related to those Level 3 assets held at September 30, 2020 and 2019 were \$7,477 and \$12,221, respectively.

The Institute uses an interest rate swap to manage the interest rate exposure of a portion of its variable rate debt. The value of the interest rate swap depends upon the contractual terms of, and specific risks inherent in, the instrument, as well as the availability and reliability of observable inputs. The interest rate swap is valued using observable inputs, such as quotations received from counterparties, dealers, or brokers, market prices for reference securities, credit curves, and assumptions for nonperformance risk, whenever available and considered reliable, and is therefore classified in Level 2 of the fair value hierarchy.

During the years ended September 30, 2020 and 2019, the Institute used exchange-traded equity derivatives and foreign currency derivatives, including put and call options, to manage its market and currency exposures related to certain equity investments. Balances and activities related to equity and foreign currency derivatives for the years ended September 30, 2020 and 2019 were as follows:

			2020				
Foreign Equity Currency		Total			2019 Total		
\$	-	\$	450	\$	450	\$	6,741
	-						-
\$	-	\$	450	\$	450	\$	6,741
\$	-	\$	50,000	\$	50,000	\$	50,000
	-		-		-		-
	-		-		-		-
\$	468	\$	-	\$	468	\$	-
	706		4,020		4,726		35
_	-		(5,196)		(5,196)		3,313
\$	1,174	\$	(1,176)	\$	(2)	\$	3,348
	\$ \$ \$	\$ - \$ - \$ - \$ - - \$ 468 706	Fequity Color	Equity Currency \$ - \$ 450 - - \$ - \$ 450 \$ - \$ 50,000 - - - - \$ 468 \$ - 706 4,020 - (5,196)	Foreign Currency \$ - \$ 450 \$ \$ \$ - \$ 450 \$	Foreign Currency Total \$ - \$ 450 \$ 450	Foreign Currency \$ - \$ 450 \$ 450 \$

L. Contingencies and Commitments

Contingencies

The Institute receives funding or reimbursement from agencies of the United States government for various activities that are subject to audit, and is a defendant in various legal actions incident to the conduct of its activities. Except as specifically discussed below, management does not expect that liabilities, if any, related to these audits or legal actions will have a material impact on the Institute's financial position. However, the settlement of audits or legal actions is subject to inherent uncertainties, and it is possible that such liabilities, if any, will differ materially from management's current expectations.

In 1997, the Institute was named as a potentially responsible party ("PRP") by NASA under the Comprehensive Environmental Response, Compensation, and Liability Act, as amended. As a PRP, the Institute may be jointly liable for contribution towards clean-up costs of the NASA/JPL Superfund site, estimated to be in excess of \$100,000. Officials of the Institute presently are not able to predict the impact, if any, that final resolution of this matter will have on the Institute's financial position or changes in its net assets. However, the Institute believes that it will have recourse to the United States government for any liabilities it may incur in connection with being named a PRP for that site.

Commitments

The Institute was committed under certain construction and services contracts in the amounts of approximately \$111,483 and \$174,062 at September 30, 2020 and 2019, respectively.

The Institute is a member of an international consortium that was organized to construct and operate an advanced telescope. In addition to the above, at September 30, 2020 and 2019, the Institute was committed to provide cash totaling approximately \$47,000 and \$49,000, respectively, to the consortium over approximately the next two years. Payments and other transfers related to this commitment are subject to certain contingencies.

The Institute's workers' compensation insurance carrier requires that the Institute maintain an unsecured letter of credit for claims that do not exceed certain deductible amounts. At September 30, 2020 and 2019, the amounts of the letter of credit facility were \$8,694 and \$8,093, respectively. The letter of credit was not used during the years ended September 30, 2020 and 2019, and therefore no liability has been recorded in the balance sheets.

The Institute is currently providing funding for the operation of certain local water treatment facilities, subject to reimbursement from NASA. Current annual costs are not expected to exceed \$9,000. The expected duration of such annual payments is not determinable.

The Institute leases equipment and buildings, primarily for JPL, under operating leases expiring at various dates through 2024. Rent expense incurred under operating lease obligations was \$5,350 and \$6,257 for the years ended September 30, 2020 and 2019, respectively.

At September 30, 2020, future minimum payments under operating leases of greater than one year in duration were as follows:

Year Ending September 30	Ar	nount
2021	\$	2,851
2022		2,126
2023		1,159
2024		-
2025		-
Total	\$	6,136

Approximately \$6,065 of the future minimum lease payments listed above is expected to be recoverable from NASA under the Institute's cost-reimbursable contract with NASA.

The Institute rents housing, equipment, and building space to students, faculty, and other organizations under operating leases expiring at various dates through 2025. Rental income under operating leases was \$3,768 and \$3,510 for the years ended September 30, 2020 and 2019, respectively.

At September 30, 2020, minimum future rental revenues from operating leases of greater than one year in duration were as follows:

Year Ending September 30	A	mount
2021	\$	3,591
2022		3,100
2023		3,066
2024		2,894
2025		2,614
Total	\$	15,265

M. Supplemental Cash Flow Information

The following are additional supplemental disclosures related to the statements of cash flows:

	2020	2019
Cash paid during the year for interest, net of amounts capitalized	\$ 55,413	\$ 42,264
Income and excise tax paid	1,861	1,443
Non-cash investing and financing activities:		
Securities received to satisfy pledge payments	14,280	15,346
In-kind receipt of securities, property, plant, and equipment	18,851	11,431
Increase/(decrease) in accrued purchases of property, plant, and equipment	8,150	(4,580)
Decrease in net amounts receivable for pending	6,312	21,797
investments transactions		

N. Subsequent Events

Subsequent events were evaluated through January 27, 2021, which is the date the financial statements were issued.

