

University of California

Report on Financial Statements and Expenditures of Federal Awards in Accordance with the Uniform Guidance For the Year Ended June 30, 2019

<u>Location</u>	<u>EIN</u>
Office of the President	94-3067788
Berkeley	94-6002123
Davis	94-6036494
Irvine	95-2226406
Los Angeles	95-6006143
Merced	27-0093858
Riverside	95-6006142
San Diego	95-6006144
San Francisco	94-6036493
Santa Barbara	95-6006145
Santa Cruz	94-1539563

University of California

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Report of Independent Auditors

To the Regents of the University of California

Report on the Financial Statements

We have audited the accompanying financial statements of the University of California (the "University"), a component unit of the State of California, its aggregate discretely presented component units, the University of California Retirement System, and the University of California Retiree Health Benefit Trust as of and for the years ended June 30, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents.

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 opinions 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. The financial statements of the University's discretely presented component units were not audited in accordance with *Government Auditing Standards*.

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 University'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 University'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 opinions.



Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the University, the aggregate discretely presented component units, the University of California Retirement System and the University of California Retiree Health Benefit Trust as of June 30, 2019 and 2018, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 4 through 22 and the required supplemental information on pages 98 through 105 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the *Governmental Accounting Standards Board* who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the University's basic financial statements. The accompanying summary schedule of expenditures of federal awards and schedule of expenditures of federal awards for the year ended June 30, 2019 are 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 are not a required part of the basic financial statements. As described in Note 2 to the summary schedule of expenditures of federal awards and schedule of expenditures of awards, the accompanying summary schedule of expenditures of federal awards and schedule of expenditures of federal awards were 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 basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the summary schedule of expenditures



of federal awards and schedule of expenditures of federal awards are fairly stated, in all material respects, on the basis of accounting described in Note 2, in relation to the basic 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 October 8, 2019 on our consideration of the University'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 June 30, 2019. 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 University's internal control over financial reporting and compliance.

PricewaterhouseCoopers LLP

San Francisco, California
October 8, 2019

Management's Discussion and Analysis (Unaudited)

The objective of Management's Discussion and Analysis is to help readers of the University of California's financial statements better understand the financial position and operating activities for the year ended June 30, 2019, with selected comparative information for the years ended June 30, 2018 and 2017. This discussion has been prepared by management and should be read in conjunction with the financial statements and the notes to the financial statements. Unless otherwise indicated, years (2017, 2018 and 2019, etc.) in this discussion refer to the fiscal years ended June 30.

The University of California's financial report communicates financial information for the University of California (the University), the University of California campus foundations (campus foundations), the University of California Retirement System (UCRS) and the University of California Retiree Health Benefit Trust (UCRHBT) through five primary financial statements and notes to the financial statements. Three of the primary statements, the statements of net position, the statements of revenues, expenses and changes in net position and the statements of cash flows, present the financial position, changes in financial position and cash flows for the University and the affiliated campus foundations. The financial statements for the campus foundations are presented discretely from the University. Two of the primary statements, the statements of plans' and trust's fiduciary net position and the statements of changes in plans' and trust's fiduciary net position, present the financial position and operating activities for UCRS and UCRHBT. The notes to the financial statements provide additional information that is essential to a full understanding of the financial statements.

THE UNIVERSITY OF CALIFORNIA

The University of California, one of the largest and most acclaimed institutions of higher learning in the world, is dedicated to excellence in teaching, research, health care and public service. The University has annual resources of nearly \$38.5 billion and encompasses ten campuses, five medical centers, four law schools and a statewide Division of Agriculture and Natural Resources. The University is also involved in the operation and management of three national laboratories for the U.S. Department of Energy (DOE).

Campuses. The ten campuses are located in Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, San Francisco, Santa Barbara and Santa Cruz. All of the campuses, except San Francisco, offer undergraduate, graduate and professional education; the San Francisco campus is devoted exclusively to graduate and professional education in health sciences.

Health sciences. The University operates one of the nation's largest health science and medical training programs. The instructional program is conducted in 16 health professional schools on six campuses. The University's health programs include five medical centers, two dental schools, three nursing schools, two public health schools and two pharmacy schools, in addition to a school of optometry and a school of veterinary medicine. The University's medical schools play a leading role in the development of health services and the advancement of medical science and research.

Law schools. The University has law schools at Berkeley, Davis, Irvine and Los Angeles. Also, the Hastings College of the Law in San Francisco is affiliated with the University, although not included in the financial reporting entity.

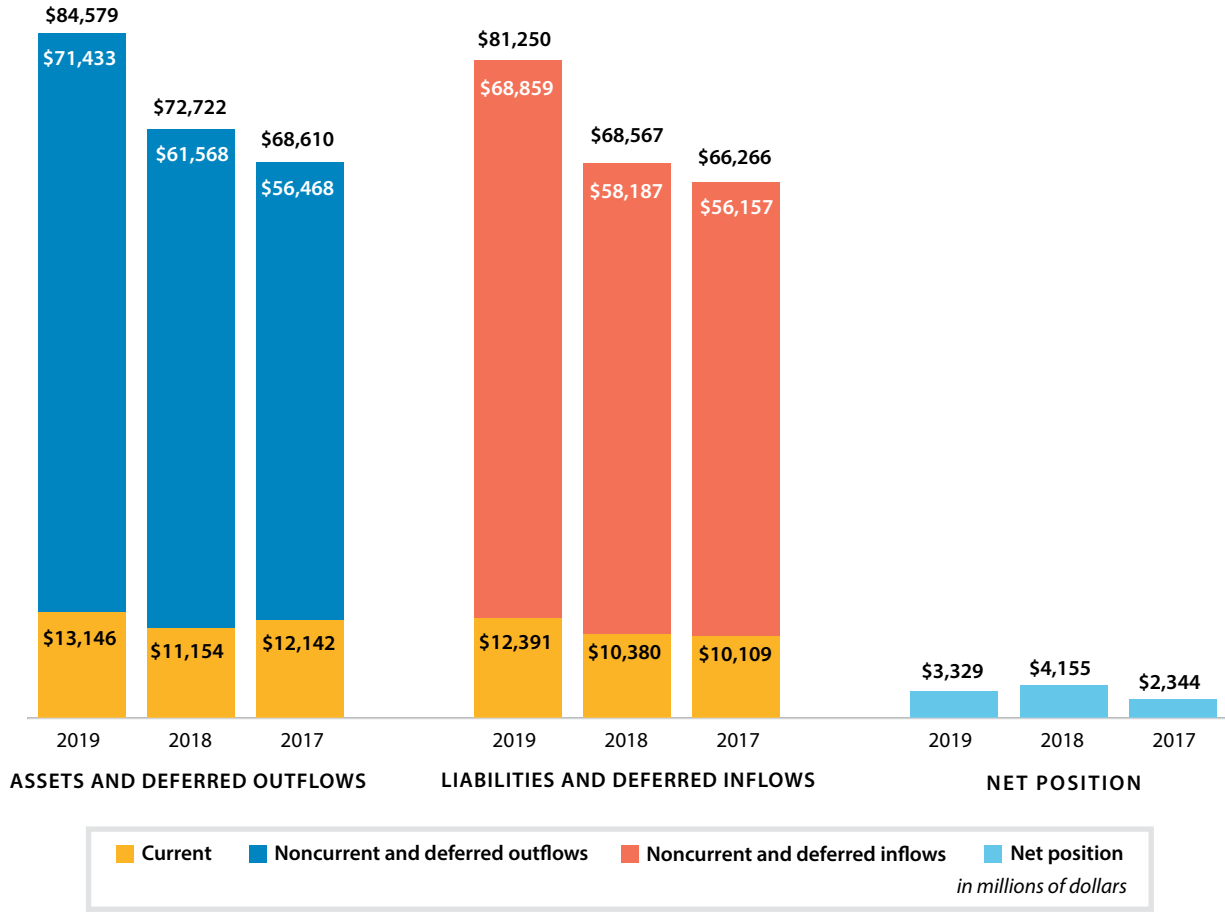
Agriculture and Natural Resources. The Division of Agriculture and Natural Resources is a statewide research and public service organization that serves a large and diverse agricultural community. The division collaborates on research with all campuses, and conducts studies at nine research and extension centers and on private land in cooperation with California producers. In addition, research and educational programs are conducted in each of the state’s 58 counties.

University Extension. The foremost continuing education program of its kind in size, scope and quality of instruction, University Extension offers almost 20,000 self-supporting courses statewide and in several foreign countries.

National laboratories. Under contract with the DOE, the University operates and manages the Ernest Orlando Lawrence Berkeley National Laboratory (LBNL) in California. The University is also a member in two separate joint ventures, Triad National Security, LLC (Triad) and Lawrence Livermore National Security, LLC (LLNS) that operate and manage the Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory (LLNL), respectively, under contracts directly with the DOE. The laboratories conduct broad and diverse basic and applied research in nuclear science, energy production, national defense and environmental and health areas.

THE UNIVERSITY’S FINANCIAL POSITION

The University implemented a new accounting policy for certain asset retirement obligations. This change in accounting policy provides recognition and measurement standards for legally and contractually enforceable liabilities associated with the retirement of tangible capital assets. Financial information for 2018 and 2017 has been restated to retroactively apply this new accounting policy.

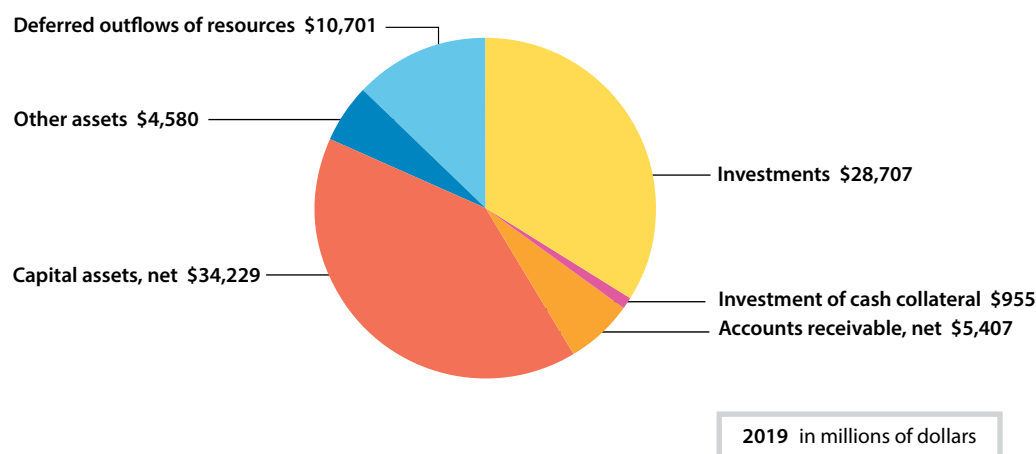


The statement of net position presents the financial position of the University at the end of each year. It displays all of the University's assets, deferred outflows, liabilities and deferred inflows. The difference between assets, deferred outflows, liabilities and deferred inflows is net position. The major components of the assets, deferred outflows, liabilities, deferred inflows and net position as of June 30, 2019, 2018 and 2017 are as follows:

(in millions of dollars)

	2019	2018	2017
ASSETS			
Investments	\$28,707	\$27,369	\$24,478
Investment of cash collateral	955	1,165	1,080
Accounts receivable, net	5,407	4,062	3,947
Capital assets, net	34,229	32,325	30,670
Other assets	4,580	3,132	2,865
Total assets	73,878	68,053	63,040
DEFERRED OUTFLOWS OF RESOURCES	10,701	4,669	5,570
LIABILITIES			
Debt, including commercial paper	24,584	23,659	20,503
Securities lending collateral	955	1,164	1,079
Net pension liability	18,118	9,775	10,739
Net retiree health benefits liability	19,862	18,862	19,290
Other liabilities	10,903	8,497	8,283
Total liabilities	74,422	61,957	59,894
DEFERRED INFLOWS OF RESOURCES	6,828	6,610	6,372
NET POSITION			
Net investment in capital assets	14,284	13,578	13,343
Restricted:			
Nonexpendable	1,225	1,182	1,155
Expendable	8,211	8,272	7,153
Unrestricted	(20,391)	(18,877)	(19,307)
Total net position	\$3,329	\$4,155	\$2,344

The University's Assets and Deferred Outflows



The University's total assets and deferred outflows of resources have increased to \$84.6 billion in 2019, compared to \$72.7 billion in 2018 and \$68.6 billion in 2017. Capital assets have increased due to continued investments in facilities in excess of depreciation. Investments increased due to positive financial market returns. Deferred outflows fluctuate primarily due to changes in the University's net pension and retiree health benefits liabilities.

Investments

Investments held by the University are principally carried in four investment pools: the Short Term Investment Pool (STIP), the Total Return Investment Pool (TRIP), the Blue and Gold Pool (BGP) and the General Endowment Pool (GEP). Cash for operations and bond proceeds for construction expenditures are invested in STIP. The University uses STIP to meet operational liquidity needs. TRIP and BGP provide the opportunity to enhance returns on long-term capital by taking advantage of the economies of scale of investing in a large pool across a broad range of asset classes. The University maximizes its use of TRIP and BGP while still maintaining sufficient funds in STIP to meet operational and liquidity needs. The GEP is a balanced portfolio and the primary investment vehicle for individual endowments and funds functioning as endowments.

The Regents of the University of California ("The Regents") utilize asset allocation strategies that are intended to optimize investment returns over time in accordance with investment objectives and at acceptable levels of risk. GEP had positive returns of 8.2 percent in 2019, 8.9 percent in 2018 and 15.1 percent in 2017. BGP commenced operations on April 1, 2019 and had a positive return of 3.5 percent from inception through June 30, 2019. TRIP had positive returns of 6.3 percent, 4.5 percent and 7.7 percent in 2019, 2018 and 2017, respectively. STIP had positive returns of 2.2 percent, 2.0 percent and 1.3 percent in 2019, 2018 and 2017, respectively.

Investment of cash collateral

The University participates in a securities lending program incorporating securities owned by both the University and UCRS as a means to augment income. Cash collateral fluctuates in response to changes in demand from borrowers and the availability of securities based on the University's asset allocation mix.

Accounts receivable, net

Accounts receivable include amounts due from state and federal governments on contracts and grants, patient receivables for medical centers and professional medical fees, investment income, proceeds from security sales and amounts due for private grants and contracts. Receivables fluctuate based on the timing of collections and investment sales activity. In 2019, medical center accounts receivable increased consistent with the growth in revenues due to higher inpatient and outpatient volumes. Additionally, in 2019, other receivables for investment securities sold increased by \$972.5 million.

Capital assets, net

The University's enrollment growth and continuing needs for renewal, modernization and seismic correction of existing facilities are the key drivers of capital investments. Capital spending continues at a brisk pace in order to provide the facilities necessary to support the University's teaching, research and public service mission and for patient care. Capital spending includes constructing and renovating academic buildings, research laboratories, libraries, student services, parking structures and infrastructure projects at all ten campuses and five medical centers. The University has a goal to increase affordable campus housing for more students given escalating living costs in many of the surrounding campus communities. In 2019 and 2018, the largest portion of the capital asset additions were related to constructing housing facilities at several campuses. Additionally, construction continues to expand the Merced campus by 2020. Total additions of capital assets were \$4.1 billion in 2019 as compared to \$3.7 billion in 2018 and \$3.0 billion in 2017.

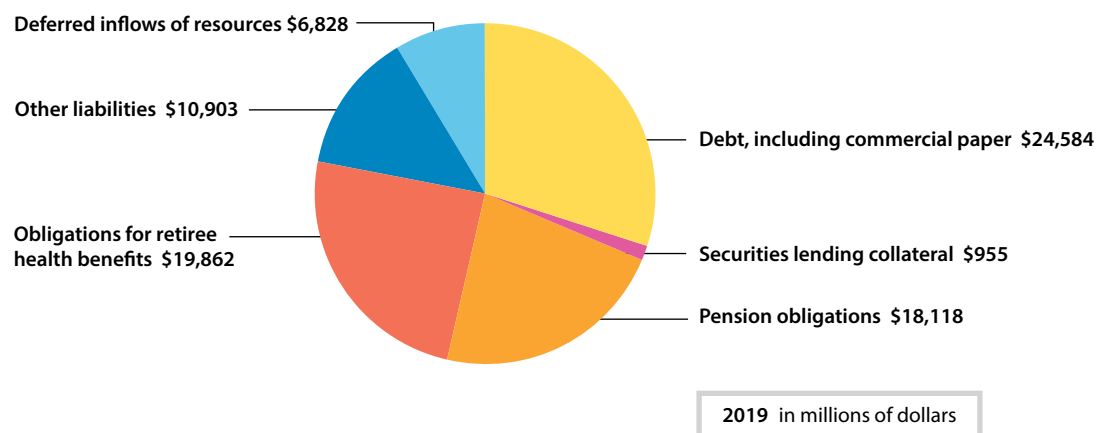
Other assets

Other assets include cash, investments held by trustees, pledge receivables, note and mortgage receivables, inventories and receivables from the DOE. In 2019, \$286.5 million was held by trustees to retire taxable bonds maturing on July 1, 2019. Additionally, in 2019 and 2018, current and noncurrent investments held by trustees increased by \$524.1 million and \$322.6 million, respectively, related to bond proceeds for the design and construction of third-party capital projects. The noncurrent receivable from the DOE, which fluctuates with the net pension and retiree health benefits liabilities due to the DOE's continuing responsibility to contribute for retired and terminated vested members of LLNL and LANL, increased by \$605.5 million in 2019 as compared to 2018 and decreased by \$284.3 million in 2018 as compared to 2017.

Deferred outflows of resources

Changes in fair values of the University's interest rate swaps that are determined to be hedging derivatives, losses on debt refundings, asset retirement obligations and certain changes in the net pension and net retiree health benefits liabilities are reported as deferred outflows of resources. In 2019, deferred outflows increased primarily due to changes in assumptions from the experience study for the University of California Retirement Plan (UCRP). In 2018, deferred outflows decreased due to higher than expected investment returns for the UCRP portfolio and an increase in the discount rate for the retiree health benefit liability.

The University's Liabilities and Deferred Inflows



The University's liabilities and deferred inflows of resources increased to \$81.2 billion in 2019 as compared to \$68.6 billion in 2018 and \$66.3 billion in 2017. The change in 2019 was primarily related to the increases in the liability for pension benefits and other liabilities. In 2018, the increase was primarily related to the issuance of additional debt to finance capital projects offset by decreases in the liabilities for pension and retiree health benefits.

Debt, including commercial paper

Capital assets are financed from a variety of sources, including University equity contributions, state support, gifts, revenue bonds, bank loans and leases or structures that involve separate legal entities. Commercial paper and bank loans provide interim financing for capital assets during the construction period.

Outstanding debt increased by \$925.4 million and \$3.2 billion in 2019 and 2018, respectively. A summary of the activity follows:

<i>(in millions of dollars)</i>		
	2019	2018
ADDITIONS TO OUTSTANDING DEBT		
General Revenue Bonds	\$653	\$1,853
Limited Project Revenue Bonds		1,692
Capital leases	16	47
Other borrowings	260	285
Blended Component Unit Revenue Bonds	662	320
Bond premium, net	77	494
Additions to outstanding debt	1,668	4,691
REDUCTIONS TO OUTSTANDING DEBT		
Refinancing and prepayments		(1,014)
Scheduled principal payments	(419)	(392)
Payments on other borrowings	(15)	(7)
Commercial paper, net	(207)	(31)
Amortization of bond premium	(102)	(91)
Reductions to outstanding debt	(743)	(1,535)
Net increase in outstanding debt	\$925	\$3,156

The University's debt, which is used to primarily finance capital assets, includes \$574.5 million, \$781.8 million and \$812.7 million of commercial paper outstanding at the end of 2019, 2018 and 2017, respectively. Total debt outstanding was \$24.6 billion at the end of 2019 compared to \$23.7 billion and \$20.5 billion at the end of 2018 and 2017, respectively.

In 2019, General Revenue Bonds of \$653.1 million were issued for operations and to finance certain facilities and projects. Proceeds of \$286.5 million were used to retire bonds maturing on July 1, 2019. Additionally, \$662.5 million of tax-exempt bonds were issued to finance the construction of third-party housing and dining facilities. Reductions to outstanding debt include \$434.4 million for scheduled principal payments.

To take advantage of favorable interest rates for tax-exempt bonds, the University financed several projects in 2018 that were approved for construction or had recently started construction. The University also refinanced debt in December 2017 in advance of tax reform changes that were effective as of January 1, 2018. In 2018, \$3.5 billion of debt was issued, including General Revenue Bonds totaling \$1.9 billion and Limited Project Revenue Bonds totaling \$1.7 billion to finance and refinance certain facilities and projects. Reductions to outstanding debt in 2018 were \$1.5 billion, including \$1.0 billion for one-time principal payments for the refinancing or refunding of previously outstanding debt. The refinancing and refunding of previously outstanding debt resulted in an economic gain of \$83.2 million.

In August 2016, the University entered into an agreement with a developer to design, construct, finance, operate and maintain certain auxiliary, administrative, academic and research facilities at the Merced campus by 2020, for which the University will finance \$600 million of the total costs. Other borrowings at June 2019 and 2018 include \$539.7 million and \$296.9 million, respectively, for the present value of the payments expected to be made over the term of the agreement through 2055 for the repayment of the private debt incurred by the developer during construction. In the event the agreement with the developer is terminated, the outstanding portion of the private debt incurred by the developer for the construction phase will become an obligation of the University.

The University's General Revenue Bond ratings are currently affirmed at Aa2, AA and AA by Moody's Investors Service, Standard & Poor's and Fitch, respectively, all with stable outlooks. The University's Limited Project Revenue Bonds and Medical Center Pooled Revenue Bonds are currently affirmed at Aa3, AA- and AA- by Moody's Investors Service, Standard & Poor's and Fitch, respectively, all with stable outlooks.

Commercial paper borrowings decreased \$207.3 million in 2019 as compared to 2018, and decreased by \$30.9 million in 2018 compared to 2017. Commercial paper is primarily used as interim financing for construction projects and short-term financing for other needs. Commercial paper fluctuates based upon the timing of refinancing construction projects with the issuance of long-term revenue bonds. The University has various revolving credit agreements totaling \$1.1 billion with major financial institutions for the purpose of providing additional liquidity for certain variable-rate demand bonds, commercial paper and for other liquidity needs.

Securities lending collateral

Under the securities lending program, the University records a liability to the borrower for cash collateral received and held by the University for securities on loan at the end of the year. All borrowers are required to provide additional collateral by the next business day if the value of the collateral falls to less than 100 percent of the fair value of the securities lent. The amount of the securities lending collateral liability fluctuates directly with securities lending opportunities and the investment of cash collateral.

Net pension liability and retiree health benefits

The University has a financial responsibility for pension benefits associated with its defined benefit plans and for retiree health benefits. The University's net pension liability was \$18.1 billion, \$9.8 billion and \$10.7 billion in 2019, 2018 and 2017, respectively. The increase in 2019 was primarily driven by changes in assumptions as a result of the most recent experience study, with the reduction in the discount rate and the changes in the mortality tables causing the largest increases. The decrease in net pension liability for 2018 was primarily driven by higher than expected investment returns on the UCRP investment portfolio. The total investment rate of return for UCRP was 6.0 percent in 2019, 7.8 percent in 2018 and 14.5 percent in 2017. The discount rate used to estimate the net pension liability was 6.75, 7.25 and 7.25 percent in 2019, 2018 and 2017, respectively.

LBNL participates in the University's defined benefit pension plan, although the DOE has an ongoing financial responsibility to reimburse the University for LBNL's share of the obligation to UCRP. In addition, under certain circumstances, the University makes contributions to UCRP for LANL and LLNL retirees and, based upon contractual arrangements with the DOE, is reimbursed by the DOE. The University recorded receivables from the DOE of \$911.5 million, \$316.7 million and \$615.1 million for 2019, 2018 and 2017, respectively, representing the DOE's share of the net pension liability.

The University's net retiree health benefits liability was \$19.9 billion, \$18.9 billion and \$19.3 billion, in 2019, 2018 and 2017, respectively. While retiree health benefits are not a legal obligation of the University and can be cancelled or modified at any time, accounting standards require the University to recognize a net retiree health liability based on the current practices of providing retiree health benefits. The University funds the retiree health benefits through UCRHBT based on a projection of benefits on a pay-as-you-go basis and the assets in the trust are not sufficient to fund retiree health benefits. Therefore, the Bond Buyer 20-year tax-exempt general obligation municipal-bond index rate is used to discount the retiree health benefits liabilities. The change in the net retiree health benefits liability in 2019 was driven by the decrease in the discount rate offset by reducing the inflation assumption and strong management of health care costs. The change in the net retiree health benefits liability in 2018 was primarily driven by the lower than expected health care cost increases and the change in discount rate used to estimate the retiree health benefits liability. The discount rates as of June 30, 2019, 2018 and 2017 were 3.50 percent, 3.87 percent and 3.58 percent, respectively.

LBNL participates in the University's retiree health benefits plans and, based on contractual arrangements with the DOE, the University is reimbursed for retiree health benefits costs associated with retirees who previously worked at LBNL. The University recorded receivables from the DOE of \$667.6 million, \$656.9 million and \$642.8 million for 2019, 2018 and 2017, respectively, representing the DOE's share of the net retiree health benefits liability.

Other liabilities

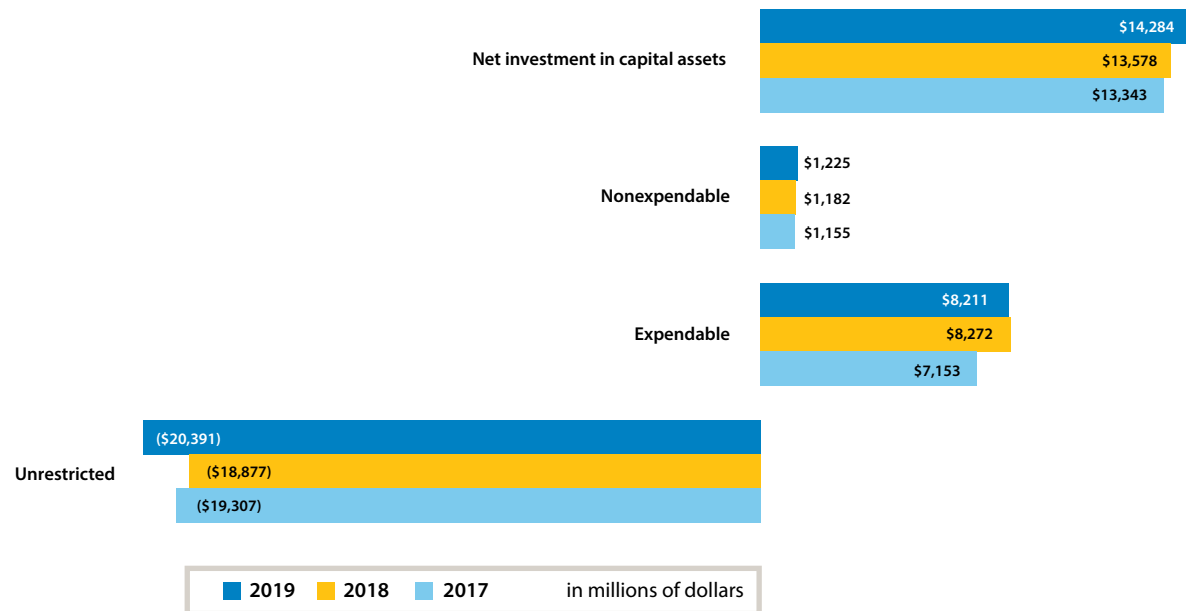
Other liabilities consist of accounts payable, accrued salaries, other employee benefits, unearned revenue, funds held for others, DOE laboratories' liabilities, federal refundable loans, self-insurance liabilities and obligations under split-interest agreements held by the University. Accounts payable increased by \$1.1 billion primarily due to higher payables for securities purchased as of June 30, 2019. In 2019, accrued salaries increased by \$617.6 million and employee benefits increased by \$181.6 million due to the timing of payroll payments to employees.

Deferred inflows of resources

Deferred inflows of resources are related to the University's service concession arrangements, gains on debt refundings, sales of certain future patent royalty revenues, changes in the estimated future value of irrevocable split-interest agreements and certain changes in the net pension and net retiree health benefits liabilities. Changes in deferred inflows of resources was primarily due to fluctuations in the net pension and retiree health liabilities.

The University's Net Position

Net position represents the residual interest in the University's assets and deferred outflows after all liabilities and deferred inflows are deducted. Net position was restated for 2018 and 2017 as a result of adopting new accounting rules for certain asset retirement obligations. The University's net position was positive \$3.3 billion in 2019 compared to positive \$4.2 billion in 2018 and positive \$2.3 billion in 2017. Net position is reported in the following categories: net investment in capital assets; restricted, nonexpendable; restricted, expendable; and unrestricted.



Net investment in capital assets

The portion of net position invested in capital assets, net of accumulated depreciation and the related outstanding debt used to finance the acquisition, construction or improvement of these capital assets, was \$14.3 billion in 2019 compared to \$13.6 billion in 2018 and \$13.3 billion in 2017. The University continues to invest in its physical facilities which are, in part, financed by debt in order to support growth.

Restricted, nonexpendable

Restricted, nonexpendable net position includes the corpus of the University's permanent endowments. In 2019 and 2018, the increase in restricted nonexpendable net position was principally due to the receipt of new gifts.

Restricted, expendable

Restricted, expendable net position is subject to externally imposed restrictions governing their use. Net position may be spent only in accordance with the restrictions placed upon them and may include endowment income and gains, subject to the University's spending policy; support received from gifts, appropriations or capital projects and trustee-held investments. The increases or decreases in restricted, expendable funds are principally due to the timing of spending restricted gifts and endowment income and gains.

Unrestricted

Under generally accepted accounting principles, net position that is not subject to externally imposed restrictions governing their use must be classified as unrestricted for financial reporting purposes. Unrestricted net position is negative due primarily to obligations for pension and retiree health benefits exceeding University assets available to pay such obligations. Although unrestricted net position is not subject to externally imposed restrictions, substantially all of the University's reserves are allocated for academic and research initiatives or programs, for capital projects or for other purposes.

THE UNIVERSITY'S RESULTS OF OPERATIONS

The statement of revenues, expenses and changes in net position is a presentation of the University's operating results and indicates whether the financial condition has improved or deteriorated. In accordance with the Governmental Accounting Standards Board (GASB) requirements, certain significant revenues relied upon and budgeted for fundamental operational support of the core instructional mission of the University are required to be recorded as nonoperating revenues, including state educational appropriations, private gifts and investment income. Results of operations for 2018 and 2017 have been restated as a result of adopting new accounting policies for certain asset retirement obligations. A summarized comparison of the operating results for 2019, 2018 and 2017, arranged in a format that matches the revenue supporting the core activities of the University with the expenses associated with these core activities, is as follows:

(in millions of dollars)

	2019			2018			2017		
	OPERATING	NONOPERATING	TOTAL	OPERATING	NONOPERATING	TOTAL	OPERATING	NONOPERATING	TOTAL
REVENUES									
Student tuition and fees, net	\$5,170		\$5,170	\$4,839		\$4,839	\$4,477		\$4,477
State educational appropriations		\$3,508	3,508		\$3,386	3,386		\$3,278	3,278
Federal Pell Grants		438	438		422	422		382	382
Grants and contracts, net	5,977		5,977	5,709		5,709	5,441		5,441
Medical centers, net	13,208	34	13,242	12,065	22	12,087	11,241	13	11,254
Educational activities, net	4,009		4,009	3,670		3,670	3,333		3,333
Auxiliary enterprises, net	1,717		1,717	1,685		1,685	1,579		1,579
Department of Energy laboratories	1,577		1,577	1,062		1,062	1,147		1,147
Private gifts, net		1,441	1,441		1,315	1,315		1,162	1,162
Investment income, net		442	442		413	413		299	299
Other revenues	937	53	990	971	127	1,098	939	67	1,006
Revenues supporting core activities	32,595	5,916	38,511	30,001	5,685	35,686	28,157	5,201	33,358
EXPENSES									
Salaries and wages	16,984		16,984	15,953		15,953	15,160		15,160
Pension benefits	4,340		4,340	1,339		1,339	1,888		1,888
Retiree health benefits	1,292		1,292	1,295		1,295	1,576		1,576
Other employee benefits	3,289		3,289	3,246		3,246	2,938		2,938
Scholarships and fellowships	850		850	767		767	729		729
Utilities	336		336	304		304	292		292
Supplies and materials	4,057		4,057	3,610		3,610	3,240		3,240
Depreciation and amortization	2,100		2,100	2,027		2,027	1,910		1,910
Department of Energy laboratories	1,571		1,571	1,055		1,055	1,139		1,139
Interest expense		767	767		746	746		721	721
Other expenses	5,284	72	5,356	4,851		4,851	4,648	60	4,708
Expenses associated with core activities	40,103	839	40,942	34,447	746	35,193	33,520	781	34,301
Income (loss) from core activities	(\$7,508)	\$5,077	(2,431)	(\$4,446)	\$4,939	493	(\$5,363)	\$4,420	(943)
OTHER NONOPERATING ACTIVITIES									
Net appreciation in fair value of investments			1,387			890			1,721
Income (loss) before other changes in net position			(1,044)			1,383			778
OTHER CHANGES IN NET POSITION									
State capital appropriations									2
Capital gifts and grants, net			195			403			256
Permanent endowments			23			25			24
Increase (decrease) in net position			(826)			1,811			1,060
NET POSITION									
Beginning of year, as previously reported			4,155			2,344			1,293
Cumulative effect of accounting change									(9)
Beginning of year, restated			4,155			2,344			1,284
End of year			\$3,329			\$4,155			\$2,344

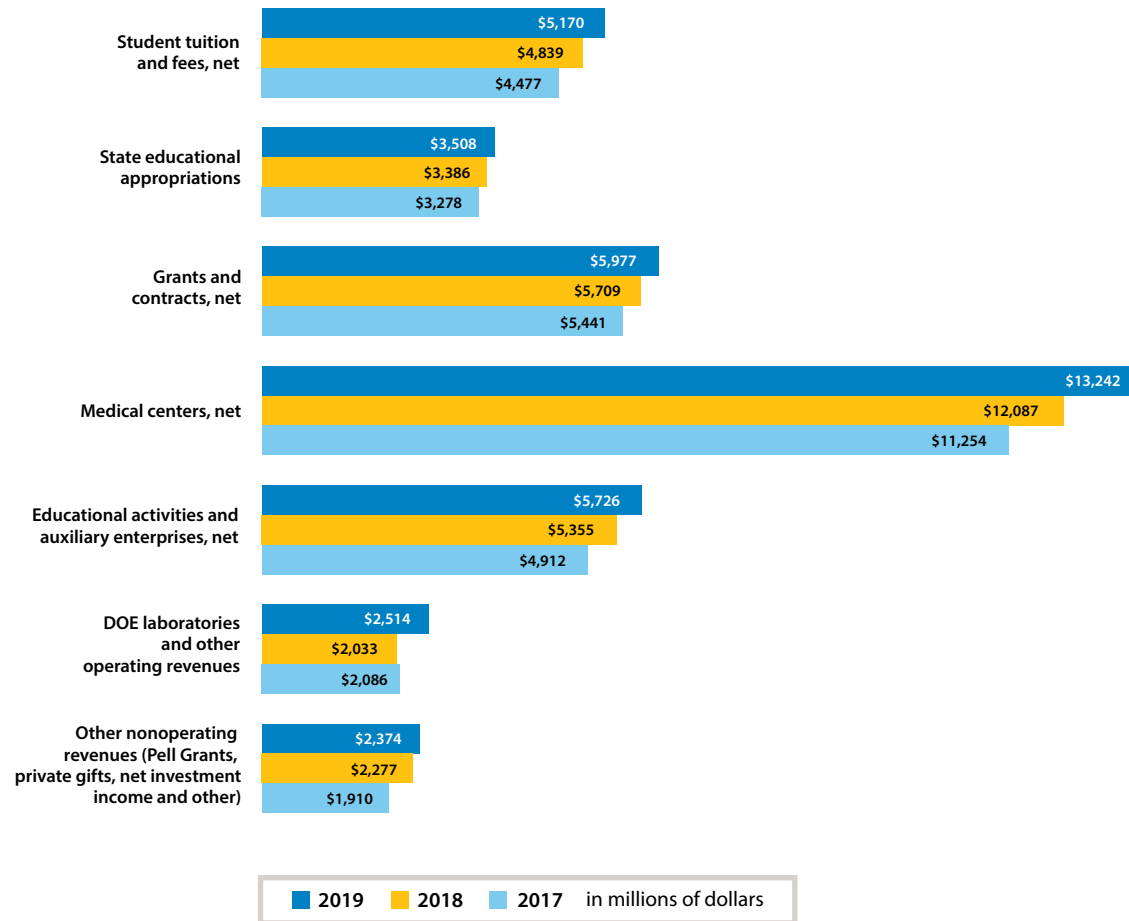
Revenues supporting core activities

Revenues to support the University's core activities, including those classified as nonoperating revenues, were \$38.5 billion, \$35.7 billion and \$33.4 billion in 2019, 2018 and 2017, respectively. These diversified sources of revenue increased by \$2.8 billion in 2019 and \$2.3 billion in 2018.

The state of California's educational appropriations, in conjunction with student tuition and fees, are the core components that support the instructional mission of the University. Grants and contracts provide opportunities for undergraduate and graduate students to participate in basic research alongside some of the most prominent researchers in the country.

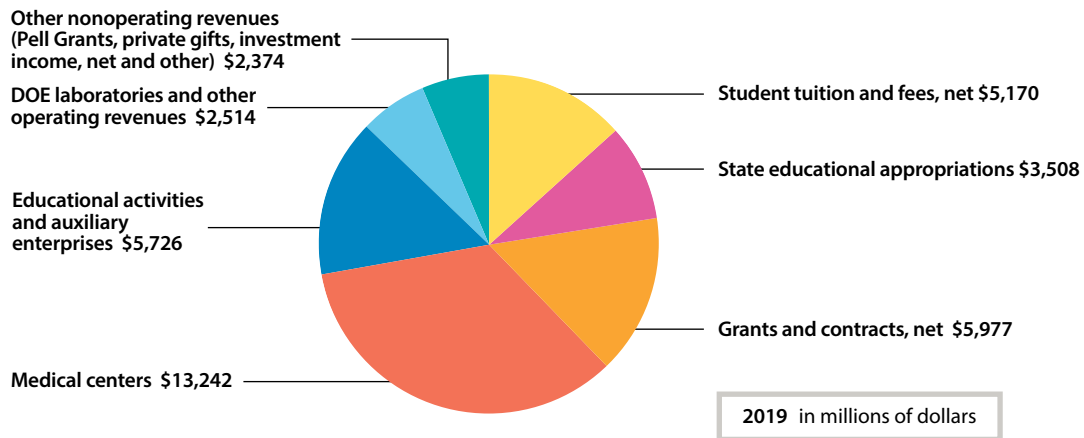
Gifts to the University allow crucial flexibility to faculty for support of their fundamental activities or new academic initiatives. Other significant revenues are from medical centers, educational activities and auxiliary enterprises such as student housing, food service operations and parking.

Revenues in the various categories have changed as follows:



A major financial strength of the University is its diverse source of revenues, including those from student fees, federally sponsored grants and contracts, medical centers, the state of California, private support and auxiliary enterprises. The variety of fund sources has become increasingly important over the past several years.

Categories of both operating and nonoperating revenue that supported the University's core activities in 2019 are as follows:



Student tuition and fees, net

Net student tuition and fees were \$5.2 billion, \$4.8 billion and \$4.5 billion in 2019, 2018 and 2017, respectively. Scholarship allowances, or financial aid, are the difference between the stated charge for tuition and fees and the amount that is paid by the student and third parties on behalf of the student. Scholarship allowances, netted against student tuition and fees, were \$1.2 billion, \$1.3 billion and \$1.1 billion in 2019, 2018 and 2017, respectively. Student tuition and fees, net of scholarship allowances, increased by \$331.4 million and \$361.6 million in 2019 and 2018, respectively, due to enrollment growth.

In 2019, enrollment grew by 2.6 percent and in 2018 enrollment grew by 3.3 percent. Mandatory tuition for resident undergraduates decreased 0.5 percent in 2019 and increased 2.5 percent in 2018. Certain nonresident undergraduates and resident and nonresident graduate students experienced increases in mandatory tuition and fees. Professional degree supplemental tuition varies by discipline; certain increases were approved for 2019, 2018 and 2017.