Federal Grantor/Pass-Through Grantor/Program Title	Federal Grant/Contract or CFDA Pass-Through Number Number		Total Federal Expenditures		hrough Federal		Federal		Pass-Through to Subrecipients	
Research and Development Cluster										
Direct Funds										
Department of Commerce										
National Institute of Standards and Technology	11.609		\$	47,297	\$ -					
Department of Defense										
Air Force	12.RD	FA9453-18-C-0058		191,565	-					
Air Force	12.800			7,413,466	2,759,865					
Army	12.420			1,115,628	244,903					
Army	12.431			4,324,197	2,178,341					
Defense Advanced Research Project Agency	12.RD	HR00111890035		462,048	83,332					
Defense Advanced Research Project Agency	12.RD	IPA #0249		354,358	-					
Defense Advanced Research Project Agency	12.910			3,998,633	230,639					
Defense Threat Reduction Agency	12.351			451,204	204,091					
Naval Information Warfare Center Pacific	12.910			196,128	-					
Navy	12.300			6,056,526	93,406					
Total Department of Defense			2	4,563,753	5,794,577					
Department of Energy										
Department of Energy	81.RD	IPA FLOOD2		(20,137)	-					
Department of Energy	81.049		1	6,463,608	1,385,942					
Department of Energy	81.135			320,343	65,976					
Total Department of Energy			1	6,763,814	1,451,918					

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued)				
Direct Funds (Continued)				
Department of Health and Human Services				
National Institutes of Health	93.077		\$ (4,675)	\$ -
National Institutes of Health	93.121		1,435,083	-
National Institutes of Health	93.172		10,339,226	5,956,326
National Institutes of Health	93.242		10,188,480	1,020,509
National Institutes of Health	93.279		1,694,135	156,483
National Institutes of Health	93.282		(276)	-
National Institutes of Health	93.286		1,827,251	15,351
National Institutes of Health	93.310		2,076,037	975,628
National Institutes of Health	93.361		190,062	-
National Institutes of Health	93.394		845,575	7,769
National Institutes of Health	93.398		31,010	-
National Institutes of Health	93.837		756,091	-
National Institutes of Health	93.838		514,225	-
National Institutes of Health	93.839		208,084	172,349
National Institutes of Health	93.847		1,817,031	43,519
National Institutes of Health	93.853		14,648,713	4,117,958
National Institutes of Health	93.855		4,264,684	605,584
National Institutes of Health	93.859		12,530,944	548,557
National Institutes of Health	93.865		3,005,241	319,312
National Institutes of Health	93.866		1,627,360	-
National Institutes of Health	93.867		1,942,065	95,257
National Institutes of Health	93.879		682,995	14,567
National Institutes of Health	93.989		94,242	82,555
Total Department of Health and Human Services			70,713,583	14,131,724

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Direct Funds (Continued)				
Department of the Interior				
United States Geological Survey	15.RD	IPA ACHARYA	\$ 38,882	\$ -
United States Geological Survey	15.RD	IPA BUNN	210,159	-
United States Geological Survey	15.RD	IPA GOOD	108,382	-
United States Geological Survey	15.RD	IPA LILLEY	3,244	-
United States Geological Survey	15.RD	IPA MALEK	35,756	-
United States Geological Survey	15.RD	IPA SCHECKEL	101,093	-
United States Geological Survey	15.807		1,089,172	-
United States Geological Survey	15.808		3,233,323	<u>-</u>
Total Department of the Interior			4,820,011	
National Aeronautics and Space Administration (NASA)				
NASA	43.RD	80GSFC18C0011	9,320,116	361,061
NASA	43.RD	80MSFC19C0042	1,261,565	1,046,542
NASA	43.RD	80MSFC20C0043	717,509	-
NASA	43.RD	NNG08FD60C	2,350,775	628,210
NASA	43.RD	NNH14IA13P	1,270	-
NASA	43.RD	NNH17IA19P	(1,473)	-
NASA	43.RD	NNH18IA31P	71,081	-
NASA	43.RD	NNJ20OB10P	1,251	-
NASA	43.001		20,796,170	1,459,014
NASA	43.003		11,233	-
NASA	43.012		767,708	30,073
Total NASA			35,297,205	3,524,900

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients	
Research and Development Cluster (Continued) Direct Funds (Continued)					
National Science Foundation					
National Science Foundation	47.RD	2034238	\$ 51,716	\$ -	
National Science Foundation	47.041		2,793,999	22,617	
COVID-19 - National Science Foundation	47.041		50,347	-	
National Science Foundation	47.049		69,548,221	9,553,472	
National Science Foundation	47.050		6,162,684	650,900	
National Science Foundation	47.070		3,997,892	68,464	
National Science Foundation	47.074		1,962,393	76,268	
National Science Foundation	47.075		687,931	-	
National Science Foundation	47.076		4,075,077	-	
National Science Foundation	47.079		807,611	108,853	
Total National Science Foundation			90,137,871	10,480,574	
Total Research and Development -			242,343,534	35,383,693	
Direct Funds					
Pass-Through Funds					
Department of Defense					
Air Force					
Cornell University	12.800	80776-11006	129,593	-	
Global Aerospace Corporation	12.RD	631-17-C-0071	1,535	-	
Massachusetts Institute of Technology	12.800	5710003606	9,048	-	
SRI International	12.RD	38479	274,200	-	
The Ohio State University	12.800	60059575	135,744	-	
The University of Chicago	12.800	FP057123-A	69,953	-	
University of Arizona	12.RD	416306	45,266	-	
University of California Los Angeles	12.800	0205 G WA558	86,826	-	
University of California Santa Barbara	12.800	KK2012	84,483	-	
University of Colorado at Boulder	12.800	1552227	44,734	-	
University of Maryland	12.800	42700-Z8183001	221,203	-	
University of Southern California	12.910	124136860	90,534		
Total Air Force Pass-Through			1,193,119	-	