State educational appropriations

Educational appropriations from the state of California were \$3.5 billion, \$3.4 billion and \$3.3 billion in 2019, 2018 and 2017, respectively. State educational appropriations increased in 2019 and 2018 by \$122.0 million and \$108.3 million, respectively. State educational appropriations include \$169.0 million and \$171.0 million in 2018 and 2017, respectively, as in one-time funds for UCRP.

Grants and contracts, net

Revenue from federal, state, private and local government grants and contracts — including an overall facilities and administration cost recovery of \$1.2 billion, \$1.1 billion and \$1.1 billion in 2019, 2018 and 2017, respectively — was \$6.0 billion, \$5.7 billion and \$5.4 billion in 2019, 2018 and 2017, respectively.

In 2019, federal grants and contracts revenue increased \$227.0 million, or 6.9 percent, as compared to 2018. In 2018, federal grants and contracts revenue increased \$43.0 million, or 1.3 percent, as compared to 2017. Federal grants and contracts include federal facilities and administrative cost recovery of \$829.0 million, \$782.0 million and \$764.0 million in 2019, 2018 and 2017, respectively. Changes in the federal budget impact the University's growth in federal grants and contracts. Grants and contracts revenue is from a variety of federal agencies as indicated below:

<i>(in millions of dollars)</i>			
	2019	2018	2017
Department of Health and Human Services	\$2,176	\$2,035	\$1,987
National Science Foundation	461	464	465
Department of Education	81	78	57
Department of Defense	299	261	275
National Aeronautics and Space Administration	91	86	95
Department of Energy (excluding national laboratories)	118	108	107
Other federal agencies	303	270	273
Federal grants and contracts net revenue	\$3,529	\$3,302	\$3,259

Medical centers, net

Medical center revenues, net of allowances, increased \$1.2 billion, or 9.6 percent, in 2019 and increased \$0.8 billion, or 7.4 percent, in 2018. Revenues increased in 2019 due to higher patient days, increased outpatient visits and additional supplemental payments. Revenues increased in 2018 due to increases in both inpatient and outpatient volumes and higher supplemental payments. Revenues increased in 2018 due to a full year of operations for the new UCSD Jacobs Medical Center which opened in November 2016.

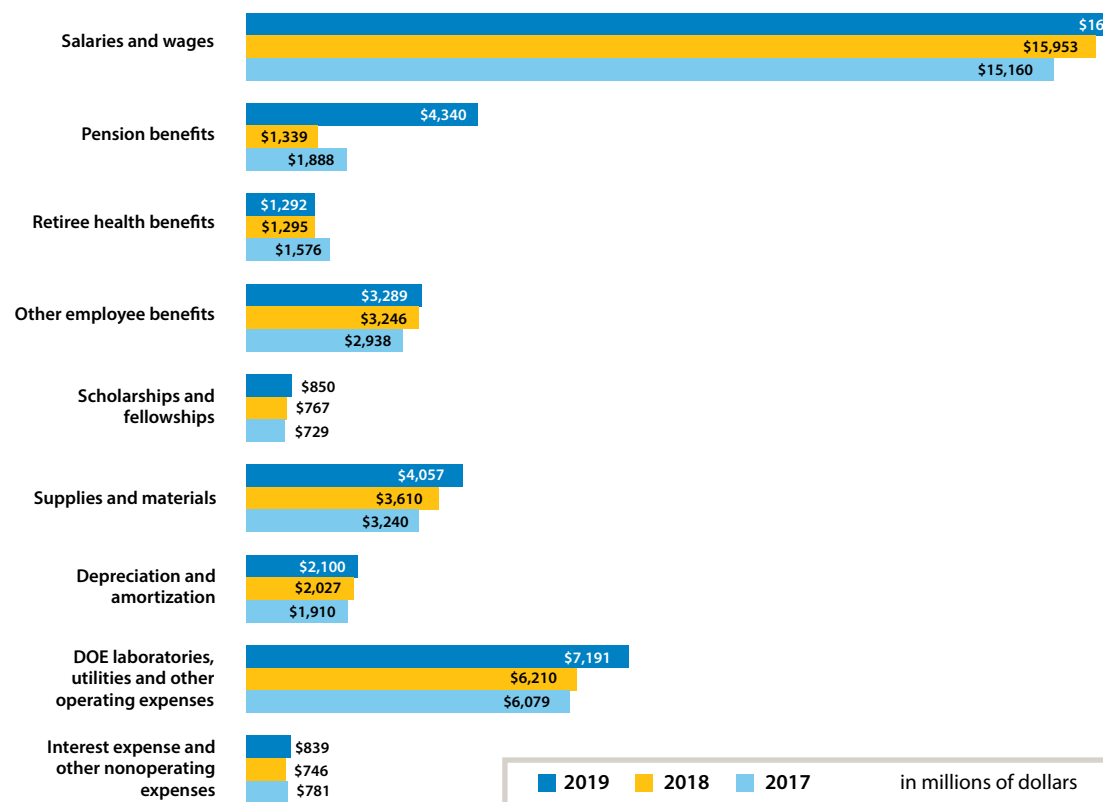
Educational activities and auxiliary enterprises, net

Revenue from educational activities, primarily medical professional fees, net of allowances, grew by \$338.5 million, or 9.2 percent, in 2019 and \$337.9 million, or 10.1 percent, in 2018. The growth is generally associated with an expanded patient base and improved collections.

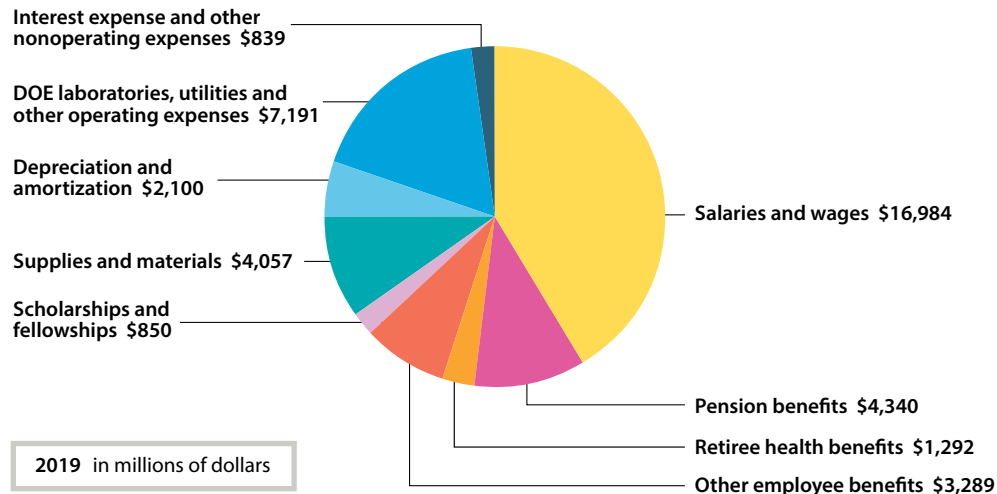
Auxiliary enterprises include housing, food service, parking, bookstores, student centers, unions and child care centers. Revenue from auxiliary enterprises, net of allowances, grew by \$32.0 million, or 1.9 percent, in 2019 and \$105.6 million, or 6.7 percent in 2018. Auxiliary revenues increased consistent with enrollment and the University's initiative to expand campus housing while minimizing increases in housing costs for students.

Expenses associated with core activities

Expenses associated with the University's core activities, including those classified as nonoperating expenses, were \$40.9 billion, \$35.2 billion and \$34.3 billion in 2019, 2018 and 2017, respectively. Expenses increased in 2019 by \$5.7 billion and in 2018 by \$0.9 billion. The University's operations continued to grow, principally at the medical centers, and salaries and employee benefits increased consistent with the overall growth in operations. In 2019, pension expense, representing the largest change, increased by \$3.0 billion in 2019 due to changes in assumptions as a result of the experience study. Expenses in the various categories are as follows:



Categories of both operating and nonoperating expenses related to the University's core activities in 2019 are as follows:



Salaries and benefits

Approximately 63.3 percent of the University's expenses were related to salaries and benefits. There were 162,600 full-time equivalent (FTE) employees in 2019, excluding employees who were associated with LBNL, whose salaries and benefits were included as laboratory expenses, as compared to 158,900 FTEs in 2018.

Salaries and benefits increased by 18.7 percent in 2019. In 2019, salaries increased by 6.5 percent, 2.4 percent due to an increase in the number of FTEs and 4.1 percent due to an increase in the average salary per FTE. Employee benefits, excluding pension and post-retirement health care benefits, increased by \$43.0 million, or 1.3 percent, in 2019, which is less than the increase in FTEs due to management of health care costs. Pension expense increased by \$3.0 billion, or 224.0 percent, due to changes in assumptions related to the experience study. Retiree health benefits expense decreased by \$2.6 million or 0.2 percent due to the decrease in the discount rate offset by reducing the inflation assumption and management of health care costs.

Salaries and benefits increased by 1.3 percent in 2018. In 2018, salaries increased by 5.2 percent, 2.8 percent due to an increase in the number of FTEs and 2.3 percent due to an increase in the average salary per FTE. Employee benefits, excluding pension and post-retirement health care benefits, increased by \$307.8 million, or 10.5 percent in 2018, due to higher health insurance costs. Pension expense decreased by \$548.1 million or 29.0 percent due to better than expected investment returns. Retiree health expense decreased by \$280.8 million or 17.8 percent due to the higher discount rate in 2018.

Scholarships and fellowships

The University places a high priority on student financial aid as part of its commitment to affordability. Scholarship allowances, representing financial aid and fee waivers awarded by the University, were \$2.3 billion, \$2.3 billion and \$2.1 billion in 2019, 2018 and 2017, respectively. Scholarships and fellowships, representing payments of financial aid made directly to students and reported as an operating expense were \$850.4 million, \$766.9 million and \$728.6 million in 2019, 2018 and 2017, respectively. On a combined basis, as the University continues its commitment to provide financial support for needy students, financial aid in all forms increased by \$77.9 million, or 3.5 percent, in 2019 as compared to 2018, and by \$180.8 million, or 8.7 percent, in 2018 as compared to 2017. Increases in financial aid, scholarships and fellowships in both 2019 and 2018 are consistent with increases in enrollment, tuition and fees and housing costs since the University's practice is to minimize the impact of cost increases on first-generation and low-income students.

Supplies and materials

During 2019 and 2018, supplies and materials costs increased by \$446.9 million, or 12.4 percent and \$370.6 million, or 11.4 percent, respectively. The largest increases occurred at the medical centers due to higher patient volumes. In 2019, supply costs also increased for research activities related to the increased federal contract and grant activities. In recent years, there has been inflationary pressure on the costs for medical supplies and laboratory instruments and higher costs for general supplies necessary to support expanded medical patient volumes. The University continues to find opportunities to manage the costs of supplies and materials.

Other expenses

Other expenses consist of a variety of expense categories, including travel, rent, insurance, legal settlements and repairs and maintenance, plus any gain or loss on disposals of capital assets and other nonoperating expenses.

Operating losses

In accordance with the GASB's reporting standards, operating losses were \$7.5 billion, \$4.4 billion and \$5.4 billion in 2019, 2018 and 2017, respectively. The operating losses in 2019, 2018 and 2017 were offset by \$5.1 billion, \$4.9 billion and \$4.4 billion, respectively, of net nonoperating revenue that supports core operating activities of the University. Expenses exceeded revenues associated with core activities in 2019 by \$2.4 billion, in 2018 revenues exceeded expenses by \$0.5 billion and in 2017 expenses exceeded revenues by \$0.9 billion. These fluctuations have been primarily driven by changes in pension expenses.

Other nonoperating activities

The University's other nonoperating activities, consisting of net appreciation or depreciation in the fair value of investments, are noncash transactions and, therefore, are not available to support operating expenses. In 2019, 2018 and 2017, the University recognized net appreciation in the fair value of investments of \$1.4 billion, \$0.9 billion and \$1.7 billion, respectively. The University's portfolio experienced positive returns in the equity markets.

Other changes in net position

Similar to other nonoperating activities discussed above, other changes in net position are also not available to support the University's operating expenses in the current year. State capital appropriations and capital gifts and grants may only be used for the purchase or construction of the specified capital assets. Only income earned from gifts of permanent endowments is available in future years to support the specified program.

THE UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS

Separate foundations at each individual campus provide valuable assistance in fundraising, public outreach and other support for the missions of the campus and the University. Although independent boards govern each of the foundations, they are affiliated with, and their assets are dedicated for, the benefit of the University of California.

The Campus Foundations' Financial Position

The campus foundations' statement of net position presents their combined financial position at the end of the year. It displays all of the campus foundations' assets, liabilities, deferred inflows and net position. The difference between assets, liabilities and deferred inflows is net position, representing a measure of the current financial condition of the campus foundation.

The major components of the combined assets, liabilities and net position of the campus foundations at June 30, 2019, 2018 and 2017 are as follows:

<i>(in millions of dollars)</i>			
	2019	2018	2017
ASSETS			
Investments	\$9,978	\$9,240	\$8,207
Investment of cash collateral	36	45	43
Accounts receivable, net	37	13	40
Pledges receivable, net	888	1,006	866
Other assets	579	567	348
Total assets	11,518	10,871	9,504
LIABILITIES			
Accounts payable and other current liabilities	50	52	113
Securities lending collateral	36	45	43
Obligations under life income agreements and funds held for others	483	467	420
Other noncurrent liabilities	278	272	253
Total liabilities	847	836	829
DEFERRED INFLOWS OF RESOURCES	229	232	209
NET POSITION			
Restricted:			
Nonexpendable	4,885	4,407	3,968
Expendable	5,018	4,966	4,305
Unrestricted	539	430	193
Total net position	\$10,442	\$9,803	\$8,466

Investments increased in 2019 and 2018 due to the performance of the financial markets. The Board of Trustees for each campus foundation is responsible for its specific investment policy, although asset allocation guidelines are recommended to campus foundations by the Investments Committee of The Regents. The Boards of Trustees may determine that all or a portion of their investments will be managed by the University's Chief Investment Officer. The Chief Investment Officer managed \$2.9 billion, \$2.6 billion and \$2.2 billion of the campus foundations' investments at the end of 2019, 2018 and 2017, respectively.

Net position represents the residual interest in the assets after all liabilities and deferred inflows are deducted. Restricted, nonexpendable net position includes the corpus of the campus foundations' permanent endowments. Restricted, expendable net position is subject to externally imposed restrictions governing their use. Restricted, expendable net position is only available in accordance with the restrictions placed upon them and may include endowment income and investment gains, subject to each individual campus foundation's spending policy; and support received from gifts. New gifts less gifts transferred to campuses, and changes in the fair value of investments were the primary reasons for the changes in net position in 2019 and 2018.

The Campus Foundations' Results of Operations

The campus foundations' combined statement of revenues, expenses and changes in net position is a presentation of their operating results for the year. It indicates whether their financial condition has improved or deteriorated during the year.

A summarized comparison of the operating results for 2019, 2018 and 2017 is as follows:

<i>(in millions of dollars)</i>			
	2019	2018	2017
OPERATING REVENUES			
Private gifts and other revenues	\$919	\$1,341	\$868
Total operating revenues	919	1,341	868
OPERATING EXPENSES			
Grants to campuses and other expenses	1,170	1,136	970
Total operating expenses	1,170	1,136	970
Operating income (loss)	(251)	205	(102)
NONOPERATING REVENUES			
Investment income	71	77	74
Net appreciation in fair value of investments	361	646	792
Income before other changes in net position	181	928	764
OTHER CHANGES IN NET POSITION			
Permanent endowments	458	409	287
Increase in net position	639	1,337	1,051
NET POSITION			
Beginning of year	9,803	8,466	7,415
End of year	\$10,442	\$9,803	\$8,466

Operating expenses generally consist of grants to University campuses. Grants to the campuses include current-use donor gifts, the annual income distributions on endowments and gift fees. Grants to campuses typically follow the pattern indicated by private gift revenue; however, the campuses' programmatic needs are also taken into consideration, subject to abiding by the restricted purposes specified by the donor for the use of gifts and endowment income.

Since gifts are transferred only when the cash is received and investment income is classified as nonoperating income, operating losses can occur when grants distributed to the campuses exceed private gift revenue.

THE UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)

UCRS is a valuable component of the comprehensive benefits package offered to employees of the University. UCRS consists of two defined benefit plans and four defined contribution plans. The defined benefit plans include the University of California Retirement Plan (UCRP) for members and the California Public Employees Retirement System (PERS) Voluntary Early Retirement Incentive Plan (UC-VERIP) for certain University employees that were members of PERS who elected early retirement. The University of California Retirement Savings Program (UCRSP) includes four defined contribution plans (Defined Contribution Plan, Supplemental Defined Contribution Plan, 403(b) Plan and 457(b) Plan), with several investment portfolio options for participants' elective and non-elective contributions.

UCRS' Financial Position and Result of Operations

The statement of plans' fiduciary net position presents the financial position of UCRS at the end of the fiscal year. It displays all of the retirement system's assets, liabilities and net position. The difference between assets and liabilities is the net position held in trust for pension benefits. These represent amounts available to provide pension benefits to members of UCRP and participants in the defined contribution plans and UC-VERIP. At June 30, 2019, UCRS' assets were \$104.8 billion, liabilities were \$8.6 billion and net position held in trust for pension benefits were \$96.1 billion, an increase of \$4.9 billion from 2018. At June 30, 2018, UCRS' assets were \$99.1 billion, liabilities were \$7.9 billion and net position held in trust for pension benefits were \$91.2 billion, an increase of \$6.6 billion from 2017.

The major components of the assets, liabilities and net position available for pension benefits for 2019, 2018 and 2017 are as follows:

(in millions of dollars)

	2019	2018	2017
ASSETS			
Investments	\$95,457	\$90,873	\$82,574
Participants' interests in mutual funds	1,692	1,585	3,351
Investment of cash collateral	6,129	6,158	6,842
Other assets	1,488	465	1,203
Total assets	104,766	99,081	93,970
LIABILITIES			
Securities lending collateral	6,127	6,157	6,838
Other liabilities	2,517	1,699	2,470
Total liabilities	8,644	7,856	9,308
NET POSITION HELD IN TRUST FOR PENSION BENEFITS			
Members' defined benefit plan benefits	70,344	66,839	62,179
Participants' defined contribution plan benefits	25,779	24,386	22,483
Total net position held in trust for pension benefits	\$96,123	\$91,225	\$84,662

The statements of changes in the plans' fiduciary net position are a presentation of UCRS' operating results. The statements indicate whether the financial condition has improved or deteriorated during the year. A summarized comparison of the operating results for 2019, 2018 and 2017 is as follows:

(in millions of dollars)

	2019	2018	2017
ADDITIONS			
Contributions	\$4,815	\$4,760	\$4,779
Net appreciation (depreciation) in fair value of investments	3,701	5,099	8,617
Investment and other income, net	1,725	1,556	1,437
Total additions	10,241	11,415	14,833
DEDUCTIONS			
Benefit payments and participant withdrawals	5,275	4,812	4,700
Plan expenses	68	40	53
Total deductions	5,343	4,852	4,753
Increase in net position held in trust for pension benefits	\$4,898	\$6,563	\$10,080

The Regents' asset allocation strategies are intended to generate investment returns over time in accordance with investment objectives and at acceptable levels of risk. The overall investment return for UCRP was 6.0 percent in 2019 as compared to 7.8 percent in 2018 and 14.5 percent in 2017.

The participants' interests in mutual funds, representing defined contribution plan contributions to certain mutual funds on a custodial plan basis, fluctuate based upon market performance of the mutual funds and participant investment elections.

UCRS participates in the University's securities lending program as a means to augment income. All borrowers are required to provide collateral and the University records a liability to the borrower for cash collateral received and held by the University for securities on loan at the end of the year. Investments in cash collateral and the securities lending collateral liability fluctuate in response to changes in demand from borrowers and the availability of securities based upon the UCRS asset allocation mix.

Contributions to UCRP were \$3.4 billion in 2019, 2018 and 2017, including contributions from employees of \$1.0 billion, \$0.9 billion and \$0.9 billion in 2019, 2018 and 2017, respectively. Contributions also included \$169.0 million and \$171.0 million, received from the state of California in 2018 and 2017, respectively, and additional deposits of \$500.0 million, \$391.8 million and \$481.0 million made by the University in 2019, 2018 and 2017, respectively. University contribution rates to UCRP were 14.0 percent of covered payroll in 2019, 2018 and 2017. Employee contribution rates ranged between 7.0 percent and 9.0 percent in 2019, 2018 and 2017. The University contribution rate will be increased starting July 1, 2020 by 0.5 percent per year, on July 1st, for six years to 17.0 percent.