See the accompanying notes to Schedule of Expenditures of Federal Awards

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
Department of Defense (Continued)				
Army				
Harvard University	12.431	134371-5113610	\$ 27,786	\$ -
Johns Hopkins University	12.630	2001515018	1,641,318	122,094
Northwestern University	12.431	60053228 CIT	92,862	-
Scitech Services, Inc.	12.RD	SciTech 20-19-F-0063-06	62,411	-
Toyon Research Corporation	12.RD	SC19-F137-1	54,828	-
Toyon Research Corporation	12.RD	SC20-C195-1	79,870	-
University Of California Los Angeles	12.431	0160 G UA559	136,524	-
University Of California Los Angeles	12.431	W911NF-17-0402	559,626	-
University Of California Santa Barbara	12.431	KK1809	266,375	-
University Of California Santa Barbara	12.431	KK1816	133,293	-
University Of California Santa Barbara	12.431	KK1954	658,165	-
University Of California Santa Barbara	12.RD	KK1956	1,303,768	-
University Of California Santa Barbara	12.RD	KK9150	204,893	277,245
University Of California, Davis	12.431	201301077-01	13,399	-
University Of California, Davis	12.431	A14-0030-S001-A01	(24)	-
University Of Minnesota	12.431	A006827503	254,767	-
University Of Southern California	12.431	118828831	186,064	-
University Of Utah	12.630	10028801-CAL-BPP CLIN0006	48,212	-
University Of Utah	12.630	10028801-CAL-BPP CLIN0008	81,601	
Total Army Pass-Through			5,805,738	399,339
Navy				
Brown University	12.300	00000984	(65,220)	-
Harvard University	12.300	123950-5092636	163,040	-
New York University	12.300	F1168-04	59,080	-
University Of California Los Angeles	12.300	0190 G VB291	183,940	-
University Of Massachusetts	12.300	18-010467 A 00	246,867	-
University Of Minnesota	12.300	A006141801	168,481	-
University Of New Hampshire	12.300	17-049	25,194	-
University Of Wisconsin	12.300	825K296	153,072	<u>-</u>
Total Navy Pass-Through		_	934,454	

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal penditures	-Through precipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
Department of Defense (Continued)				
Defense Advanced Research Projects Agency				
Advanced Technology International	12.RD	MCDC-18-01-01-007	\$ 1,054,136	\$ 102,712
Columbia University	12.910	3(GG012664)	520,957	-
Duke University	12.910	313-0699	71,354	-
Harvard University	12.910	152236.5099923.0004	(7,892)	-
HRL Laboratories, LLC	12.RD	17121-182629-HS	48,423	-
Northwestern University	12.431	60053228 CIT	(17,830)	-
University Of Arizona	12.351	470205	169,510	-
University Of California San Diego	12.910	110765856	120,621	-
University Of California Santa Barbara	12.910	KK1540	80,592	-
University Of Colorado Boulder	12.910	1557229	64,992	-
University Of Colorado Boulder	12.RD	1557975	241,614	-
University Of Southern California	12.910	108724411	69,724	-
University Of Washington	12.910	UWSC10014	 200	
Total Defense Advanced Research Projects Agency			 2,416,401	102,712
Pass-Through				
Total Department of Defense Pass-Through			 10,349,712	502,051

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients	
Research and Development Cluster (Continued) Pass-Through Funds (Continued)					
Department of Energy					
Aerosol Dynamics, Inc.	81.049	3901	\$ 113,219	\$ -	
Emory University	81.049	A216624	214,801	-	
Fermilab National Accelerator Laboratory	81.RD	615210	55,710	-	
Fermilab National Accelerator Laboratory	81.RD	626507	75,919	-	
Fermilab National Accelerator Laboratory	81.RD	635571	3,417	-	
Fermilab National Accelerator Laboratory	81.RD	644019	168,518	-	
Fermilab National Accelerator Laboratory	81.RD	656068	7,493	-	
Fermilab National Accelerator Laboratory	81.RD	657924	23,478	-	
Fermilab National Accelerator Laboratory	81.RD	659658	71,767	-	
Fermilab National Accelerator Laboratory	81.RD	659952	71,226	-	
Fermilab National Accelerator Laboratory	81.RD	661273	248,312	-	
Fermilab National Accelerator Laboratory	81.RD	662260	108,590	-	
Fermilab National Accelerator Laboratory	81.RD	663624	15,325	-	
Fermilab National Accelerator Laboratory	81.RD	664429	43,406	-	
Fermilab National Accelerator Laboratory	81.RD	668526	244,818	-	
Fermilab National Accelerator Laboratory	81.RD	19-F-24	15,000	-	
Krell Institute	81.049	KRELL.CSGFAY17	8,695	-	
Krell Institute	81.112	KRELL.GRADPT	84	-	
Lawrence Berkeley National Laboratory	81.RD	7486600	328,279	-	
Lawrence Livermore National Laboratory	81.RD	B621015	5,504	-	
Lawrence Livermore National Laboratory	81.RD	B634157	13,592	-	
Lawrence Livermore National Laboratory	81.RD	B635321	21,512	-	
Lawrence Livermore National Laboratory	81.RD	B635751	17,221	-	
Lawrence Livermore National Laboratory	81.RD	B640845	50,018	-	
Lawrence Livermore National Laboratory	81.RD	B641802	35,656	-	
Lawrence Livermore National Laboratory	81.RD	B642753	16,761	-	
Los Alamos National Laboratory	81.RD	545611	20,552	-	
Los Alamos National Laboratory	81.RD	597412	33,578	-	
Los Alamos National Laboratory	81.RD	600227	9,678	-	
Oak Ridge National Laboratory	81.RD	4000166453	146,924	-	
Pacific Northwest National Laboratory	81.RD	463458	79,709	-	
Proton Onsite	81.087	EC-0008092-02	142,612	-	
Sandia National Laboratories	81.RD	1869239	95,426	-	
Sheeta Global Technology Company	81.RD	CIT-Phase-II-DE-SC0017710	319,073	-	
Stanford University	81.049	61961560-136555	494,670	-	
Talos Tech LLC	81.049	DOESTTR20532-SUB01	44,938	-	
Tetramer Technologies, L.L.C.	81.049	20190430CIT	23,937	_	
	01.017	20170180011	23,537		

See the accompanying notes to Schedule of Expenditures of Federal Awards

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
Department of Energy (Continued)				
Tetramer Technologies, L.L.C.	81.049	20200427CIT	\$ 76,077	\$ -
The George Washington University	81.112	18-S23	61,838	-
University At Buffalo	81.089	R1198145	95,394	-
University Of California Los Angeles	81.049	0980 G WD719	178,188	-
University Of California Los Angeles	81.049	1000 G WB868	6,496	-
University Of California Riverside	81.049	S-001253	25,537	-
University Of Delaware	81.049	51603	159,524	-
University Of Florida	81.049	UFDSP00012324	187,279	-
University Of Montana	81.086	G241-20-W8196	89,819	-
University Of Notre Dame	81.049	203208CIT	91,991	-
University Of Southern California	81.049	68192992	23,699	-
University Of Southern California	81.049	131471827	13,607	-
University Of Texas At Austin	81.089	UTA20-000592	61,719	-
Washington State University	81.112	136018 G004120	235,210	-
Washington State University	81.112	21238_G003613	379	
Total Department of Energy Pass-Through			4,696,175	
Department of Health and Human Services Centers for Disease Control and Prevention				
Aerosol Dynamics, Inc.	93.262	NIHOH010515	150,710	-
National Institutes of Health				
Allen Institute For Brain Science	93.242	2017-0569	912,163	-
Carnegie Mellon University	93.351	1090520-389466	7,193	_
City Of Hope	93.396	53077.2003696.669301	25,162	_
Cold Spring Harbor Labs	93.242	64550315	92,331	-
Cold Spring Harbor Labs	93.242	64550415	20,880	=
Columbia University	93.853	4(GG013057-07)	(3,846)	-
Columbia University	93.853	4(GG013057-12)	444,719	-
Columbia University	93.853	4(GG013057-21)	29,853	-
Dartmouth College	93.393	R1239	449,675	=
Design-Zyme LLC	93.273	DZ-SBIR-004-RA	10,001	-

See the accompanying notes to Schedule of Expenditures of Federal Awards

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
Department of Health and Human Services (Continued)				
National Institutes of Health (Continued)				
Duke University	93.866	A032411	\$ 32,8	812 \$ -
Duke University	93.866	A032690	8,0	
Duke University	93.866	A032707	343,7	727 -
Glycan Therapeutics	93.859	CAL-001	69,5	596 -
Glycan Therapeutics	93.859	CAL-002	78,	- 546
Huntington Medical Research Institute	93.866	2776	125,4	- 473
Indiana University	93.242	BL-4631256-CT	79,1	190 -
Institute For Systems Biology	93.397	2018.0007	(7	70) -
Institute For Systems Biology	93.397	2018.0011	144,2	247 -
Johns Hopkins University	93.855	2003414413	198,8	
Leidos Biomedical Research, Inc.	93.RD	20X022	677,5	571 -
Massachusetts General Hospital	93.837	236181	9,9	997 -
Phoenix Nest	93.853	PNI.NIHU44	270,5	513 -
Salk Institute For Biological Studies	93.242	P0243583	110,2	- 218
Stanford University	93.353	61835968-128752	(83,1	38) -
Stanford University	93.286	62278533-139609	168,6	- 545
Talis Biomedical Corporation	93.360	2018-01	175,4	- 440
The Broad Institute, Inc.	93.172	5000314-55.1413	11,9	
The Rockefeller University	93.855	P01AI38938	577,2	242 -
COVID-19 - The Rockefeller University	93.855	SUB00000126	112,3	365 -
The University Of Chicago	93.853	FP061372-A	74,7	739 -
University At Buffalo	93.286	R1044577	29,3	397 -
University Of California Berkeley	93.853	00009590	236,3	351 -
University Of California Los Angeles	93.286	0845 G SB495	87,4	477 -
University Of California Los Angeles	93.279	1505 G WA426	482,7	766 -
University Of California Los Angeles	93.310	1556 G VB627	149,4	400 -
University Of California Los Angeles	93.837	1564 G XA044	219,4	406 -
University Of California Los Angeles	93.866	1580 G WC775	371,0	- 663
University Of California Los Angeles	93.853	1713 G UA875	(3,8	32) -
University Of California San Diego	93.855	105954574	34,	595 -
University Of California San Francisco	93.396	12155sc	27,	- 141
University Of California San Francisco	93.394	8849sc	14,0	- 018
University Of California Santa Barbara	93.859	KK1645	17,	530 -
University Of California Santa Barbara	93.286	KK1942	14,2	286 -
University Of Colorado At Denver	93.879	FY19.995.001	228,4	