Benefit payments and participant withdrawals were \$463.0 million more in 2019 than in 2018 and \$112.2 million more in 2018 than in 2017. Payments from UCRP increase each year due to a growing number of retirees receiving payments and cost-of-living adjustments (COLAs). Benefit payments from UCRSP fluctuate based upon member withdrawals. Participant withdrawals increased by \$234.5 million, or 19.2 percent, in 2019 as compared to 2018, and decreased by \$154.2 million, or 11.2 percent, in 2018 as compared to 2017. As of June 30, 2019, over 79,100 retirees and beneficiaries were receiving payments from UCRS as compared to over 75,900 as of June 30, 2018 and 73,000 as of June 30, 2017.

The net pension liability for UCRP was \$18.1 billion in 2019, \$9.8 billion in 2018 and \$10.7 billion in 2017. The increase in net pension liability for 2019 of \$8.3 billion was primarily due to lower than expected investment returns on the UCRP investment portfolio and assumption changes, including a lower discount rate, longer mortality and lower inflation. The decrease in net pension liability for 2018 of \$0.9 billion was due to higher than expected investment returns on the UCRP portfolio. The ratio of plan net position to total pension liability was 79.5 percent in 2019, 87.2 percent in 2018 and 85.3 percent in 2017.

Additional information on the retirement plans can be obtained from the 2019 annual reports of the University of California Retirement System by writing to the University of California, Office of the President, Human Resources and Benefits, Post Office Box 24570, Oakland, California 94623.

THE UNIVERSITY OF CALIFORNIA RETIREE HEALTH BENEFIT TRUST (UCRHBT)

UCRHBT was established on July 1, 2007 to allow certain University locations — primarily campuses and medical centers — that share the risks, rewards and costs of providing for retiree health benefits the opportunity to fund such benefits on a cost-sharing basis and accumulate funds under an arrangement segregated from University assets. The University contributes toward retiree medical and dental benefits, although it does not contribute toward the cost of other benefits available to retirees. The DOE laboratories do not participate in UCRHBT, therefore the DOE has no interest in the trust's assets.

UCRHBT's Financial Position and Result of Operations

The statement of trust's fiduciary net position presents the financial position of the UCRHBT at the end of the fiscal year. It displays the UCRHBT's assets, liabilities and net position. The difference between assets and liabilities is the net position held in trust for retiree health benefits. This represents amounts available to provide retiree health benefits to participants.

The major components of the assets, liabilities and net position available for retiree health benefits for 2019, 2018 and 2017 were as follows:

(in millions of dollars)

	2019	2018	2017
ASSETS			
Investments	\$136	\$128	\$98
Other assets	40	24	26
Total assets	176	152	124
LIABILITIES			
Total liabilities	19	18	17
NET POSITION HELD IN TRUST FOR RETIREE HEALTH BENEFITS			
Total net position held in trust for retiree health benefits	\$157	\$134	\$107

The statement of changes in the trust's fiduciary net position is a presentation of UCRHBT's operating results and indicates whether the financial condition has improved or deteriorated during the year. Summarized operating results for 2019, 2018 and 2017 are as follows:

(in millions of dollars)

	2019	2018	2017
ADDITIONS			
Contributions	\$333	\$338	\$328
Investment and other income	3	2	
Total additions	336	340	328
DEDUCTIONS			
Insurance premiums and payments	309	309	290
Plan expenses	4	4	4
Total deductions	313	313	294
Increase in net position held in trust for retiree health benefits	\$23	\$27	\$34

Contributions for retiree health benefits are made by the campuses and medical centers based upon projected pay-as-you-go financing. The University acts as a third-party administrative agent on behalf of UCRHBT to pay health care insurers and administrators amounts currently due.

The retiree health benefits provided under the University's plan and any liabilities related to the future funding requirements for the retiree health benefits are reported by the University. The net retiree health liability for UCRHBT was \$19.2 billion, \$18.3 billion and \$18.7 billion in 2019, 2018 and 2017, respectively.

LOOKING FORWARD

The University of California is a world center of learning, known for generating a steady stream of talent, knowledge and social benefits, and has always been at the center of California's capacity to innovate. The excellence of its programs attracts the best students, leverages hundreds of millions of dollars in state, federal and private funding and promotes discovery of new knowledge that fuels economic growth.

The Governor signed the 2019-20 State Budget Act on June 27, 2019. State funds allocated to the University totaled \$3.9 billion, which includes an increase of 7.1 percent, or \$247.5 million in new ongoing support. The additional funds address general operating cost increases, increasing enrollment by 4,860 new California undergraduates above 2018-19 levels by 2020-21 and various other programs. The Budget Act also includes \$215.1 million in one-time funding for various programs across the University including \$143.5 million for deferred maintenance.

The University remains highly competitive in attracting federal grants and contracts revenue, with fluctuations in the awards received closely paralleling trends in the budgets of federal research granting agencies. Over two-thirds of the University's federal research revenue comes from two agencies, the Department of Health and Human Services, primarily through the National Institutes of Health, and the National Science Foundation. Other agencies that figure prominently in the University's awards are the Department of Education, Department of Defense, the National Aeronautics and Space Administration and the Department of Energy. The University is a unique national resource for helping the nation address competitiveness and economic initiatives.

The University's medical centers have positive operating margins, although they continue to face financial and competitive challenges in their regional markets, along with the added costs and responsibilities related to their function as academic institutions. The demand for health care services and the cost of providing them continue to increase significantly. In addition to the rising costs of salaries, benefits and medical supplies faced by hospitals across the state, along with the costs of maintaining and upgrading facilities, the University's medical centers also face additional costs associated with seismic retrofitting, new technologies, biomedical research, the education and training of health care professionals and the care for a disproportionate share of the medically underserved in California. Other than Medicare and Medi-Cal (California's Medicaid program), health insurance payments do not recognize the added cost of teaching in their payment to academic medical centers. The growth in costs of the publicly funded programs and health care reform will likely continue to reduce rates or limit payment growth, placing downward pressure on operating results for the medical centers.

The University must have a balanced array of many categories of facilities to meet its education, research and public service goals and continues to assess its long-term capital requirements. Support for the University's capital program is expected to be provided from a combination of sources, including the state of California, external financing, gifts and other sources.

Additional budget information can be found at <http://universityofcalifornia.edu/news/budget/welcome.html>. Additional information concerning state budget matters and the state's financial condition may be found on the website of the California Department of Finance at <http://www.dof.ca.gov>.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain information provided by the University, including written as outlined above or oral statements made by its representatives, may contain forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, which address activities, events or developments that the University expects or anticipates will or may occur in the future contain forward-looking information.

In reviewing such information, it should be kept in mind that actual results may differ materially from those projected or suggested in such forward-looking information. This forward-looking information is based upon various factors and was derived using various assumptions. The University does not undertake to update forward-looking information contained in this report or elsewhere to reflect actual results, changes in assumptions or changes in other factors affecting such forward-looking information.

UNIVERSITY OF CALIFORNIA
STATEMENTS OF NET POSITION

	UNIVERSITY OF CALIFORNIA		CAMPUS FOUNDATIONS	
	2019	2018	2019	2018
<i>At June 30, 2019 and 2018 (in thousands of dollars)</i>				
ASSETS				
Cash and cash equivalents	\$143,127	\$249,523	\$458,594	\$447,377
Short-term investments	4,923,749	4,890,075	875,652	857,844
Investment of cash collateral	839,994	1,054,406	32,733	40,999
Investments held by trustees	914,176	26,803		
Accounts receivable, net	5,406,680	4,061,888	37,496	13,102
Pledges receivable, net	28,039	25,049	201,299	234,294
Current portion of notes and mortgages receivable, net	66,357	68,482		181
Inventories	266,839	244,706		
Department of Energy receivable	155,027	133,472		
Other current assets	401,781	400,030	3,959	4,622
Current assets	13,145,769	11,154,434	1,609,733	1,598,419
Investments	23,783,632	22,478,922	9,102,737	8,381,736
Investment of cash collateral	114,946	110,301	3,651	4,289
Investments held by trustees	331,772	388,361		
Pledges receivable, net	30,036	32,690	686,693	771,889
Notes and mortgages receivable, net	379,981	386,342	250	250
Department of Energy receivable	1,579,117	973,652		
Capital assets, net	34,229,473	32,325,107		
Other noncurrent assets	282,762	202,996	115,047	115,177
Noncurrent assets	60,731,719	56,898,371	9,908,378	9,273,341
Total assets	73,877,488	68,052,805	11,518,111	10,871,760
DEFERRED OUTFLOWS OF RESOURCES	10,701,222	4,668,926		
LIABILITIES				
Accounts payable	3,236,356	2,178,244	15,441	22,071
Accrued salaries	1,260,368	642,753		
Employee benefits	574,856	393,296		
Unearned revenue	1,505,912	1,423,686	6,265	5,535
Collateral held for securities lending	954,668	1,164,481	36,384	45,288
Commercial paper	574,483	781,804		
Current portion of long-term debt	1,696,499	1,371,030		
Funds held for others	433,213	409,934	314,910	298,060
Department of Energy laboratories' liabilities	137,481	116,111		
Other current liabilities	2,017,093	1,898,204	46,404	44,180
Current liabilities	12,390,929	10,379,543	419,404	415,134
Federal refundable loans	248,645	244,852		
Self-insurance	715,417	584,186		
Obligations under life income agreements	35,118	35,293	150,069	149,391
Long-term debt	22,313,160	21,505,943		
Net pension liability	18,117,941	9,775,120		
Net retiree health liability	19,861,686	18,862,265		
Other noncurrent liabilities	738,640	569,396	278,076	271,825
Noncurrent liabilities	62,030,607	51,577,055	428,145	421,216
Total liabilities	74,421,536	61,956,598	847,549	836,350
DEFERRED INFLOWS OF RESOURCES	6,828,085	6,609,704	228,675	232,018
NET POSITION				
Net investment in capital assets	14,284,354	13,578,222		
Restricted:				
Nonexpendable: Endowments and gifts	1,176,981	1,148,699	4,885,413	4,408,143
Nonexpendable: Reserved for minority interests	47,770	33,754		
Expendable	8,211,427	8,272,450	5,017,760	4,965,668
Unrestricted	(20,391,443)	(18,877,696)	538,714	429,581
Total net position	\$3,329,089	\$4,155,429	\$10,441,887	\$9,803,392

See accompanying Notes to Financial Statements.

UNIVERSITY OF CALIFORNIA

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

<i>Years ended June 30, 2019 and 2018 (in thousands of dollars)</i>	UNIVERSITY OF CALIFORNIA		CAMPUS FOUNDATIONS	
	2019	2018	2019	2018
OPERATING REVENUES				
Student tuition and fees, net	\$5,170,171	\$4,838,764		
Grants and contracts, net:				
Federal	3,528,753	3,302,446		
State	548,975	567,532		
Private	1,539,487	1,523,778		
Local	359,352	315,424		
Medical centers, net	13,208,083	12,064,598		
Educational activities, net	4,009,029	3,670,545		
Auxiliary enterprises, net	1,716,776	1,684,759		
Department of Energy laboratories	1,577,244	1,062,428		
Campus foundation private gifts			\$918,363	\$1,340,158
Other operating revenues, net	937,427	970,991	967	1,237
Total operating revenues	32,595,297	30,001,265	919,330	1,341,395
OPERATING EXPENSES				
Salaries and wages	16,984,570	15,952,983		
Pension benefits	4,340,355	1,339,462		
Retiree health benefits	1,292,332	1,294,888		
Other employee benefits	3,288,909	3,245,927		
Supplies and materials	4,057,105	3,610,171		
Depreciation and amortization	2,100,228	2,027,343		
Department of Energy laboratories	1,569,702	1,054,475		
Scholarships and fellowships	850,390	766,857		
Utilities	336,232	303,773		
Campus foundation grants			1,134,265	1,100,287
Other operating expenses	5,283,590	4,850,982	35,948	35,917
Total operating expenses	40,103,413	34,446,861	1,170,213	1,136,204
Operating income (loss)	(7,508,116)	(4,445,596)	(250,883)	205,191
NONOPERATING REVENUES (EXPENSES)				
State educational appropriations	3,508,102	3,386,119		
State hospital fee grants	33,609	21,670		
Build America Bonds federal interest subsidies	53,071	57,179		
Federal Pell Grants	437,828	421,693		
Private gifts, net	1,441,330	1,315,092		
Investment income:				
Short Term Investment Pool and other, net	339,661	307,225		
Endowment, net	93,608	97,134		
Securities lending, net	8,459	8,958	385	366
Campus foundations			71,123	76,988
Net appreciation in fair value of investments	1,386,797	889,534	360,862	646,441
Interest expense	(767,358)	(746,476)	(27)	(50)
Gain (loss) on disposal of capital assets	(16,258)	7,779		
Other nonoperating revenues (expenses)	(55,486)	62,308	(1,316)	(23)
Net nonoperating revenues	6,463,363	5,828,215	431,027	723,722
Income (loss) before other changes in net position	(1,044,753)	1,382,619	180,144	928,913
OTHER CHANGES IN NET POSITION				
Capital gifts and grants, net	195,348	403,164		
State capital appropriations		32		
Permanent endowments	23,065	25,328	458,351	408,707
Increase (decrease) in net position	(826,340)	1,811,143	638,495	1,337,620
NET POSITION				
Beginning of year, as previously reported	4,155,429	2,354,476	9,803,392	8,465,772
Cumulative effect of accounting change		(10,190)		
Beginning of year, restated	4,155,429	2,344,286	9,803,392	8,465,772
End of year	\$3,329,089	\$4,155,429	\$10,441,887	\$9,803,392

See accompanying Notes to Financial Statements.

UNIVERSITY OF CALIFORNIA
STATEMENTS OF CASH FLOWS

	UNIVERSITY OF CALIFORNIA		CAMPUS FOUNDATIONS	
	2019	2018	2019	2018
<i>Years ended June 30, 2019 and 2018 (in thousands of dollars)</i>				
CASH FLOWS FROM OPERATING ACTIVITIES				
Student tuition and fees	\$5,153,207	\$4,820,829		
Grants and contracts	6,010,358	5,571,346		
Medical centers	13,032,546	11,831,671		
Educational activities	3,903,724	3,646,918		
Auxiliary enterprises	1,724,883	1,686,540		
Collection of loans from students and employees	79,437	85,622		
Campus foundation private gifts			\$914,380	\$997,932
Payments to employees	(16,245,812)	(15,907,816)		
Payments to suppliers and utilities	(9,034,484)	(8,228,056)		
Payments for pension benefits	(2,191,594)	(2,208,680)		
Payments for retiree health benefits	(377,826)	(319,927)		
Payments for other employee benefits	(3,197,524)	(3,318,249)		
Payments for scholarships and fellowships	(850,235)	(766,797)		
Loans issued to students and employees	(68,465)	(176,940)		
Payments to campuses and beneficiaries			(1,184,480)	(1,157,983)
Other receipts	299,829	723,416	30,586	29,217
Net cash used by operating activities	(1,761,956)	(2,560,123)	(239,514)	(130,834)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES				
State educational appropriations	3,508,973	3,371,735		
Federal Pell Grants	437,934	418,735		
State hospital fee grants	33,609	21,670		
Gifts received for other than capital purposes:				
Private gifts for endowment purposes	20,023	59,022	386,618	332,939
Other private gifts	1,307,172	1,306,915		
Receipt of retiree health contributions from UCRP	88,434	65,102		
Payment of retiree health contributions to UCRHBT	(81,722)	(82,597)		
Receipts from UCRHBT	399,047	372,702		
Payments for retiree health benefits made on behalf of UCRHBT	(438,586)	(385,462)		
Student direct lending receipts	555,283	562,158		
Student direct lending payments	(555,180)	(562,128)		
Proceeds from debt issuance	500,000			
Commercial paper financing:				
Proceeds from issuance	33,761	7,576		
Payments of principal	(16,780)	(12,936)		
Interest paid on debt	(29,737)	(22,554)		
Other receipts	8,902	122,345	9,241	22,593
Net cash provided by noncapital financing activities	5,771,133	5,242,283	395,859	355,532
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES				
Commercial paper financing:				
Proceeds from issuance	193,506	642,547		
Payments of principal	(417,808)	(668,056)		
Interest paid	(9,559)	(10,693)		
State capital appropriations	4,165	(1,794)		
Build America bonds federal interest subsidies	46,586	57,845		
Capital gifts and grants	150,394	130,358		
Proceeds from debt issuance	436,994	4,645,296		
Proceeds from the sale of capital assets	37,151	3,348		
Purchase of capital assets	(3,615,979)	(3,557,917)		
Refinancing or prepayment of outstanding debt		(1,013,739)		
Scheduled principal paid on debt and capital leases	(430,238)	(394,905)		
Interest paid on debt and capital leases	(901,107)	(878,075)		
Net cash used by capital and related financing activities	(4,505,895)	(1,045,785)		

See accompanying Notes to Financial Statements.

UNIVERSITY OF CALIFORNIA
STATEMENTS OF CASH FLOWS *continued*

	UNIVERSITY OF CALIFORNIA		CAMPUS FOUNDATIONS	
	2019	2018	2019	2018
<i>Years ended June 30, 2019 and 2018 (in thousands of dollars)</i>				
CASH FLOWS FROM INVESTING ACTIVITIES				
Proceeds from sales and maturities of investments	\$75,381,612	\$83,531,008	\$1,455,483	\$1,642,416
Purchase of investments	(75,445,081)	(85,520,749)	(1,672,071)	(1,751,480)
Investment income, net of investment expenses	453,791	399,519	71,460	77,643
Net cash provided (used) by investing activities	390,322	(1,590,222)	(145,128)	(31,421)
Net increase (decrease) in cash and cash equivalents	(106,396)	46,153	11,217	193,277
Cash and cash equivalents, beginning of year	249,523	203,370	447,377	254,100
Cash and cash equivalents, end of year	\$143,127	\$249,523	\$458,594	\$447,377
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH USED BY OPERATING ACTIVITIES				
Operating income (loss)	(\$7,508,116)	(\$4,445,596)	(\$250,883)	\$205,191
<i>Adjustments to reconcile operating loss to net cash used by operating activities:</i>				
Depreciation and amortization expense	2,100,228	2,027,343		
Noncash gifts			(112,580)	(141,530)
Allowance for uncollectible accounts	252,838	257,198	856	3,775
Loss on impairment of capital assets	4,056	10,361		
<i>Change in assets and liabilities:</i>				
Investments held by trustees	(17,062)	10,254	(3,287)	(1,186)
Accounts receivable	(587,066)	(639,229)	2,401	6,796
Pledges receivable			113,671	(147,333)
Inventories	(22,132)	(17,712)		
Other assets	(143,490)	(179,961)	2,802	(7,095)
Accounts payable	126,473	110,295	790	(1,143)
Accrued salaries	617,615	(1,747)		
Employee benefits	174,466	15,765		
Unearned revenue	80,162	225,169	(761)	(55,807)
Department of Energy	(594,755)	298,366		
Self-insurance	127,478	116,108		
Obligations under life income agreements			(4,899)	(5,659)
Net pension liability	2,665,176	(1,200,507)		
Net retiree health benefits liability	857,147	874,018		
Other liabilities	105,026	(20,248)	12,376	13,157
Net cash used by operating activities	(\$1,761,956)	(\$2,560,123)	(\$239,514)	(\$130,834)
SUPPLEMENTAL NONCASH ACTIVITIES INFORMATION				
Capital assets acquired through capital leases	\$16,328	\$47,225		
Capital assets acquired with a liability at year end	105,603	76,120		
Change in fair value of interest rate swaps classified as hedging derivatives	(75,322)	35,393		
Gifts of capital assets	46,971	294,873		
Other noncash gifts	130,100	3,276	\$172,898	\$203,015
Proceeds from issuance of blended component unit revenue bonds deposited with trustees	717,135	382,747		
Beneficial interests in irrevocable split interest agreements administered by third parties	(15,348)	1,114	16,887	12,818
Noncash gifts for University-administered irrevocable split-interest agreements			14,120	35,119

See accompanying Notes to Financial Statements.

UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM AND RETIREE HEALTH BENEFIT TRUST
STATEMENTS OF PLANS' AND TRUST'S FIDUCIARY NET POSITION

	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)		UNIVERSITY OF CALIFORNIA RETIREE HEALTH BENEFIT TRUST (UCRHBT)		TOTAL UCRS AND UCRHBT	
	2019	2018	2019	2018	2019	2018
<i>At June 30, 2019 and 2018 (in thousands of dollars)</i>						
ASSETS						
Investments	\$95,456,703	\$90,872,718	\$136,248	\$128,091	\$95,592,951	\$91,000,809
Participants' interests in mutual funds	1,691,773	1,585,098			1,691,773	1,585,098
Investment of cash collateral	6,128,526	6,158,290			6,128,526	6,158,290
Participant 403(b) loans	193,766	184,388			193,766	184,388
Accounts receivable:						
Contributions from University and affiliates	168,208	113,353	30,737	6,537	198,945	119,890
Investment income	83,927	90,314			83,927	90,314
Security sales and other	1,043,318	76,615	318	200	1,043,636	76,815
Prepaid insurance premiums			8,565	17,300	8,565	17,300
Total assets	104,766,221	99,080,776	175,868	152,128	104,942,089	99,232,904
LIABILITIES						
Payable to University			18,959	18,547	18,959	18,547
Payable for securities purchased	2,132,979	1,612,039			2,132,979	1,612,039
Member withdrawals, refunds and other payables	383,595	86,664			383,595	86,664
Collateral held for securities lending	6,126,849	6,157,131			6,126,849	6,157,131
Total liabilities	8,643,423	7,855,834	18,959	18,547	8,662,382	7,874,381
NET POSITION HELD IN TRUST						
Members' defined benefit plan benefits	70,343,741	66,838,838			70,343,741	66,838,838
Participants' defined contribution plan benefits	25,779,057	24,386,104			25,779,057	24,386,104
Retiree health benefits			156,909	133,581	156,909	133,581
Total net position held in trust	\$96,122,798	\$91,224,942	\$156,909	\$133,581	\$96,279,707	\$91,358,523

See accompanying Notes to Financial Statements.

UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM AND RETIREE HEALTH BENEFIT TRUST
STATEMENTS OF CHANGES IN PLANS' AND TRUST'S FIDUCIARY NET POSITION

	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)		UNIVERSITY OF CALIFORNIA RETIREE HEALTH BENEFIT TRUST (UCRHBT)		TOTAL UCRS AND UCRHBT	
	2019	2018	2019	2018	2019	2018
<i>Years ended June 30, 2019 and 2018 (in thousands of dollars)</i>						
ADDITIONS						
Contributions:						
Members and employees	\$2,349,879	\$2,216,388			\$2,349,879	\$2,216,388
State		169,000				169,000
University	2,465,178	2,374,352	\$333,107	\$338,436	2,798,285	2,712,788
Total contributions	4,815,057	4,759,740	333,107	338,436	5,148,164	5,098,176
<i>Investment income (expense), net:</i>						
Net appreciation in fair value of investments	3,701,585	5,098,540			3,701,585	5,098,540
Interest, dividends and other investment income	1,671,203	1,508,186	3,195	1,634	1,674,398	1,509,820
Securities lending income	212,596	136,099			212,596	136,099
Securities lending fees and rebates	(160,185)	(89,025)			(160,185)	(89,025)
Total investment income, net	5,425,199	6,653,800	3,195	1,634	5,428,394	6,655,434
Interest income from contributions receivable	796	1,148			796	1,148
Total additions	10,241,052	11,414,688	336,302	340,070	10,577,354	11,754,758
DEDUCTIONS						
<i>Benefit payments:</i>						
Retirement payments	2,664,031	2,495,200			2,664,031	2,495,200
Member withdrawals	144,384	153,324			144,384	153,324
Cost-of-living adjustments	560,546	517,646			560,546	517,646
Lump sum cashouts	362,545	336,966			362,545	336,966
Preretirement survivor payments	51,011	49,329			51,011	49,329
Disability payments	30,102	30,259			30,102	30,259
Death payments	8,028	9,440			8,028	9,440
Participant withdrawals	1,454,549	1,220,081			1,454,549	1,220,081
Total benefit payments	5,275,196	4,812,245			5,275,196	4,812,245
<i>Insurance premiums:</i>						
Insured plans			112,997	167,546	112,997	167,546
Self-insured plans			184,114	131,458	184,114	131,458
Medicare Part B reimbursements			11,563	10,340	11,563	10,340
Total insurance premiums, net			308,674	309,344	308,674	309,344
<i>Other deductions:</i>						
Plan administration	54,833	29,981	4,300	3,859	59,133	33,840
Other	13,167	9,388			13,167	9,388
Total other deductions	68,000	39,369	4,300	3,859	72,300	43,228
Total deductions	5,343,196	4,851,614	312,974	313,203	5,656,170	5,164,817
Increase in net position held in trust	4,897,856	6,563,074	23,328	26,867	4,921,184	6,589,941
NET POSITION HELD IN TRUST						
Beginning of year	91,224,942	84,661,868	133,581	106,714	91,358,523	84,768,582
End of year	\$96,122,798	\$91,224,942	\$156,909	\$133,581	\$96,279,707	\$91,358,523

See accompanying Notes to Financial Statements.

Notes to Financial Statements

Years ended June 30, 2019 and 2018

ORGANIZATION

The University of California (the University) was founded in 1868 as a public, state-supported institution. The California State Constitution provides that the University shall be a public trust administered by the corporation, "The Regents of the University of California," which is vested with full powers of organization and government, subject only to such legislative control necessary to ensure the security of its funds and compliance with certain statutory and administrative requirements. The majority of the 26-member independent governing board (The Regents) is appointed by the governor and approved by the state Senate. Various University programs and capital outlay projects are funded through appropriations from the state's annual Budget Act. The University's financial statements are discretely presented in the state's basic financial statements as a component unit.

FINANCIAL REPORTING ENTITY AND SIGNIFICANT ACCOUNTING POLICIES

Financial Reporting Entity

The University's financial statements include the accounts of ten campuses, five medical centers, a statewide agricultural extension program and the operations of most student government or associated student organizations as part of the primary financial reporting entity because The Regents has certain oversight responsibilities for these organizations. Organizations that are not significant or for which the University is not financially accountable, such as booster and alumni organizations, are not included in the reporting entity. However, cash invested with the University by these organizations, along with the related liability, is included in the statement of net position. The statement of revenues, expenses and changes in net position excludes the activities associated with these organizations.

Fiat Lux Risk and Insurance Company (Fiat Lux), the University's wholly owned captive insurance company, is a blended component unit of the University. The Regents is the sole corporate and voting member of Children's Hospital & Research Center Oakland (CHRCO), a private, not-for-profit 501(c)(3) corporation. Children's Hospital & Research Center Foundation, a not-for-profit public benefit corporation, is organized and operated for the purpose of supporting CHRCO. CHRCO, combined with its foundation, is a blended component unit of the University. In addition, the financial position and operating results of certain other legally separate organizations are included in the University's financial reporting entity on a blended basis if The Regents is determined to be financially accountable for the organization. These include legally separate organizations that provide research and housing services entirely, or almost entirely, to the University or otherwise exclusively, or almost exclusively, benefit the University.

The University has eleven legally separate, tax-exempt, affiliated campus foundations, one for each campus and the Lawrence Berkeley National Laboratory (LBNL). The economic resources received or held by the foundations are entirely for the benefit of the campuses. Because of the nature and significance of their relationship with the University, including their ongoing financial support, the campus foundations are reported under the Governmental Accounting Standards Board (GASB) requirements as discretely presented component units of the University.

Specific assets and liabilities and all revenues and expenses associated with the LBNL, a major United States Department of Energy (DOE) national laboratory operated and managed by the University under contract directly with the DOE, are included in the accompanying financial statements.

The Regents has fiduciary responsibility for the University of California Retirement System (UCRS) which includes two defined benefit plans, the University of California Retirement Plan (UCRP) and the University of California Voluntary Early Retirement Incentive Plan (UC-VERIP), and four defined contribution plans in the University of California Retirement Savings Program (UCRSP), consisting of the Defined Contribution Plan (DC Plan), the Supplemental Defined Contribution Plan (SDC Plan), the Tax-Deferred 403(b) Plan (403(b) Plan) and the 457(b) Deferred Compensation Plan (457(b) Plan). As a result, the UCRS statements of plans' fiduciary net position and changes in plans' fiduciary net position are shown as a fiduciary fund in the University's financial statements.

The Regents also has fiduciary responsibility for the University of California Retiree Health Benefit Trust (UCRHBT). As a result, UCRHBT's statements of trust's fiduciary net position and changes in trust's fiduciary net position are shown as a fiduciary fund in the University's financial statements. UCRHBT allows certain University locations and affiliates, primarily campuses and medical centers that share the risks, rewards and costs of providing for retiree health benefits, the opportunity to fund such benefits on a cost-sharing basis and to accumulate funds on a tax-exempt basis under an arrangement segregated from University assets. The Regents serves as Trustee of UCRHBT and has the authority to amend or terminate the trust.

Significant Accounting Policies

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, using the economic resources measurement focus and the accrual basis of accounting. The University follows accounting principles issued by the GASB.

Government Accounting Standards Board (GASB) Statement No. 83, *Certain Asset Retirement Obligations*, was adopted by the University as of July 1, 2018. The Statement establishes guidance for determining the timing and pattern of recognition for liabilities and corresponding deferred outflow of resources related to asset retirement obligations. The Statement requires the measurement of an asset retirement obligation to be based on the best estimate of the current value of outlays expected to be incurred. The deferred outflow of resources associated with an asset retirement obligation is measured at the amount of the corresponding liability upon initial measurement and is generally recognized as an expense during the reporting periods that the asset provides service. The effects of reporting Statement No. 83 in the University's financial statements for the year ended June 30, 2018, were as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA AS OF AND FOR THE YEAR ENDED JUNE 30, 2018		
	AS PREVIOUSLY REPORTED	EFFECT OF ADOPTION OF STATEMENT NO. 83	AS RESTATED
STATEMENT OF NET POSITION			
Deferred outflows of resources	\$4,649,403	\$19,523	\$4,668,926
Other noncurrent liabilities	538,381	31,015	569,396
Noncurrent liabilities	51,546,040	31,015	51,577,055
Total liabilities	61,925,583	31,015	61,956,598
Unrestricted	(18,866,204)	(11,492)	(18,877,696)
Total net position	4,166,921	(11,492)	4,155,429
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION			
Other nonoperating revenues	\$63,610	(\$1,302)	\$62,308
Net nonoperating revenues (expenses)	5,829,517	(1,302)	5,828,215
Income before other changes in net position	1,383,921	(1,302)	1,382,619

The adoption of Statement No. 83 did not result in any adjustments to the financial statements of UCRS or UCRHBT.

GASB Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*, was implemented by the University as of July 1, 2018. This Statement defines debt for purposes of disclosures in notes to financial statements as a liability that arises from a contractual obligation to pay cash (or other assets that may be used in lieu of cash) in one or more payments to settle an amount that is fixed at the date the contractual obligation is established. This Statement requires additional disclosures related

to debt including providing additional information for direct borrowings and direct placements of debt separately from other debt. Implementation of Statement No. 88 had no impact on the financial statements.

The significant accounting policies of the University are as follows:

Cash and cash equivalents. The University and campus foundations consider all balances in demand deposit accounts to be cash. The University classifies all other highly liquid cash equivalents with original maturities less than one year as short-term investments. Certain campus foundations classify their deposits in the University's Short Term Investment Pool as a cash equivalent.

Investments. Investments are measured and reported at fair value. Securities are generally valued at the last sale price on the last business day of the fiscal year, as quoted on a recognized exchange or by utilizing an industry standard pricing service, when available. Securities for which no sale was reported as of the close of the last business day of the fiscal year are valued at the quoted bid price of a dealer who regularly trades in the security being valued. Investment in non-exchange traded debt and equity investments are valued using inputs provided by independent pricing services or by brokers/dealers who actively trade in these markets. Certain securities may be valued on a basis of a price provided by a single source.

Investments also include private equities, absolute return funds, real estate, real asset and certain corporate asset-backed securities. Private equities include venture capital partnerships, buyouts, real assets and international funds. Fair values for interests in private equity, absolute return partnerships and real estate partnerships are based on valuations provided by the general partners of the respective partnerships. The valuations are primarily based on the most recent net asset value (NAV) of the underlying investments. The NAV is reported by the external investment managers, including general partners, in accordance with their policies as described in their respective financial statements and offering memoranda. The most recent NAV is adjusted for capital calls, distributions and significant known valuation changes, if any, of its related portfolio through June 30, 2019 and 2018.

Interests in certain direct investments in real estate are estimated based upon independent appraisals. Because the private equity, real estate, real assets and absolute return partnerships, along with direct investments in real estate, are not readily marketable, their estimated value is subject to uncertainty and, therefore, may differ significantly from the value that would be used had a ready market for such investments existed. These investments are generally less liquid than other investments, and the value reported may differ from the values that would have been reported had a ready market for these investments existed.

For other investments, the University considers various factors to estimate fair value, such as the timing of the transaction, the market in which the company operates, comparable transactions, company performance and projections as well as discounted cash flow analysis. The selection of an appropriate technique may be affected by the availability and general reliability of relevant inputs. In some cases, one valuation technique may provide the best indication of fair value while in other circumstances, multiple valuation techniques may be appropriate. Furthermore, the University may review the investment's underlying portfolio as well as engage external appraisers, depending on the nature of the investment.

The University exercises due diligence in assessing the external managers' use of and adherence to fair value principles. In conjunction with these procedures, estimated fair value is determined by consideration of a wide range of factors, including market conditions, redemption terms and restrictions and risks inherent to the inputs of the external investment managers' valuation. In situations where the information provided by the external manager is deemed to not be representative of the fair value as of the measurement date, management evaluates specific features of the investment and utilizes supplemental fair value information provided by the external manager along with any relevant market data to measure the investment's fair value.

Investments in registered investment companies are valued based upon the reported NAV of those companies. Mortgage loans, held as investments, are valued on the basis of their future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. Insurance contracts are valued at contract value, plus reinvested interest, which approximates fair value.

Investments denominated in foreign currencies are translated into U.S. dollar equivalents using year-end spot foreign currency exchange rates. Purchases and sales of investments and their related income are translated at the rate of exchange on the respective transaction dates. Realized and unrealized gains and losses resulting from foreign currency changes are included in the University's statement of revenues, expenses and changes in net position.

Investment transactions are recorded on the date the securities are purchased or sold (trade date). Realized gains or losses are recorded as the difference between the proceeds from the sale and the average cost of the investment sold. Dividend income is recorded on the ex-dividend date and interest income is accrued as earned. Gifts of securities are recorded based on fair value at the date of donation.

Campus foundations may invest all or a portion of their investments in University-managed investment pools. Certain securities in these investment pools are included in the University's security lending program. Accordingly, the campus foundations' investments

in University-managed investment pools and their allocated share of the securities lending activities have been excluded from the University's financial statements and included in the Campus Foundations' column.

Derivative financial instruments. Derivative instruments are recorded at fair value. Futures contracts, foreign currency exchange contracts, stock rights and warrants, options and swaptions are valued at the settlement price on the last day of the fiscal year, as quoted on a recognized exchange or by utilizing an industry standard pricing service, when available. Financial institutions or independent advisors have estimated the fair value of the interest rate swaps and total return swaps using quoted market prices when available or discounted expected future net cash flows.

The University has entered into interest rate swap agreements to limit the exposure of its variable-rate debt to changes in market interest rates. Interest rate swap agreements involve the exchange with a counterparty of fixed- and variable-rate interest payments periodically over the life of the agreement without exchange of the underlying notional principal amounts. The net differential to be paid or received is recognized over the life of the agreements as an adjustment to interest expense. The University's counterparties are major financial institutions.

Derivatives are recorded at estimated fair value as either assets or liabilities in the statement of net position. Certain derivatives are determined to be hedging derivatives and designated as either a fair value or cash flow hedge. Under hedge accounting, changes in the fair value of hedging derivatives are considered to be deferred inflows (for hedging derivatives with positive fair values) or deferred outflows (for hedging derivatives with negative fair values).

Changes in the fair value of derivatives that are not hedging derivatives are recorded as net appreciation or depreciation of investments in the statement of revenues, expenses and changes in net position.

Participants' interests in mutual funds. Participants in the University's defined contribution retirement plans may invest their account balances in funds managed by the University's Chief Investment Officer or in certain mutual funds.

Accounts receivable, net. Accounts receivable, net of allowance for uncollectible amounts, include reimbursements due from state and federal sponsors of externally funded research, patient billings, accrued income on investments and other receivables. Other receivables include local government and private grants and contracts, educational activities and amounts due from students, employees and faculty.

Pledges receivable, net. Unconditional pledges of private gifts to the University or campus foundations, net of allowance for uncollectible amounts, are recorded as pledges receivable and revenue in the year promised at the net present value of expected cash flows. Conditional pledges, including all pledges of endowments and intentions to pledge, are recognized as receivables and revenues when the specified conditions are met.

Beneficial interests in irrevocable split-interest agreements. The beneficial interests in irrevocable split-interest agreements represent the University's and the campus foundations' right to the portion of the benefits from the irrevocable split-interest agreements that are administered by third parties and are recognized as assets and deferred inflows of resources. These are measured at fair value and are reported as other noncurrent assets in the statements of net position. Changes in the fair value of the beneficial interest assets are recognized as an increase or decrease in the related deferred inflows of resources. At the termination of the agreement, net assets received from the beneficial interests are recognized as revenues.

Notes and mortgages receivable, net. Loans to students, net of allowance for uncollectible amounts, are provided from federal student loan programs and from other University sources. Home mortgage loans, primarily to faculty, are provided from the University's Short Term Investment Pool and from other University sources. Mortgage loans provided by the Short Term Investment Pool are classified as investments and loans provided by other sources are classified as mortgages receivable in the statements of net position.

Inventories. Inventories for the campuses, consisting primarily of supplies and merchandise for resale, are valued at cost, typically determined under the weighted average method, which is not in excess of estimated net realizable value. Inventories for the medical centers consist primarily of pharmaceuticals and medical supplies which are stated on a first-in, first-out basis at the lower of cost or market.

DOE national laboratories. The University operates and manages LBNL under a contract directly with the DOE. Specific assets and liabilities and all revenues and expenses associated with LBNL are included in the financial statements. Other assets, such as cash, property and equipment and other liabilities of LBNL are owned by the United States government rather than the University and, therefore, are not included in the statement of net position. The statement of cash flows excludes the cash flows associated with LBNL other than reimbursements, primarily related to pension and health benefits, since all other cash transactions are recorded in bank accounts owned by the DOE.

The University is a member in three separate joint ventures that operate and manage two other DOE laboratories under contracts directly with the DOE. Lawrence Livermore National Security, LLC (LLNS) operates and manages Lawrence Livermore National Laboratory (LLNL). Triad National Security, LLC (Triad) commenced operating and managing Los Alamos National Laboratory (LANL) effective November 1, 2018. Prior to November 1, 2018, LANL was managed by Los Alamos National Security, LLC (LANS). The University's investments in Triad, LLNS and LANS are accounted for using the equity method. Accordingly, the University's statement of net position includes its equity interest in Triad, LANS and LLNS, adjusted for the equity in undistributed earnings or losses and the statement of revenues, expenses and changes in net position includes its equity in the current earnings or losses of LANS and LLNS.

The DOE is financially responsible for substantially all of the current and future costs incurred at any of the national laboratories, including pension and retiree health benefit costs. Accordingly, to the extent there is a liability on the University's statement of net position for pension or retiree health obligations related to these laboratories, the University records a receivable from the DOE.

Capital assets, net. Land, infrastructure, buildings and improvements, intangible assets, equipment, libraries, collections and special collections are recorded at cost at the date of acquisition, or estimated acquisition value at the date of donation in the case of gifts. Estimates of acquisition value involve assumptions and estimation methods that are uncertain and, therefore, the estimates could differ from actual value. Intangible assets include easements, land rights, trademarks, patents and other similar arrangements. Capital leases are recorded at the estimated present value of future minimum lease payments. Significant additions, replacements, major repairs and renovations to infrastructure and buildings are generally capitalized if the cost exceeds \$35,000 and if they have a useful life of more than one year. Minor renovations are charged to operations. Equipment with a cost in excess of \$5,000 and a useful life of more than one year is capitalized. Incremental costs, including salaries and employee benefits, directly related to the acquisition, development and installation of major software projects are included in the cost of the capital assets. All costs of land, library collections and special collections are capitalized.