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
Department of Health and Human Services (Continued)				
National Institutes of Health (Continued)				
University Of Miami	93.394	SPC-001260	\$ 125,902	\$ -
University Of Minnesota	93.351	H005556202	253,700	-
University Of Southern California	93.172	86281301	388,579	-
University Of Southern California	93.242	91200601	343,241	-
University Of Southern California	93.242	109001621	337,618	-
University Of Utah	93.859	10044932-01	281,103	-
University Of Utah	93.859	10044932-11	244,959	-
University Of Washington	93.242	UWSC10984	8,465	-
University Of Washington	93.847	UWSC11572	126,378	-
Vanderbilt University	93.847	VUMC 57088	386,616	-
Vanderbilt University	93.847	VUMC 57231	549,244	-
Total National Institutes of Health Pass-Through			10,127,797	<u> </u>
Total Department of Health and Human			10,278,507	
Services Pass-Through				
Department of the Interior				
United States Geological Survey (USGS)				
University Of Southern California	15.807	118062119	147,580	-
University Of Southern California	15.807	131435773	63,804	-
University Of Southern California	15.807	131435842	89,557	
Total Department of the Interior Pass-Through			300,941	<u> </u>
Department of Transportation US Federal Axiation Administration (EAA)				
US Federal Aviation Administration (FAA) University of Illinois	20.109	100421-17957	23,488	
Oniversity of millors	20.107	100721-1/93/	23,400	

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
National Aeronautics and Space Administration (NASA)				
Baylor College Of Medicine	43.003	7000000323	\$ 684,883	\$ -
Baylor College Of Medicine	43.003	700000886	199,690	-
Baylor College Of Medicine	43.003	7000001083	175,625	-
Boeing Company	43.RD	1516995	19,881	-
Boston University	43.001	4500003539	2,219	-
Brigham Young University	43.001	18-0522	(745)	-
Harvard University	43.001	131477-5099213	14,386	-
Johns Hopkins University	43.001	162605	5,108	-
Lockheed Martin Corporation	43.RD	4103823811	57,780	-
Massachusetts Institute Of Technology	43.001	S4795	66,504	-
Pennsylvania State University	43.001	5886-CIT-NASA-0094	144,553	-
Princeton University	43.RD	SUB0000157	622,567	-
Princeton University	43.001	SUB0000194	47,733	-
Rochester Institute Of Technology	43.001	32447-01	48,365	-
Rochester Institute Of Technology	43.001	32463-01	83,029	-
Smithsonian Astrophysical Observatory	43.001	AR0-21001X	40,698	-
Smithsonian Astrophysical Observatory	43.001	AR0-21003X	4,501	-
Smithsonian Astrophysical Observatory	43.001	GO8-19055B	4,078	-
Smithsonian Astrophysical Observatory	43.001	GO9-20002X	35,152	-
Smithsonian Astrophysical Observatory	43.001	TM8-19003X	2,159	-
Southwest Research Institute	43.RD	699047X	214,797	-
Southwest Research Institute	43.RD	699048X	360,616	-
Southwest Research Institute	43.RD	699049X	26,873	-
Southwest Research Institute	43.001	K99057JRG	45,890	-
Space Science Institute	43.001	SUBAWD 000797	28,219	_
Space Telescope Science Institute	43.001	HST-AR-15021.001-A	72,896	-
Space Telescope Science Institute	43.001	HST-AR-15036.003-A	28,140	_
Space Telescope Science Institute	43.001	HST-AR-15789.001-A	19,848	-
Space Telescope Science Institute	43.001	HST-AR-15800.001-A	92,605	_
Space Telescope Science Institute	43.001	HST-GO-13364.049-A	22,638	_
Space Telescope Science Institute	43.RD	HST-GO-13665.005-A	128	-
Space Telescope Science Institute	43.001	HST-GO-14178.008-A	70,969	_
Space Telescope Science Institute	43.001	HST-GO-14260.003-A	12,290	<u>-</u>
Space Telescope Science Institute	43.001	HST-GO-14455.004-A	5,985	<u>-</u>
Space Telescope Science Institute	43.001	HST-GO-14645.001-A	7,173	_
-L	.5.001	1101010111	7,173	

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
National Aeronautics and Space Administration (NASA)				
(Continued)				
Space Telescope Science Institute	43.001	HST-GO-14650.001-A	\$ 62,571	\$ -
Space Telescope Science Institute	43.001	HST-GO-14682.005-A	140,980	-
Space Telescope Science Institute	43.001	HST-GO-14764.001-A	3,607	-
Space Telescope Science Institute	43.001	HST-GO-14767.010-A	7,713	-
Space Telescope Science Institute	43.001	HST-GO-14862.002-A	5,421	-
Space Telescope Science Institute	43.001	HST-GO-14887.005-A	4,120	-
Space Telescope Science Institute	43.001	HST-GO-15117.003-A	21,123	-
Space Telescope Science Institute	43.001	HST-GO-15138.004-A	7,107	-
Space Telescope Science Institute	43.001	HST-GO-15140.005-A	24,427	-
Space Telescope Science Institute	43.001	HST-GO-15140.006-A	44,992	-
Space Telescope Science Institute	43.001	HST-GO-15151.001-A	8,018	-
Space Telescope Science Institute	43.001	HST-GO-15152.001-A	3,603	-
Space Telescope Science Institute	43.001	HST-GO-15156.004-A	500	-
Space Telescope Science Institute	43.001	HST-GO-15186.016-A	13,370	-
Space Telescope Science Institute	43.001	HST-GO-15218.014-A	153,004	-
Space Telescope Science Institute	43.001	HST-GO-15241.002-A	4,031	-
Space Telescope Science Institute	43.001	HST-GO-15249.002-A	61,570	-
Space Telescope Science Institute	43.001	HST-GO-15272.002-A	2,769	-
Space Telescope Science Institute	43.001	HST-GO-15287.002-A	11,250	-
Space Telescope Science Institute	43.001	HST-GO-15295.001-A	16,034	-
Space Telescope Science Institute	43.001	HST-GO-15331.003-A	1,206	-
Space Telescope Science Institute	43.001	HST-GO-15357.001-A	6,994	-
Space Telescope Science Institute	43.001	HST-GO-15425.002-A	8,854	-
Space Telescope Science Institute	43.001	HST-GO-15489.003-A	6,653	-
Space Telescope Science Institute	43.001	HST-GO-15647.001-A	145,925	-
Space Telescope Science Institute	43.001	HST-GO-15649.005-A	2,750	-
Space Telescope Science Institute	43.001	HST-GO-15654.001-A	256,463	-
Space Telescope Science Institute	43.001	HST-GO-15675.002-A	5,054	-
Space Telescope Science Institute	43.001	HST-GO-15692.001-A	3,352	-
Space Telescope Science Institute	43.001	HST-GO-15846.002-A	1,260	-
Space Telescope Science Institute	43.001	HST-GO-15853.001-A	4,421	-
Space Telescope Science Institute	43.001	HST-GO-15902.027-A	2,412	-
Space Telescope Science Institute	43.001	HST-GO-15906.008	909	-
Space Telescope Science Institute	43.001	HST-GO-15925.001-A	14,937	-
Space Telescope Science Institute	43.001	HST-GO-15940.007-A	255	-
Space Telescope Science Institute	43.001	HST-GO-16040.001-A	10,376	-

See the accompanying notes to Schedule of Expenditures of Federal Awards

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
National Aeronautics and Space Administration (NASA)				
(Continued)				
Space Telescope Science Institute	43.001	HST-GO-16044.001-A	\$ 1,967	\$ -
Space Telescope Science Institute	43.001	HST-HF2-51408.001-A	98,966	-
Space Telescope Science Institute	43.001	HST-HF2-51440.001-A	134,287	-
Space Telescope Science Institute	43.001	HST-HF2-51444.001-A	100,683	-
Space Telescope Science Institute	43.001	JWST-ERS-01328.001-A	62,245	-
Space Telescope Science Institute	43.001	JWST-ERS-01349.002-A	39,078	-
Space Telescope Science Institute	43.001	JWST-ERS-01386.024-A	11,571	-
Space Telescope Science Institute	43.001	STI-510253	1,114,336	-
Space Telescope Science Institute	43.RD	STScI-51329	48,574	-
The Ohio State University	43.RD	60052242-RF01451668	214,642	-
The Ohio State University	43.RD	60076272 - RF01600783	94,948	-
Universities Space Research Association	43.RD	07-0189	172,510	54,642
Universities Space Research Association	43.RD	08700-11	44,857	-
Universities Space Research Association	43.RD	SOF 05-0014 Appleton	23,353	-
Universities Space Research Association	43.RD	SOF 06-0131	18,575	-
Universities Space Research Association	43.RD	SOF 07-0106	3,791	-
Universities Space Research Association	43.RD	SOF 07-0154	25,280	-
Universities Space Research Association	43.RD	SOF-06-0052-Morris	12,731	-
Universities Space Research Association	43.RD	SOF-06-0124-Appleton	4,502	-
University Of California Berkeley	43.001	00009962	357,119	-
University Of California Berkeley	43.001	00010110	48,603	-
University Of California Santa Cruz	43.001	A16-0408-S001-P0652638	581	-
University Of Colorado Boulder	43.003	1555629	1,451	-
University Of Colorado Boulder	43.001	1557892	16,149	-
University Of Illinois	43.001	089623-17108	46,376	-
University Of Maryland	43.001	34508-Z6037001	260	-
University Of Maryland	43.001	87921-Z6267201	15,009	-
University Of Michigan	43.001	3003962831	73,529	-
University Of Nevada	43.001	UNR 19-33	104,923	-
University Of Washington	43.001	UWSC10147	53,259	
Total NASA Pass-Through			7,279,419	54,642