Depreciation is calculated using the straight-line method over the estimated economic life of the asset. Equipment under capital leases is amortized over the estimated useful life of the equipment. Leasehold improvements are amortized using the straight-line method over the shorter of the life of the applicable lease or the economic life of the asset.

Estimated economic lives are generally as follows:

	YEARS
Infrastructure	25
Buildings and improvements	15-33
Equipment	2-20
Computer software	3-7
Intangible assets	2-indefinite
Library books and collections	15

Capital assets acquired through federal grants and contracts where the federal government retains a reversionary interest are also capitalized and depreciated.

Inexhaustible capital assets, such as land or special collections that are protected, preserved and held for public exhibition, education or research, including art, museum, scientific and rare book collections are not depreciated.

Interest on borrowings to finance facilities is capitalized during construction, net of any investment income earned on tax-exempt borrowings during the temporary investment of project-related borrowings.

Service concession arrangements. The University has entered into service concession arrangements with third parties for parking, student housing and certain other faculty and student services. Under these arrangements, the University enters into ground leases with third parties at minimal or no cost, and gives the third party the right to construct, operate and maintain a facility, primarily for the benefit of students and faculty at competitive rates. Rate increases for use of the facilities are subject to certain constraints and ownership of the facilities reverts to the University upon expiration of the ground lease. The facilities are reported as capital assets by the University when placed in service, and a corresponding deferred inflow of resources is reported. The University has not provided guarantees on financing obtained by the third parties under these arrangements.

Unearned revenue. Unearned revenue primarily includes amounts received from grant and contract sponsors that have not been earned under the terms of the agreement and other revenue billed in advance of the event, such as student tuition and fees for housing and dining services.

Funds held for others. Funds held for others result from the University or the campus foundations acting as an agent, or fiduciary, on behalf of organizations that are not significant or financially accountable to the University or campus foundations.

Federal refundable loans. Certain loans to students are administered by the University with funding primarily supported by the federal government. The University's statement of net position includes both the notes receivable and the related federal refundable loan liability representing federal capital contributions owed upon termination of the program.

Bond premium. The bond premium received in the issuance of long-term debt is amortized as a reduction to interest expense over the term of the related long-term debt.

Self-insurance programs. The University is self-insured or insured through a wholly owned captive insurance company for medical malpractice, workers' compensation, employee health care and general liability claims. These risks are subject to various claim and aggregate limits, with excess liability coverage provided by an independent insurer. Liabilities are recorded when it is probable a loss has occurred and the amount of the loss can be reasonably estimated. These losses include an estimate for claims that have been incurred, but not reported. The estimated liabilities are based upon an independent actuarial determination of the present value of the anticipated future payments. Settlements did not exceed self-insured or supplementally insured coverage for any program in the past three fiscal years.

Obligations under life income agreements. Obligations under life income agreements represent trusts with living income beneficiaries where the University has a residual interest. The investments associated with these agreements are recorded at fair value. The discounted present value of the income beneficiary interest is reported as a liability in the statement of net position. Gifts subject to such agreements administered by the University are recorded as deferred inflows of resources, net of the income beneficiary share, at the date of the gift. Actuarial gains and losses are included in deferred inflows of resources in the statement of net position. At the termination of the agreement, the University's residual interest is recorded as gift revenue in the statement of revenues, expenses and changes in net position.

Pollution remediation obligations. Upon an obligating event, the University estimates the components of any expected pollution remediation costs and recoveries from third parties. The costs, estimated using the expected cash flow technique, are accrued as a liability. Pollution remediation liabilities generally involve groundwater, soil and sediment contamination at certain sites where state and other regulatory agencies have indicated that the University is among the responsible parties. The liabilities are reviewed annually and may increase or decrease the cost of recovery from third parties, if any, as a result of additional information that refines the estimates, or from payments made from revenue sources that support the activity. There were no expected recoveries at June 30, 2019 and 2018 reducing the pollution remediation liability.

Asset retirement obligations. Upon an obligating event, the University records the costs of any expected tangible capital asset retirement obligations using the best estimate of the current value of outlays expected to be incurred. The liabilities are reviewed annually and may change as a result of additional information that refines the estimates. Actual asset retirement obligation costs may vary from these estimates as a result of changes in assumptions such as asset retirement dates, regulatory requirements, technology and costs of labor, materials and equipment. The estimated remaining useful lives of these assets range from 2 to 28 years.

Deferred outflows of resources and deferred inflows of resources. Deferred outflows of resources and deferred inflows of resources represent a consumption and acquisition of net position that apply to a future period, respectively. The University classifies gains on refunding of debt, increases in the fair value of the hedging derivatives, payments received or to be received from service concession arrangements and changes in irrevocable split-interest agreements as deferred inflows of resources. The University classifies losses on refunding of debt, decreases in the fair value of hedging derivatives and certain asset retirement obligations as deferred outflows of resources. Gains or losses on refunding of debt are amortized as a component of interest expense over the remaining life of the old debt, or the new debt, whichever is shorter. Asset retirement obligations are recognized over the remaining useful life of the related asset. Revenues from split interest agreements are recognized when the resources become available to spend.

Changes in the net pension and net retiree health liabilities not included in expense are reported as deferred outflows of resources or deferred inflows of resources. Employer contributions subsequent to the measurement date of the net pension and retiree health liabilities are reported as deferred outflows of resources.

Net position. Net position is required to be classified for accounting and reporting purposes into the following categories:

Net investment in capital assets. This category includes all of the University's capital assets, net of accumulated depreciation, reduced by outstanding debt attributable to the acquisition, construction or improvement of those assets.

Restricted. The University and campus foundations classify the net position resulting from transactions with purpose or time restrictions as restricted net position until the specific resources are used for the required purpose or for as long as the provider requires the resources to remain intact.

Nonexpendable. The net position subject to externally imposed restrictions, which must be retained in perpetuity by the University or campus foundations, is classified as nonexpendable net position. This includes the University and campus foundation permanent endowment funds.

Also included in nonexpendable net position are minority interests, which include the net position of legally separate organizations attributable to other participants.

Expendable. The net position whose use by the University or campus foundations is subject to externally imposed restrictions that can be fulfilled by actions of the University or campus foundations pursuant to those restrictions or that expire by the passage of time is classified as expendable net position.

Unrestricted. The net position that is not subject to externally imposed restrictions governing its use is classified as unrestricted net position. The University's unrestricted net position may be designated for specific purposes by management or The Regents. The campus foundations' unrestricted net position may be designated for specific purposes by their Boards of Trustees. Substantially all of the University's unrestricted net position is allocated for academic and research initiatives or programs, for capital programs or for other purposes.

Restricted or unrestricted resources are spent based upon a variety of factors, including funding restrictions, consideration of prior and future revenue sources, the type of expense incurred, the University's budgetary policies surrounding the various revenue sources or whether the expense is a recurring cost. Unrestricted net position is negative due primarily to liabilities for pension and retiree health benefits exceeding University assets available to pay such obligations.

Revenues and expenses. Operating revenues of the University include receipts from student tuition and fees, grants and contracts for specific operating activities and sales and services from medical centers, educational activities and auxiliary enterprises. Operating expenses incurred in conducting the programs and services of the University are presented in the statement of revenues, expenses and changes in net position as operating activities. The University's equity in current earnings or losses of LANS and LLNS is also an operating transaction.

Certain significant revenues relied upon and budgeted for fundamental operational support of the core instructional mission of the University are mandated by the GASB to be recorded as nonoperating revenues, including state educational appropriations, certain federal grants for student financial aid, private gifts and investment income, since the GASB does not consider them to be related to the principal operating activities of the University.

Campus foundations are established to financially support the University. Private gifts to campus foundations are recognized as operating revenues since, in contrast to the University, such contributions are fundamental to the core mission of the campus foundations. Foundation grants to the University are recognized as operating expenses by the foundations. Private gift or capital gift revenues associated with campus foundation grants to the University are recorded by the University as gifts when the foundations transfer the gifts to the University.

Nonoperating revenues and expenses include state educational appropriations, state financing appropriations, state hospital fee grants, Build America Bond federal interest subsidies, Federal Pell Grants, private gifts for other than capital purposes, investment income, net appreciation (or depreciation) in the fair value of investments, interest expense and the gain (loss) on the disposal of capital assets.

State capital appropriations, capital gifts and grants and gifts for permanent endowment purposes are classified as other changes in net position.

Student tuition and fees. Substantially all student tuition and fees provide for the current operations of the University. A small portion of the student fees, reported as capital gifts and grants, is required for debt service associated with student union and recreational centers.

The University recognizes scholarship allowances as the difference between the stated charge for tuition and fees, housing and dining charges, recreational center and other fees, and the amount that is paid by the student and third parties on behalf of the student. Payments of financial aid made directly to students are classified as scholarship and fellowship expenses.

Scholarship allowances are netted against student tuition and fees in the statement of revenues, expenses and changes in net position for the years ended June 30 as follows:

<i>(in thousands of dollars)</i>	2019	2018
Student tuition and fees	\$1,231,856	\$1,250,300
Auxiliary enterprises	232,157	206,012
Other operating revenues	17,225	30,602
Scholarship allowances	\$1,481,238	\$1,486,914

State appropriations. The state of California provides appropriations to the University on an annual basis. State educational appropriations are recognized as nonoperating revenue; however, the related expenses for educational, retirement or other specific operating purposes are reported as operating expenses. State appropriations for capital projects are recorded as revenue under other changes in net position when the related expenditures are incurred. Special state appropriations for AIDS, tobacco and breast cancer research are reported as grant operating revenue.

Grant and contract revenue. The University receives grant and contract revenue from governmental and private sources. The University recognizes revenue associated with the direct costs of sponsored programs as the related expenditures are incurred. Recovery of facilities and administrative costs of federally sponsored programs is at cost reimbursement rates negotiated with the University's federal cognizant agency, the U.S. Department of Health and Human Services. For the year ended June 30, 2019, the facilities and administrative cost recovery totaled \$1.2 billion, which consisted of \$829.0 million from federally sponsored programs and \$348.0 million from other sponsors. For the year ended June 30, 2018, the facilities and administrative cost recovery totaled \$1.1 billion, which consisted of \$782.0 million from federally sponsored programs and \$333.8 million from other sponsors.

Medical center revenue. Medical center revenue is reported at the estimated net realizable amounts from patients and third-party payors, including Medicare, Medi-Cal and others, for services rendered, as well as estimated retroactive adjustments under reimbursement agreements with third-party payors. Laws and regulations governing Medicare and Medi-Cal are complex and subject to interpretation. Retroactive adjustments are accrued on an estimated basis in the period the related services are rendered and adjusted in future periods as final settlements are determined. It is reasonably possible that estimated amounts accrued could change significantly based upon settlement, or as additional information becomes available.

Net pension liability. The University records net pension liability equal to the net pension liability for its defined benefit plans. The net pension liability is measured as the total pension liability, less the amount of the pension plans' fiduciary net positions. The fiduciary net position and changes in net position of the defined benefit plans have been measured consistent with the accounting policies used by the plans. The total pension liability is determined based upon discounting projected benefit payments based on the benefit terms and legal agreements existing at the pension plan's fiscal year end. Projected benefit payments are discounted using a single rate that reflects the expected rate of return on investments, to the extent that plan assets are available to pay benefits, and a tax-exempt, high-quality municipal bond rate when plan assets are not available.

Pension expense is recognized for benefits earned during the period, interest on the unfunded liability and changes in benefit terms. The differences between expected and actual experience and changes in assumptions about future economic or demographic factors are reported as deferred inflows or outflows and are recognized over the average expected remaining service period for employees eligible for pension benefits. The differences between expected and actual returns are reported as deferred inflows or outflows and are recognized over five years.

Both current employees and retirees at LBNL participate in UCRP. The University makes contributions to UCRP for LBNL employees based upon rates authorized by The Regents and is reimbursed by the DOE. The University also makes contributions to UCRP for LANL and LLNL retirees and terminated vested members, whose benefits were retained in UCRP at the time the joint ventures were formed. The University records a receivable for the net pension liability that is expected to be collected from the DOE. The University deposits funds in UCRP when the DOE makes payments for these contributions. The contributions from the DOE and deposits into UCRP on behalf of DOE are included as DOE laboratory revenue in the statement of revenues, expenses and changes in net position.

Retiree health benefits and liability. The University's net retiree health benefits liability is measured as the total retiree health benefits liability, less the amount of the University of California Retiree Health Benefit Trust's (UCRHBT) fiduciary net position. The fiduciary net position and changes in net position of UCRHBT have been measured consistent with the accounting policies used by the trust. The total retiree health benefits liability is determined based upon discounting projected benefit payments based on the benefit terms and legal agreements existing at the health benefit trust's fiscal year end. Projected benefit payments are discounted using a single rate that reflects the expected rate of return on investments, to the extent that plan assets are available to pay benefits, and a tax-exempt, high-quality municipal bond rate when plan assets are not available.

Expense for retiree health benefits is recognized for benefits earned during the period, interest on the unfunded liability and changes in benefit terms. The differences between expected and actual experience and changes in assumptions about future economic or demographic factors are reported as deferred inflows or outflows and are recognized over the average expected remaining service period for employees eligible for retiree health benefits. The differences between expected and actual returns are reported as deferred inflows or outflows and are recognized over five years.

LBNL participates in the University's retiree health plans. The net retiree health benefits liability for LBNL is determined independently from the University's campuses and medical centers. Retiree health benefits expense for LBNL is included with the DOE laboratory expense in the statement of revenues, expenses and changes in net position. The contributions from the DOE are included as DOE laboratory revenue in the statement of revenues, expenses and changes in net position.

The University records a receivable from the DOE for the DOE's portion of the University's net retiree health benefits liability attributable to LBNL. The University does not have any retiree health benefits liability for LANL or LLNL retiree health benefit costs since they do not participate in the University's retiree health plans.

Campus and medical center contributions toward retiree health costs made to UCRHBT, the University's LBNL-related payments made directly to health care insurers and administrators and the corresponding reimbursements from the DOE, are shown as operating activities in the statement of cash flows. Cash flows resulting from retiree health contributions from retirees are shown as noncapital financing activities in the statement of cash flows.

University of California Retiree Health Benefit Trust. UCRHBT receives the University's contributions toward retiree health benefits from campuses, medical centers and University affiliates. The University receives retiree health contributions from University affiliates and campus and medical center retirees that are deducted from their UCRP benefit payments and then remitted to UCRHBT.

The University acts as a third-party administrator on behalf of UCRHBT and pays health care insurers and administrators amounts currently due under the University's retiree health benefit plans for retirees. UCRHBT reimburses the University for these amounts.

LBNL does not participate in UCRHBT; therefore, the DOE has no interest in its assets.

Compensated absences. The University accrues annual leave, including employer-related costs, for employees at rates based upon length of service and job classification and compensatory time based upon job classification and hours worked.

Endowment spending. Under provisions of California law, the Uniform Prudent Management of Institutional Funds Act allows for investment income, as well as a portion of realized and unrealized gains, to be expended for the operational requirements of University programs.

Tax exemption. The University is recognized as a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code (IRC), except for tax on unrelated business income under IRC Section 511. The University is also exempt from federal income tax under IRC Section 115(a) as a state institution. In addition, the University is exempt from state income taxes imposed under the California Revenue and Taxation Code. UCRS plans are qualified under IRC Section 401(a) and the related trusts are tax-exempt under Section 501(c)(3). The campus foundations are also qualified for tax exemption under IRC Section 501(c)(3). CHRCO and its component unit, the Children's Hospital and Research Center Foundation, are qualified for exemption under IRC Section 501(c)(3). Income received by UCRHBT is tax-exempt under IRC Section 115(a).

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 expenditures during the reporting period. Although management believes the estimates and assumptions are reasonable, they are based upon information available at the time the estimate or judgment is made and actual amounts could differ from those estimates.

New accounting pronouncements. In January 2017, the GASB issued Statement No. 84, *Fiduciary Activities*, effective for the University's fiscal year beginning July 1, 2019. This Statement establishes criteria for identifying fiduciary activities of all state and local governments. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. This Statement describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds and (4) custodial funds. Custodial funds generally should report fiduciary activities that are not held in a trust or an equivalent arrangement that meets specific criteria. The University is evaluating the effect Statement No. 84 will have on its financial statements.

In June 2017, the GASB issued Statement No. 87, *Leases*, effective for the University's fiscal year beginning July 1, 2020. This Statement establishes a single approach to accounting for and reporting leases based on the principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. Limited exceptions to the single-approach guidance are provided for short-term leases, defined as lasting a maximum of twelve months at inception, including any options to extend, financed purchases, leases of assets that are investments and certain regulated leases. The University is evaluating the effect Statement No. 87 will have on its financial statements.

In June 2018, the GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*, effective prospectively for the University's fiscal year beginning July 1, 2020. The Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred. As a result, interest costs would not be capitalized as part of the asset's historical cost. For construction in progress, interest cost incurred after applying this Statement will not be capitalized. The University expects interest expense to increase upon implementation of Statement No. 89.

In August 2018, the GASB issued Statement No. 90, *Majority Equity Interests — An Amendment of GASB Statements No. 14 and No. 61*, effective for the University's fiscal year beginning July 1, 2019. The Statement defines a majority equity interest in a legally separate organization and clarifies the accounting and financial reporting for majority equity interests, classified as either investments or component units, in the financial statements. The University is evaluating the effect that Statement No. 90 will have on its financial statements.

In May 2019, the GASB issued Statement No. 91, *Conduit Debt Obligations*, effective for the University's fiscal year beginning July 1, 2021. The Statement defines a conduit debt obligation and clarifies the accounting and financial reporting for conduit debt obligations with additional or voluntary commitments by issuers. The University is evaluating the effect that Statement No. 91 will have on its financial statements.

1. CASH AND CASH EQUIVALENTS

The University maintains centralized management for substantially all of its cash and cash equivalents. Cash in demand deposit accounts is minimized by sweeping available cash balances into investment accounts on a daily basis.

Under University policy, deposits are only held at financial institutions that maintain an issuer rating on long-term debt of A3 or higher by Moody's, A- or higher by Standard & Poor's or an Asset Peer Group rating of 65 or higher as defined by Sheshunoff Bank Rating Reports. At June 30, 2019 and 2018, the carrying amount of the University's demand deposits, generally held in five nationally recognized banking institutions, was \$143.1 million and \$249.5 million, respectively, compared to bank balances of \$93.6 million and \$169.7 million, respectively. Deposits in transit and cash awaiting investment are the primary differences. The University's deposits are uninsured and uncollateralized except for bank balances insured by the Federal Deposit Insurance Corporation (FDIC) up to applicable statutory limits.

The University does not have significant exposure to foreign currency risk in demand deposit accounts. Accounts held in foreign countries maintain minimum operating balances with the intent to reduce potential foreign exchange risk while providing an adequate level of liquidity to meet the obligations of the academic programs established abroad. The equivalent U.S. dollar balances required to support research groups and education abroad programs in foreign countries was \$0.2 million at June 30, 2019 and \$4.4 million at June 30, 2018.

The carrying amount of the campus foundations' cash and cash equivalents at June 30, 2019 and 2018 was \$458.6 million and \$447.4 million, respectively, compared to bank balances of \$88.0 million and \$58.0 million, respectively. Deposits in transit and cash awaiting investment are the primary differences. Included in bank balances are deposits in the University's Short Term Investment Pool of \$366.9 million at June 30, 2019 and \$387.6 million at June 30, 2018, with the remaining uncollateralized bank balances insured by the Federal Deposit Insurance Corporation (FDIC) up to applicable statutory limits. Uncollateralized bank balances include \$20.8 million and \$8.7 million in excess of the FDIC limits at June 30, 2019 and 2018, respectively. The campus foundations do not have exposure to foreign currency risk in their cash and cash equivalents.

2. INVESTMENTS

The Regents, as the governing Board, is responsible for the oversight of the University's, UCRS' and UCRHBT's investments and establishes an investment policy, which is carried out by the Chief Investment Officer. These investments are associated with the Short Term Investment Pool (STIP), Total Return Investment Pool (TRIP), Blue and Gold Pool (BGP), General Endowment Pool (GEP), UCRS, UCRHBT and other investment pools managed by the Chief Investment Officer, or are separately invested. Pursuant to The Regents' policies on campus foundations, the Board of Trustees for each campus foundation may determine that all or a portion of their investments will be managed by the Chief Investment Officer. Asset and Risk Allocation Policy guidelines are provided to the campus foundations by the Investments Committee of The Regents.

STIP allows participants to maximize the returns on their short-term cash balances by taking advantage of the economies of scale of investing in a large pool with a broad range of maturities and is managed to maximize current earned income. Cash to provide for payroll, construction expenditures and other operating expenses for campuses and medical centers is invested in STIP. The available cash in UCRS or endowment investment pools awaiting investment, or cash for administrative expenses, is also invested in STIP.

Investments authorized by The Regents for STIP include fixed-income securities with a maximum maturity of five and one-half years. In addition, for STIP, The Regents has also authorized loans, primarily to faculty members residing in California, under the University's Mortgage Origination Program with terms of up to 40 years.

TRIP allows participants the opportunity to maximize the return on their intermediate-term working capital by taking advantage of the economies of scale of investing in a large pool across a broad range of asset classes. TRIP is managed to a total return objective and is intended to supplement STIP. Investments authorized by The Regents for TRIP include a diversified portfolio of equity, fixed income and alternative investments.

BGP is an investment pool established by The Regents and is available to the University and its related entities. The objective of BGP is to provide a low cost, liquid, diversified investment vehicle to invest long-term excess reserves to earn a higher return than would otherwise be expected from STIP and TRIP. To achieve liquidity, transparency and minimal expense, a passive investment strategy in equities and bonds is used.

GEP is an investment pool in which a large number of individual endowments participate in order to benefit from diversification and economies of scale. GEP is a balanced portfolio and the primary investment vehicle for endowed gift funds. Where donor agreements place constraints on allowable investments, assets associated with endowments are invested in accordance with the terms of the agreements.

Other investment pools primarily facilitate annuity and life income arrangements. Separate investments are those that cannot be pooled due to investment restrictions or income requirements.

Investments authorized by The Regents for GEP, UCRS, other investment pools and separate investments include equity securities, fixed-income securities and certain other asset classes. The equity portion of the investment portfolios include both domestic and foreign common and preferred stocks which may be included in actively or passively managed strategies, along with exposure to private equities. The University's investment portfolios may include foreign currency-denominated equity securities. The fixed-income portion of the investment portfolios may include both domestic and foreign securities, along with certain securitized investments, including mortgage-backed and asset-backed securities. Fixed-income investment guidelines permit the use of futures and options on fixed-income instruments in the ongoing management of the portfolios. Real estate investments are authorized for all pools except for STIP. Absolute return strategies, which may incorporate short sales, plus derivative positions to implement or hedge an investment position, are also authorized for all pools except for STIP.

Derivative instruments, including futures, forward contracts, options and swap contracts are authorized for portfolio rebalancing in accordance with The Regents' asset allocation policy and as substitutes for physical securities. Derivatives are not used for speculative purposes.

The Regents has also authorized certain employee account balances in defined contribution plans included as part of UCRS' investments to be invested in mutual funds. The participants' interests in mutual funds are not managed by the Chief Investment Officer and totaled \$1.7 billion and \$1.6 billion at June 30, 2019 and 2018, respectively.

Investments authorized by The Regents for the UCRHBT are restricted to a portfolio of high-quality money market instruments in a commingled fund that is managed externally. The average credit quality of the portfolio is A-1/P-1 with an average maturity of 33 days and 17 days at June 30, 2019 and 2018, respectively. The fair values of UCRHBT's investment in this portfolio were \$136.2 million and \$128.1 million at June 30, 2019 and 2018, respectively. These are measured at net asset value as of June 30, 2019 and 2018, respectively.

The composition of investments, by investment type at June 30 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
<i>Equity securities:</i>						
Domestic	\$3,958,908	\$2,981,893	\$272,859	\$258,339	\$24,837,610	\$19,851,801
Foreign	2,338,504	2,575,283	28,130	23,255	14,770,785	13,473,111
Equity securities	6,297,412	5,557,176	300,989	281,594	39,608,395	33,324,912
<i>Fixed- or variable-income securities:</i>						
U.S. government-guaranteed:						
U.S. Treasury bills, notes and bonds	2,554,434	2,726,553	347,724	375,054	1,531,732	1,896,840
U.S. Treasury strips	781,608	538,903	241	212	1,973,596	1,464,655
U.S. TIPS	30,912	124,756			3,142,771	2,512,561
U.S. government-backed securities				15		
U.S. government-backed mortgage-backed securities	6,881	9,358	9,557	11,386	5,927	7,214
U.S. government-guaranteed	3,373,835	3,399,570	357,522	386,667	6,654,026	5,881,270
<i>Other U.S. dollar-denominated:</i>						
Corporate bonds	3,521,045	3,776,818	25,838	28,768	4,316,281	4,490,273
Commercial paper	1,962,132	4,248,162			421,635	2,012,845
U.S. agencies	1,856,385	1,917,652	3,762		4,006,178	4,035,120
U.S. agencies - asset-backed securities	680,334	687,546	15,711	36,588	2,796,820	2,953,252
Corporate - asset-backed securities	802,323	621,817	22,093	59,824	1,583,412	1,639,967
Supranational/foreign	1,381,686	1,422,310	369	4,207	2,824,693	2,804,258
Other	26,491	116,497	181	805	28,753	175,279
Other U.S. dollar-denominated	10,230,396	12,790,802	67,954	130,192	15,977,772	18,110,994
<i>Foreign currency-denominated:</i>						
Corporate	98	113			536	576
Government/sovereign			1,430			
Foreign currency-denominated	98	113	1,430		536	576
<i>Commingled funds:</i>						
Absolute return funds	4,313,573	3,957,859	2,531,318	2,589,828	4,716,290	4,475,682
Non-U.S. equity funds	2,385,721	2,172,821	1,133,275	1,031,849	8,198,932	8,958,098
Private equity	2,554,119	1,701,059	1,132,506	954,534	4,458,873	3,178,252
Money market funds	845,562	681,658	1,285,848	1,060,958	5,664,235	5,817,621
U.S. equity funds	74,076	193,547	914,398	771,075	1,137,570	4,069,653
Real estate investment trusts	204,527	310,119	174,974	162,111	2,454,783	1,475,420
Real assets	627,023	381,533			1,530,725	1,146,296
U.S. bond funds	804,055	402,336	136,634	146,316	1,131,443	1,076,196
Non-U.S. bond funds	144,613	135,862	20,727	21,697	14	14
Balanced funds	243,152	234,375	1,519,333	1,330,673		
Commingled funds	12,196,421	10,171,169	8,849,013	8,069,041	29,292,865	30,197,232
Investment derivatives	545	(5,520)	(388)	(355)	6,485	(19,142)
Publicly traded real estate investment trusts	265,160	224,036			2,092,822	1,711,685
Mortgage loans	766,748	510,765				
Real estate	1,035,477	428,590	143,713	135,731	1,823,802	1,665,191
Other investments	121,256	27,701	258,156	236,710		
Campus foundations' investments with the University	(2,892,444)	(2,611,651)				
UCRS investment in the STIP	(2,687,523)	(3,123,754)				
Total investments	28,707,381	27,368,997	9,978,389	9,239,580	\$95,456,703	\$90,872,718
Less: Current portion	(4,923,749)	(4,890,075)	(875,652)	(857,844)		
Noncurrent portion	\$23,783,632	\$22,478,922	\$9,102,737	\$8,381,736		

Investment Risk Factors

There are many factors that can affect the value of investments. Some, such as custodial credit risk, concentration of credit risk and foreign currency risk, may affect both equity and fixed-income securities. Equity securities respond to such factors as economic conditions, individual company earnings performance and market liquidity, while fixed-income securities are particularly sensitive to credit risks and changes in interest rates. Alternative investment strategies and their underlying assets and rights are subject to an array of economic and market vagaries that can limit or erode value.

Credit Risk

Fixed-income securities are subject to credit risk, which is the chance that a bond issuer will fail to pay interest or principal in a timely manner, or the possibility that negative perceptions of the issuer's ability to make these payments will cause security prices to decline. These circumstances may arise due to a variety of factors such as financial weakness, bankruptcy, litigation and/or adverse political developments.

A bond's credit quality is an assessment of the issuer's ability to pay interest on the bond and, ultimately, to pay the principal. Credit quality is evaluated by one of the independent bond rating agencies, for example Moody's Investors Service (Moody's) or Standard and Poor's (S&P). The lower the rating, the greater the chance, in the rating agency's opinion, that the bond issuer will default, or fail to meet its payment obligations. Generally, the lower a bond's credit rating, the higher its yield should be to compensate for the additional risk.

Certain fixed-income securities, primarily obligations of the U.S. government or those explicitly guaranteed by the U.S. government, are considered to have minimal credit risk. Asset-backed securities are debt obligations that represent claims to the cash flows from pools of commercial, mortgage, credit card or student loans. Mortgage-backed securities issued by Ginnie Mae are backed by the full faith and credit of the U.S. government.

The investment guidelines for STIP recognize that a limited amount of credit risk, properly managed and monitored, is prudent and provides incremental risk-adjusted return over its benchmark (the benchmark for STIP is a weighted average of the two-year Treasury income note and Citigroup 3-month Treasury bill).

The University recognizes that credit risk is appropriate in balanced investment pools such as TRIP, BGP, UCRS and GEP by virtue of the benchmarks chosen for the fixed-income portion of those pools.

The core fixed-income benchmark for UCRS, BGP, GEP and TRIP is the Barclays Capital U.S. Aggregate Bond Index, comprised of 25.1 percent corporate bonds and 29.7 percent mortgage/asset-backed bonds, all of which carry some degree of credit risk. The remaining 45.1 percent is government issued bonds.

Credit risk is managed primarily by diversifying across issuers. The University monitors and reviews their exposures on an ongoing basis and will maintain a high quality portfolio within the investment guidelines set forth by the Office of the Chief Investment Officer.

The credit risk profile for fixed- or variable-income securities at June 30 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
<i>Fixed- or variable-income securities:</i>						
U.S. government-guaranteed	\$3,373,835	\$3,399,570	\$357,522	\$386,667	\$6,654,026	\$5,881,270
<i>Other U.S. dollar-denominated:</i>						
AAA	772,543	686,606	14,996	20,817	1,682,354	1,798,100
AA	1,812,421	1,866,014	16,926	24,932	2,980,968	3,115,678
A	1,740,713	1,712,026	6,244	7,045	1,265,126	1,472,752
BBB	1,889,585	2,067,115	18,883	23,815	2,270,637	2,587,735
BB	387,960	461,019		592	1,356,147	1,176,085
B	244,231	302,023		1,242	1,282,856	1,069,331
CCC or below	28,966	42,513		19,629	196,655	200,111
Not rated	3,353,977	5,653,486	10,905	32,120	4,943,029	6,691,202
<i>Foreign currency-denominated:</i>						
BBB			1,430			
B		113			536	576
CCC or below	98					
<i>Commingled funds:</i>						
U.S. bond funds: Not rated	804,055	402,336	136,634	146,316	1,131,443	1,076,196
Non-U.S. bond funds: Not rated	144,613	135,862	20,727	21,697	14	14
Money market funds: Not rated	845,562	681,658	1,285,848	1,060,958	5,664,235	5,817,621
Mortgage loans: Not rated	766,748	510,765				
Investment derivatives: Not rated			(388)	(355)		

Custodial Credit Risk

Custodial credit risk is the risk that in the event of the failure of the custodian, the investments may not be returned.

Substantially all of the University's, campus foundations' and UCRS' securities are registered in the University's name by the custodial bank as an agent for the University. Other types of investments represent ownership interests that do not exist in physical or book-entry form. As a result, custodial credit risk for such investments is remote.

Concentration of Credit Risk

Concentration of credit risk is the risk associated with a lack of diversification, such as having substantial investments in a few individual issuers, thereby exposing the organization to greater risks resulting from adverse economic, political, regulatory, geographic or credit developments.

The U.S. and non-U.S. equity portions of the University and UCRS portfolios may be managed either passively or actively. For the portions managed passively, the concentration of individual securities is similar to their concentration in the benchmark. While some securities have a larger representation in the benchmark than others, the University considers passive management results in an absence of concentration of credit risk. For the portions managed actively, asset class guidelines do not specifically address concentration risk, but do state that the equity asset class, in the aggregate, will be appropriately diversified to control overall risk and will exhibit portfolio characteristics similar to the asset class benchmark (including concentration of credit risk). Concentration risk for individual portfolios is monitored relative to their individual benchmarks and agreed-upon risk parameters in their guidelines.

Each campus foundation may have its own individual investment policy designed to limit exposure to a concentration of credit risk. Securities issued or explicitly guaranteed by the U.S. government, mutual funds, external investment pools, other investment pools or investments that are invested by the University for the campus foundations are not subject to concentration of credit risk. Most of the campus foundations that hold other types of investments have policies to limit the exposure to an individual issuer.

At June 30, 2019 and 2018, no single issuer comprised more than five percent or more of investments held by the University, campus foundations and UCRS.

Interest Rate Risk

Interest rate risk is the risk that the value of fixed-income securities will decline because of changing interest rates. The prices of fixed-income securities with a longer time to maturity, measured by effective duration, tend to be more sensitive to changes in interest rates and, therefore, more volatile than those with shorter durations. Effective duration is the approximate change in price of a security resulting from a 100-basis-point (1-percentage-point) change in the level of interest rates. It is not a measure of time.

Interest rate risk for STIP is managed by constraining the maturity of all individual securities to be less than five and one-half years. There is no restriction on weighted average maturity of the portfolio as it is managed relative to the liquidity demands of the investors. The nature and maturity of individual securities in STIP allow for the use of weighted average maturity as an effective risk management tool, rather than the more complex measure, effective duration.

The portfolio guidelines constrain the potential price movement due to interest rate changes of the portfolio being similar to that of the benchmark. There are similar restrictions for the high-yield and emerging market debt portfolios relative to their benchmarks.

The effective durations for fixed- or variable-income securities at June 30 are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
Fixed- or variable-income securities:						
U.S. government-guaranteed:						
U.S. Treasury bills, notes and bonds	1.7	2.4	2.7	2.9	2.9	2.7
U.S. Treasury strips	8.4	9.2	15.5	16.5	11.0	10.3
U.S. TIPS	3.9	5.9			6.1	6.1
U.S. government-backed securities				1.4		
U.S. government-backed mortgage-backed securities	0.7	1.6	0.7	2.9	2.2	2.9
Other U.S. dollar-denominated:						
Corporate bonds	3.5	3.5	2.5	2.7	5.3	5.7
U.S. agencies	1.0	2.0			1.6	2.0
U.S. agencies - asset-backed securities	2.8	4.2	1.6	5.0	2.5	3.9
Corporate - asset-backed securities	3.3	3.9	0.8	2.2	2.6	2.6
Supranational/foreign	3.0	3.6	2.6	3.4	5.7	5.2
Other	9.2	8.5		5.3	15.9	15.6
Foreign currency-denominated:						
Corporate	2.6	0.6			2.6	0.6
Government/sovereign			3.4			
Commingled funds:						
U.S. bond funds	4.1	2.4	4.6	4.6	2.9	
Non-U.S. bond funds	3.0	3.4	7.0	5.3	7.6	
Money market funds*			1.2	2.0	1.2	2.0

*Foundation and UCRS investment in STIP.

The University considers the effective durations for commercial paper, mortgage loans, insurance contracts and money market funds to be zero. The terms of the mortgage loans include variable interest rates. Insurance contracts can be liquidated without loss of principal and money market funds consist of underlying securities that are of a short-term, liquid nature.

Investments also include various mortgage-backed securities, collateralized mortgage obligations, structured notes, variable-rate securities and callable bonds that may be considered to be highly sensitive to changes in interest rates due to the existence of prepayment or conversion features. The effective durations of these securities, however, may be low.

At June 30, the fair values of such investments are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
Mortgage-backed securities	\$656,113	\$669,109	\$13,460	\$53,471	\$2,691,572	\$2,795,428
Collateralized mortgage obligations	610,379	501,265	10,658	22,540	922,334	830,356
Other asset-backed securities	266,402	271,890	22,093	27,612	508,094	1,266,122
Structured notes	236				2,711	
Variable-rate securities	708,676	582,299			2,160,669	2,413,025
Callable bonds	4,215,677	4,067,934	476		8,452,259	8,466,784
Convertible bonds	17,215	455			205,222	4,618
Total	\$6,474,698	\$6,092,952	\$46,687	\$103,623	\$14,942,861	\$15,776,333

Mortgage-Backed Securities. These securities are issued primarily by Fannie Mae, Ginnie Mae and Freddie Mac, and various commercial entities and include short embedded prepayment options. Unanticipated prepayments by the obligees of the underlying asset reduce the total expected rate of return.

Collateralized Mortgage Obligations. Collateralized mortgage obligations (CMOs) generate a return based upon either the payment of interest or principal on mortgages in an underlying pool. The relationship between interest rates and prepayments makes the fair value highly sensitive to changes in interest rates. In falling interest rate environments, the underlying mortgages are subject to a higher propensity of prepayments. In rising interest rate environments, the opposite is true.

Other Asset-Backed Securities. Other asset-backed securities also generate a return based upon either the payment of interest or principal on obligations in an underlying pool, generally associated with auto loans or credit cards. As with CMOs, the relationship between interest rates and prepayments makes the fair value highly sensitive to changes in interest rates.

Variable-Rate Securities. These securities are investments with terms that provide for the adjustment of their interest rates on set dates and are expected to have fair values that will be relatively unaffected by interest rate changes. Variable-rate securities may have limits on how high or low the interest rate may change. These constraints may affect the market value of the security.

Callable Bonds. Although bonds are issued with clearly defined maturities, an issuer may be able to redeem, or call, a bond earlier than its maturity date. The University must then replace the called bond with a bond that may have a lower yield than the original. The call feature causes the fair value to be highly sensitive to changes in interest rates.

At June 30, the effective durations for these securities are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
Mortgage-backed securities	3.0	4.3	1.6	1.5	2.5	4.1
Collateralized mortgage obligations	4.1	4.7	0.8	8.3	3.7	4.1
Other asset-backed securities	0.4	1.1	0.8	0.2	0.7	0.8
Variable-rate securities	3.4	3.2			1.8	1.6
Structured notes	0.9				1.1	
Callable bonds	3.0	3.3	2.6		3.3	3.8
Convertible bonds	0.4	1.7			0.9	1.7

Foreign Currency Risk

The University's strategic asset allocation policy for TRIP, UCRS and GEP includes allocations to non-U.S. equities and non-dollar-denominated bonds. The benchmarks for these investments are not hedged; therefore foreign currency risk is part of the investment strategy. Portfolio guidelines for U.S. investment-grade fixed-income securities also allow exposure to non-U.S. dollar-denominated bonds up to 10 percent of the total portfolio market value. Exposure to foreign currency risk from these securities is permitted and it may be fully or partially hedged using forward foreign currency exchange contracts. Under the University's investment policies, such instruments are not permitted for speculative use or to create leverage. Similar limits on foreign exchange exposure apply to the high-yield debt and emerging market debt portfolios.