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures		Pass-Th	U
Research and Development Cluster (Continued)						
Pass-Through Funds (Continued)						
National Science Foundation						
Arizona State University	47.041	17-100	\$	140,861	\$	-
Assoc. Of Universities For Research In Astronomy	47.049	N51608C		373,044		-
Columbia University	47.050	9(GG009393)		3,001		-
Columbia University	47.050	9(GG009393-01)		8,263		-
Columbia University	47.050	9B(GG009393-04)		423		-
Columbia University	47.050	9M(GG009393)		18,933		-
Columbia University	47.050	9T(GG009393)		96,868		-
Cornell University	47.070	72954-10593		32,611		-
Duke University	47.075	333-2366		14,559		-
Emory University	47.049	A225805		125,207		-
Georgia Institute Of Technology	47.041	RJ133-G2		37,379		-
Michigan State University	47.049	RC108774CIT		52,832		-
Montana State University	47.049	G225-20-W7963		85,484		-
National Radio Astronomy Observatory	47.049	362499		17,617		-
National Radio Astronomy Observatory	47.049	367686		33,192		-
Northeastern University	47.070	502480-78050		79,744		-
Oregon Health Sciences University	47.074	1009951_CALTECH		82,530		-
Princeton University	47.049	SUB0000150		104,780		-
Princeton University	47.049	SUB0000174		493,694		-
COVID-19 – Protabit LLC	47.041	2027586		40,103		-
Provivi, Inc.	47.041	1738308		(42,941)		-
San Francisco State University	47.049	S19-0018		27,600		-
Smithsonian Astrophysical Observatory	47.049	SVO-09001		178,803		-
Southwest Research Institute	47.049	N99026EH		5,345		-
Stanford University	47.049	61939855-134448		516,454		-
Stanford University	47.070	62358693-136731		57,117		-
The University Of North Carolina At Charlotte	47.070	20160600-01-CIT		388,230		-
University Of California Berkeley	47.049	00008795		45		-
University Of California Berkeley	47.076	00009414		111,896		-
University Of California Berkeley	47.049	00009632		3,321		-
University Of California Los Angeles	47.041	0160 G VB427		107,986		-

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Research and Development Cluster (Continued) Pass-Through Funds (Continued)				
National Science Foundation (Continued)				
University Of Hawaii At Manoa	47.050	MA1234	\$ 22,48	8 \$ -
University Of Michigan	47.074	3004704539	273,03	0 -
University Of Southern California	47.083	66468073	248,23	-
University Of Southern California	47.050	91171011	244,48	-
University Of Southern California	47.041	100051794	12,68	-
University Of Texas At Austin	47.070	UTA19-001216	44,24	9 -
University Of Utah	47.049	10055084-S3	7,03	9 -
University Of Virginia	47.041	GA11355.159449	(4,525	5) -
University Of Virginia	47.041	GA11355.PO#2180525	123,24	-1
University Of Washington	47.041	UWSC9356	60,31	-
University Of Wisconsin-Milwaukee	47.049	153405540	144,47	-
University Of Wisconsin-Milwaukee	47.049	203405459	17,73	-
Virginia Tech	47.070	479590-19717	66,39	-
W.M. Keck Observatory	47.049	13679	4,60	-
W.M. Keck Observatory	47.049	14639	1,629,94	-
W.M. Keck Observatory	47.049	14831	38,27	5 -
Total National Science Foundation Pass-Through			6,127,63	9 -
Total Research and Development - Pass-Through Funds			39,055,88	1 556,693
Total Research and Development Cluster			281,399,41	5 35,940,386

Federal Grantor/Pass-Through Grantor/Program Title	Federal CFDA Number	Grant/Contract or Pass-Through Number	Total Federal Expenditures	Pass-Through to Subrecipients
Student Financial Assistance Cluster				
Direct Funds				
Department of Education				
Federal Work Study Program	84.033		\$ 271,097	\$ -
Federal Supplemental Educational Opportunity Grant	84.007		421,725	-
Federal Pell Grant Program	84.063		482,283	-
Federal Perkins Loan				
Outstanding Loans as of October 1, 2019	84.038		2,254,026	-
New Loans Issued during 2020	84.038		-	-
Federal Direct Loans	84.268		646,444	<u>-</u> _
Total Student Financial Assistance Cluster			4,075,575	<u>-</u> _
Other Programs				
Department of Justice Office of Justice Programs				
State Of California - Office Of Emergency Services	16.575	CT10019503	15,245	<u>-</u> _
Total Expenditures of Federal Awards			\$ 285,490,235	\$ 35,940,386

California Institute of Technology Notes to Schedule of Expenditures of Federal Awards For the Year Ended September 30, 2020

1. Summary of Significant Accounting Policies

General

The California Institute of Technology (the "Institute") is a private, not-for-profit institution of higher education based in Pasadena, California. The Institute provides education and training services, primarily for students at the undergraduate, graduate, and postdoctoral levels. The Institute performs research, training, and other services under grants, contracts, and similar agreements with sponsoring organizations, primarily departments and agencies of the United States government. The awards set forth in the accompanying Schedule of Expenditures of Federal Awards (the "Schedule") do not include amounts related to the Jet Propulsion Laboratory ("JPL") which is a National Aeronautics and Space Administration ("NASA") Federally Funded Research and Development Center ("FFRDC") managed by the Institute. Refer to the separate audited financial statements and related OMB Uniform Guidance reports for JPL.

Basis of Presentation

The Schedule has been prepared on the cash basis of accounting and in accordance with the requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* ("Uniform Guidance"). The Schedule summarizes the expenditures of the Institute under programs of the federal government for the year ended September 30, 2020, except those related to JPL. Because the Schedule presents only a selected portion of the operations of the Institute and is prepared on the cash basis of accounting, it is not intended to and does not present the financial position, changes in net assets or cash flows of the Institute in accordance with accounting principles generally accepted in the United States of America.

Expenditures for direct costs are recognized as incurred using the cash basis of accounting and the cost accounting principles contained in the Uniform Guidance. Under those cost principles, certain types of expenditures are not allowable or are limited as to reimbursements. Moreover, expenditures include a portion of costs associated with general institution activities (facilities and administrative costs) which are allocated to awards under negotiated formulas commonly referred to as indirect cost rates. The Institute has elected to use its own negotiated indirect cost rates rather than the 10% de minimis rate allowed by Uniform Guidance.

Negative balances reflected in the Schedule represent adjustments to expenditures under awards made in prior years.

The Institute receives funding or reimbursement from Federal Government agencies primarily for research under government grants and contracts. Grants and contracts provide for reimbursement of indirect costs based on rates negotiated with the Department of Defense's Office of Naval Research ("ONR"), the Institute's cognizant federal agency.

For purposes of the Schedule, federal awards include all grants, contracts and similar agreements entered into directly between the Institute and agencies and departments of the federal government and all subawards to the Institute by nonfederal organizations pursuant to federal grants, contracts and similar agreements.

California Institute of Technology Notes to Schedule of Expenditures of Federal Awards For the Year Ended September 30, 2020

2. Loan Advances

The Federal Perkins Loan Program is administered directly by the Institute. The outstanding balance of loans at September 30, 2020 was \$1,769,891. Balances and transactions related to this program are included in the Institute's financial statements. The Institute did not charge any administrative cost allowance to the Federal Perkins Loan Program for the year ended September 30, 2020.

3. Commingled Assistance

California Student Aid Commission (CSAC) administers the State Cal Grant A and B Programs, selects the student recipients of these grant awards, and provides funds to participating institutions for disbursement. Federal Temporary Assistance for Needy Families (TANF) funds, CFDA Number 93.558, from the United States Department of Health and Human Services may comprise up to approximately 25% of the total funding for these Cal Grant awards. In fiscal year 2020, the Institute received Cal Grant A funds in the amount of \$154,428; however, CSAC is unable to determine the exact amount of TANF funds, if any, represented in those awards. Therefore, the Schedule does not include State Cal Grant A awards.



Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards

To the Board of Trustees of California Institute of Technology

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of California Institute of Technology (the "Institute"), which comprise the balance sheet as of September 30, 2020, and the related statements of activities and of cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated January 27, 2021.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Institute's internal control over financial reporting ("internal control") as a basis for designing the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control. Accordingly, we do not express an opinion on the effectiveness of the Institute's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Institute's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.



Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Los Angeles, California January 27, 2021

Primoterbone Coopers LLP



Report of Independent Auditors on Compliance with Requirements That Could Have a Direct and Material Effect on Each Major Program and on Internal Control Over Compliance in Accordance with the Uniform Guidance

To the Board of Trustees of California Institute of Technology

Report on Compliance for Each Major Federal Program

We have audited California Institute of Technology's (the "Institute") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the Institute's major federal programs for the year ended September 30, 2020. The Institute's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

The Institute's financial statements include the operations of the Jet Propulsion Laboratory (a Federally Funded Research and Development Center managed by the Institute), which expended \$2,641,884,000 in federal awards which is not included in the schedule of expenditures of federal awards during the year ended September 30, 2020. Our audit, described below, did not include the operations of the Jet Propulsion Laboratory because it is audited separately under the Uniform Guidance.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the Institute's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Institute's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the Institute's compliance.



Opinion on Each Major Federal Program

In our opinion, California Institute of Technology complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended September 30, 2020.

Report on Internal Control Over Compliance

Management of the Institute is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Institute's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Institute's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Los Angeles, California

Primoterbone Coopers LLP

June 9, 2021

California Institute of Technology Schedule of Findings and Questioned Costs For the Year Ended September 30, 2020

SECTION I – SUMMARY OF AUDITOR'S RESULTS

Financial Statements

Type of auditor's report issued:

Unmodified

Internal control over financial reporting:

• Material weakness(es) identified?

• Significant deficiency(ies) identified that are not considered to be material weakness(es)?

None Reported

Noncompliance material to the financial statements noted?

Federal Awards

Internal control over major programs:

Material weakness(es) identified?

• Significant deficiency(ies) identified that are not considered to be material weakness(es)?

None Reported

Type of auditor's report issued on compliance for major programs:

Unmodified

Any audit findings that are required to be reported in accordance with 2 CFR 200.516(a)?

Identification of major programs:

Program Name CFDA Number

Research and Development Cluster Various

Dollar threshold used to distinguish between Type A and Type B programs: \$3,000,000

Auditee qualified as a low-risk auditee? Yes

SECTION II - FINANCIAL STATEMENT FINDINGS

None reported.

Section III – FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

None reported.

California Institute of Technology Summary Schedule of Prior Audit Findings For the Year Ended September 30, 2020

There were no findings from prior years that require an update in this report.