At June 30, the foreign currency risk expressed in U.S. dollars, organized by currency denomination and investment type, are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
<i>Equity securities:</i>						
Euro	\$729,350	\$960,899	\$439	\$259	\$3,596,443	\$3,895,404
British Pound	228,661	272,005	913	1,109	1,669,488	1,988,754
Japanese Yen	338,827	438,014			2,395,527	2,562,213
Canadian Dollar	131,959	127,083	148	1,918	906,653	722,719
Swiss Franc	165,398	122,133	448	634	999,908	839,277
Australian Dollar	94,235	91,454	1,069	2,915	645,339	511,526
Hong Kong Dollar	172,392	150,506			1,131,613	676,822
Swedish Krona	72,038	69,163			344,871	289,024
Singapore Dollar	17,708	18,752			112,683	106,094
Danish Krone	25,330	23,938			178,612	167,934
Norwegian Krone	12,786	14,399			112,538	98,172
South Korean Won	83,299	74,413	15,203	16,337	612,854	482,103
Brazilian Real	40,171	24,203			271,299	74,405
Indian Rupee	43,671	23,632	2,934		471,209	275,785
New Taiwan Dollar	60,605	57,938			399,004	234,014
South African Rand	29,052	27,963			205,161	153,225
Thailand Baht	15,052	9,046			170,839	106,332
Mexican Peso	13,153	13,332			91,115	54,541
Chinese Yuan	1,168				33,719	
Other	63,649	56,409	6,976	83	421,910	234,769
Subtotal	2,338,504	2,575,282	28,130	23,255	14,770,785	13,473,113
<i>Fixed-income securities:</i>						
Mexico Peso			1,430			
Euro	98	113			536	576
Subtotal	98	113	1,430		536	576
<i>Commingled funds (various currency denominations):</i>						
Absolute return funds			930,896	835,996		
Non-U.S. equity funds	2,385,721	2,172,821	1,133,275	1,016,679	8,198,932	8,958,098
Private equity	24,933	7,255	119,908	82,228	108,682	98,116
Real estate investment trusts			10,291	16,402		
Real assets	42,682	32,301	73,104	67,946	191,288	149,441
Non U.S. bond funds	144,613	135,861	20,727	21,697	14	14
Balanced funds			133,575	139,769		
Subtotal	2,597,949	2,348,238	2,421,776	2,180,717	8,498,916	9,205,669
<i>Investment derivatives:</i>						
Australian Dollar	1	1			51	58
Canadian Dollar	5	32			64	59
British Pound	3	30			135	177
Japanese Yen	2	(20)			94	(666)
Hong Kong Dollar					8	
Euro	113	120			1,172	369
Other	22				158	27
Subtotal	146	163			1,682	24
<i>Publicly traded real estate investment trusts:</i>						
Australian Dollar	12,029	11,568			73,586	64,239
Euro	9,605	14,112			65,922	87,183
British Pound	13,070	15,004			78,198	86,648
Japanese Yen	17,280	9,817			103,838	52,635
South African Rand	1,325	1,499			6,685	7,704
Singapore Dollar	6,461	4,059			37,628	21,148
Canadian Dollar	5,157	1,633			28,971	9,360
Mexican Peso	694	595			3,194	2,944
Other	3,527	2,521			22,569	11,232
Subtotal	69,148	60,808			420,591	343,093
Total exposure to foreign currency risk	\$5,005,845	\$4,984,604	\$2,451,336	\$2,203,972	\$23,692,510	\$23,022,475

The University's Investment Pools

The composition of the University's investments at June 30, 2019, by investment pool, are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA					TOTAL
	STIP	TRIP	BGP	GEP	OTHER	
<i>Equity securities:</i>						
Domestic		\$1,722,441	\$487,757	\$1,633,627	\$115,083	\$3,958,908
Foreign		1,323,101	373,345	592,005	50,053	2,338,504
<i>Fixed- or variable-income securities:</i>						
U.S. government-guaranteed	\$2,202,780	883,111		216,952	70,992	3,373,835
Other U.S. dollar-denominated	5,746,781	3,330,143		907,977	245,495	10,230,396
Foreign currency-denominated				98		98
Commingled funds	8,619	1,742,286	589,714	8,758,395	1,097,407	12,196,421
Investment derivatives		706	125	(308)	22	545
Publicly traded real estate investment trusts		98,431	27,977	133,835	4,917	265,160
Mortgage loans	766,748					766,748
Real estate		144,652		831,811	59,014	1,035,477
Other investments					121,256	121,256
Subtotal	8,724,928	9,244,871	1,478,918	13,074,392	1,764,239	34,287,348
Campus foundations' investments with the University	(1,529,399)	(25,946)		(1,124,899)	(212,200)	(2,892,444)
UCRS investment in the STIP	(2,687,523)					(2,687,523)
Total investments	\$4,508,006	\$9,218,925	\$1,478,918	\$11,949,493	\$1,552,039	\$28,707,381

The composition of the University's investments at June 30, 2018, by investment pool, are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA					TOTAL
	STIP	TRIP	GEP	OTHER		
<i>Equity securities:</i>						
Domestic		\$1,747,569	\$1,097,837	\$136,487		\$2,981,893
Foreign		1,422,238	1,109,393	43,652		2,575,283
<i>Fixed- or variable-income securities:</i>						
U.S. government-guaranteed	\$2,284,617	694,153	355,374	65,426		3,399,570
Other U.S. dollar-denominated	8,212,850	3,447,620	904,769	225,563		12,790,802
Foreign currency-denominated			113			113
Commingled funds	62,531	1,517,144	7,545,543	1,045,951		10,171,169
Investment derivatives			(572)	(4,912)	(36)	(5,520)
Publicly traded real estate investment trusts		98,739	120,248	5,049		224,036
Mortgage loans	510,765					510,765
Real estate		126,476	276,569	25,545		428,590
Other investments				27,701		27,701
Subtotal	11,070,763	9,053,367	11,404,934	1,575,338		33,104,402
Campus foundations' investments with the University	(1,395,676)	(26,298)	(981,095)	(208,582)		(2,611,651)
UCRS investment in the STIP	(3,123,754)					(3,123,754)
Total investments	\$6,551,333	\$9,027,069	\$10,423,839	\$1,366,756		\$27,368,997

The total investment returns based upon unit values, representing the combined income plus net appreciation or depreciation in the fair value of investments, for the year ended June 30, 2019 were 6.3 percent for TRIP, 3.5 percent since inception of April 1, 2019 for BGP, 8.2 percent for GEP and 6.0 percent for UCRP. The total investment returns based upon unit values, representing the combined income plus net appreciation or depreciation in the fair value of investments, for the year ended June 30, 2018, were 4.5 percent for TRIP, 8.9 percent for GEP and 7.8 percent for UCRP. The investment return for STIP distributed to participants, representing combined income and realized gains or losses, during the same periods, was 2.2 percent and 2.0 percent, respectively. Other investments consist of numerous, small portfolios of investment or individual securities, each with its own individual rate of return.

Related Party Relationships with the University

UCRS and campus foundations may invest available cash in STIP. Shares are purchased or redeemed in STIP at a constant value of \$1 per share. Actual income earned, including any realized gains or losses on the sale of STIP investments, is allocated to UCRS and campus foundations based upon the number of shares held. Unrealized gains and losses associated with the fluctuation in the fair value of investments included in STIP are recorded by the University as the manager of the pool. The net asset value for STIP is held at a constant value of \$1 and is not adjusted for unrealized gains and losses associated with the fluctuation in the fair value of investments included in STIP.

The campus foundations may also purchase or redeem shares in GEP, BGP, TRIP or other investment pools at the unitized value of the portfolio at the time of purchase or redemption. Actual income earned is allocated to the campus foundations based upon the number of shares held.

Campus Foundations

The campus foundations' cash and cash equivalents and investments that are invested with the University and managed by the Chief Investment Officer are excluded from the University's statement of net position and included in the campus foundations' statement of net position. Under the accounting policies elected by each campus foundation, certain component units classify all or a portion of their investment in STIP and TRIP as cash and cash equivalents, rather than investments. Substantially all of the campus foundations' investments managed by the Chief Investment Officer are categorized as commingled funds or commingled money market funds by the campus foundations in the composition of investments.

The fair value of the campus foundations' cash and cash equivalents and investments that are invested with the University, by investment pool, at June 30 are as follows:

<i>(in thousands of dollars)</i>	2019	2018
STIP	\$1,529,399	\$1,398,634
TRIP	25,946	26,298
GEP	1,124,899	981,095
Other investment pools	212,200	205,624
Campus foundations' investments with the University	2,892,444	2,611,651
Classified as cash and cash equivalents by campus foundations	(357,676)	(386,391)
Classified as investments by campus foundations	\$2,534,768	\$2,225,260

Investment income in the University's statement of revenues, expenses and changes in net position is net of income earned by, and distributed to, the campus foundations totaling \$38.2 million and \$31.8 million for the years ended June 30, 2019 and 2018, respectively.

UCRS

UCRS had \$2.7 billion and \$3.1 billion invested in STIP at June 30, 2019 and 2018, respectively. These investments are excluded from the University's statement of net position and are included in UCRS' statement of plans' fiduciary net position. They are categorized as commingled money market funds in the composition of investments for UCRS. STIP investment income in the University's statement of revenues, expenses and changes in net position is net of income earned by, and distributed to, UCRS totaling \$68.3 million and \$43.4 million for the years ended June 30, 2019 and 2018, respectively.

Agency Relationships with the University

STIP and GEP are external investment pools and include investments on behalf of external organizations that are associated with the University, although not financially accountable to the University. These organizations are not required to invest in these pools. Participants purchase or redeem shares in STIP at a constant value of \$1 per share and purchase or redeem shares in GEP at the unitized value of the portfolio at the time of purchase or redemption. Actual income earned is allocated to participants based upon the number of shares held.

The fair value of these investments in each investment pool and the related liability associated with these organizations that are included in the University's statement of net position at June 30 are as follows:

<i>(in thousands of dollars)</i>	2019	2018
STIP	\$127,407	\$95,502
GEP	296,651	309,627
Other investment pools	9,155	4,805
Total agency assets	\$433,213	\$409,934
Funds held for others	\$433,213	\$409,934

The composition of the net position at June 30 for STIP and GEP are as follows:

<i>(in thousands of dollars)</i>	STIP		GEP	
	2019	2018	2019	2018
Investments	\$8,724,928	\$11,070,763	\$13,074,391	\$11,404,934
Investment of cash collateral	72,847	126,019	228,945	256,407
Securities lending collateral	(72,827)	(125,995)	(228,881)	(256,357)
Other assets, net	3,387,851	2,929,104	145,026	607,907
Net position	\$12,112,799	\$13,999,891	\$13,219,481	\$12,012,891

Other assets include amounts receivable for pension benefits from the campuses and medical centers of \$3.4 billion and \$3.0 billion at June 30, 2019 and 2018, respectively.

The changes in net position for STIP and GEP for the year ending June 30 are as follows:

<i>(in thousands of dollars)</i>	STIP		GEP	
	2019	2018	2019	2018
Net position, beginning of year	\$13,999,891	\$11,502,056	\$12,012,891	\$10,589,342
Investment income	281,982	227,622	83,076	102,914
Net appreciation (depreciation) in fair value of investments	121,201	(82,872)	922,147	887,999
Transfer to TRIP	(21,891)	(416,703)		
Transfer to BGP	(1,002,778)			
Participant contributions (distributions), net	(1,265,606)	2,769,788	201,367	432,636
Net position, end of year	\$12,112,799	\$13,999,891	\$13,219,481	\$12,012,891

3. SECURITIES LENDING

The University and UCRS jointly participate in a securities lending program as a means to augment income. The campus foundations' investments that are invested with the University and managed by the Chief Investment Officer are included in the University's investment pools that participate in the securities lending program.

The campus foundations' allocated share of the program's cash collateral received, investment of cash collateral and collateral held for securities lending is determined based upon their equity in the investment pools. The Board of Trustees for each campus foundation may also authorize participation in a direct securities lending program.

Securities are lent to selected brokerage firms for which collateral received equals or exceeds the fair value of such investments lent during the period of the loan. Securities loans immediately terminate upon notice by either the University or the borrower. Collateral may be cash or securities issued by the U.S. government or its agencies, or the sovereign or provincial debt of foreign countries. Securities collateral cannot be pledged or sold by the University unless the borrower defaults.

Loans of domestic equities and all fixed-income securities are initially collateralized at 102 percent of the fair value of securities lent. Loans of foreign equities are initially collateralized at 105 percent. All borrowers are required to provide additional collateral by the next business day if the value of the collateral falls to less than 100 percent of the fair value of securities lent.

Cash collateral received from the borrower is invested by lending agents, as agents for the University, in investment pools in the name of the University, with guidelines approved by the University. These investments are shown as investment of cash collateral in the statement of net position. At June 30, 2019 and 2018, the securities in these pools had a weighted average maturity of 20 days and 15 days, respectively. The University records a liability for the return of the cash collateral shown as collateral held for securities lending in the statement of net position. Securities collateral received from the borrower is held in investment pools by the University's custodial bank.

At June 30, 2019 and 2018, the University had insignificant exposure to borrowers because the amounts the University owed the borrowers were substantially the same as the amounts the borrowers owed the University. The University is indemnified by its lending agents against any losses incurred as a result of borrower default.

The composition of the securities lending programs at June 30 are as follows:

<i>(in thousands of dollars)</i>	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
SECURITIES LENT						
<i>For cash collateral:</i>						
Equity securities:						
Domestic	\$322,500	\$468,126			\$2,932,651	\$3,186,668
Foreign	63,898	3,975			349,318	
Fixed-income securities:						
U.S. government-guaranteed	145,563	171,984			877,269	1,744,379
U.S. agency	5,632					
Other U.S. dollar-denominated	432,202	497,720			1,819,850	1,138,667
Foreign currency-denominated	2,250				38,235	
Foundations' share	(36,384)	(45,288)	\$36,384	\$45,288		
Lent for cash collateral	935,661	1,096,517	36,384	45,288	6,017,323	6,069,714
<i>For securities collateral:</i>						
Equity securities:						
Domestic	339,723	358,657			3,240,103	3,057,625
Foreign	178,023	147,358			1,197,501	1,242,195
Fixed-income securities:						
U.S. government-guaranteed	294,545	376,684			2,705,074	3,174,988
Other U.S. dollar-denominated	46,480	123,429			471,693	710,653
Foreign currency-denominated	57				3,221	
Lent for securities collateral	858,828	1,006,128			7,617,592	8,185,461
Total securities lent	\$1,794,489	\$2,102,645	\$36,384	\$45,288	\$13,634,915	\$14,255,175
COLLATERAL RECEIVED						
Cash	\$991,052	\$1,209,769			\$6,126,849	\$6,157,131
Foundations' share	(36,384)	(45,288)	\$36,384	\$45,288		
Total cash collateral received	954,668	1,164,481	36,384	45,288	6,126,849	6,157,131
Securities	932,360	1,095,763			8,269,811	8,914,709
Total collateral received	\$1,887,028	\$2,260,244	\$36,384	\$45,288	\$14,396,660	\$15,071,840
INVESTMENT OF CASH COLLATERAL						
<i>Fixed-income securities:</i>						
Other U.S. dollar-denominated:						
Corporate bonds	\$51,173	\$32,858			\$316,357	\$167,234
Commercial paper	120,336	146,215			743,938	744,164
Repurchase agreements	276,518	555,710			1,709,481	2,828,291
Corporate - asset-backed securities	26,269	5,803			162,397	29,534
Certificates of deposit/time deposits	441,744	381,408			2,730,933	1,941,184
Supranational/foreign	76,119	88,252			470,583	449,163
Other assets (liabilities), net*	(835)	(251)			(5,163)	(1,280)
Foundations' share	(36,384)	(45,288)	\$36,384	\$45,288		
Investment of cash collateral	954,940	1,164,707	36,384	45,288	\$6,128,526	\$6,158,290
Less: Current portion	(839,994)	(1,054,406)	(32,733)	(40,999)		
Noncurrent portion	\$114,946	\$110,301	\$3,651	\$4,289		

* Other assets (liabilities), net is comprised of pending settlements of cash collateral investments.

The University earns interest and dividends on the collateral held during the loan period, as well as a fee from the brokerage firm, and is obligated to pay a fee and rebate to the borrower. The University receives the net investment income. The securities lending income and fees and rebates for the year ended June 30 are as follows:

<i>(in thousands of dollars)</i>	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
Securities lending income	\$32,269	\$23,743	\$1,497	\$1,008	\$212,596	\$136,099
Securities lending fees and rebates	(23,810)	(14,785)	(1,112)	(642)	(160,185)	(89,025)
Securities lending investment income, net	\$8,459	\$8,958	\$385	\$366	\$52,411	\$47,074

Investment Risk Factors

There are a variety of potential risk factors involved in a securities lending program. Risks associated with the investment of cash collateral may include the credit risk from fixed-income securities, concentration of credit risk, interest rate risk and foreign currency risk. In addition, there may be custodial credit risk associated with both cash and securities received as collateral for securities lent.

The University's and UCRS' investment guidelines and other information related to each of these risks are summarized below. Campus foundations that participate in a securities lending program may have their own individual investment policies designed to limit the same risks.

Credit Risk

The University's and UCRS' investment guidelines for the investment of cash collateral maintained in separately managed collateral pools restrict the credit rating of issuers at the time of purchase to no less than A-1, P-1 or F-1 for short-term securities and no less than A2/A for long-term securities. Asset-backed securities must have a rating of AAA at the time of purchase.

The credit risk profile for fixed- or variable-income securities associated with the investment of cash collateral at June 30 are as follows:

<i>(in thousands of dollars)</i>	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
<i>Fixed- or variable-income securities:</i>						
Other U.S. dollar-denominated:						
AAA	\$48,557	\$94,055			\$300,188	\$478,695
AA-	85,376	118,258			527,811	601,875
A+	301,142	10,185			1,861,709	51,834
A	42,688	243,045			263,903	1,236,981
A-						
A-1 / A-2 / P-1 / F-1	184,046	188,995			1,137,805	961,888
Not rated	53,831				332,792	
Other assets (liabilities) net*: Not rated	(835)	(251)			(5,163)	(1,280)
Campus foundations' share	(36,384)	(45,288)	\$36,384	\$45,288		

* Other assets (liabilities), net is comprised of pending settlements of cash collateral investments.

Custodial Credit Risk

Cash collateral received for securities lent is invested in pools by the University's lending agents. The University's and UCRS' securities related to the investment of cash collateral are registered in the University's name by the lending agents. Securities collateral received for securities lent are held in investment pools by the University's lending agents. As a result, custodial credit risk is remote.

Concentration of Credit Risk

The University's and UCRS' investment guidelines with respect to the concentration of credit risk associated with the investment of cash collateral in the separately managed collateral pools restricts investments in any single issuer of corporate debt securities, time deposits, certificates of deposit, banker's acceptances and money market funds to no more than 5 percent of the portfolio value at the time of purchase. Campus foundations that directly participate in a securities lending program do not have specific investment policies related to concentration of credit risk, although the lending agreements with the agents establish restrictions for the type of investments, as well as minimum credit ratings.

Investments in issuers other than U.S. government-guaranteed securities that represent 5 percent or more of the total investment of cash collateral at June 30 are as follows:

<i>(in thousands of dollars)</i>	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018
Morgan Stanley & Co LLC	\$69,617	\$98,530	\$430,383	\$501,471
Skandinaviska Enskilda Banken AB	53,334		329,721	
UBS AG	51,535		318,596	
RCap Securities Inc.		102,307		520,693
Goldman Sachs & Company		73,898		376,102
Nomura Securities International Inc.		63,716		324,284

Interest Rate Risk

The nature of individual securities in the collateral pools allows for the use of weighted average maturity as an effective risk management measure. The University's and UCRS' investment guidelines with respect to the interest rate risk associated with the investment of cash collateral in the separately managed collateral pools require the weighted average maturity of the entire collateral pool to be less than 120 days. The maturity of securities issued by the U.S. government and asset-backed securities must be less than five years, corporate debt obligations must be less than two years and time deposits must be less than 190 days.

The weighted average maturity expressed in days for fixed- or variable-income securities associated with the investment of cash collateral at June 30 are as follows:

<i>(in days)</i>	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018
<i>Fixed- or variable-income securities:</i>				
<i>Other U.S. dollar-denominated:</i>				
Corporate bonds	19	26	19	26
Commercial paper	26	22	26	22
Repurchase agreements	11	6	11	6
Corporate asset-backed securities	29	20	29	20
Certificates of deposit/time deposits	23	24	23	24
Supranational/foreign	18	16	18	16

Investment of cash collateral may include various asset-backed securities, structured notes and variable-rate securities that may be considered to be highly sensitive to changes in interest rates due to the existence of prepayment or conversion features, although the weighted average maturity may be short.

At June 30, the fair value of investments that are considered to be highly sensitive to changes in interest rates are as follows:

<i>(in thousands of dollars)</i>	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2019	2018	2019	2018	2019	2018
Other asset-backed securities	\$95,060	\$94,055			\$587,680	\$478,695
Variable-rate investments	797,390	865,249			4,929,597	4,403,692
Campus foundations' share	(32,755)	(35,905)	\$32,755	\$35,905		
Total	\$859,695	\$923,399	\$32,755	\$35,905	\$5,517,277	\$4,882,387

At June 30, 2019 and 2018, the weighted average maturity expressed in days for asset-backed securities was 23 days and 16 days, respectively and for variable-rate investments it was 153 days and 136 days, respectively.

Foreign Currency Risk

The University's and UCRS' investment policy with respect to the foreign currency risk associated with the investment of cash collateral maintained in separate collateral pools restricts investments to U.S. dollar-denominated securities. Therefore, there is no foreign currency risk.

4. DERIVATIVE FINANCIAL INSTRUMENTS

The University may use derivatives including futures, forward contracts, options and interest rate swap contracts as a substitute for investment in equity and fixed-income securities to reduce the effect of fluctuating foreign currencies on foreign currency-denominated investments, or to limit its exposure of variable-rate bonds to changes in market interest rates. The Board of Trustees for each campus foundation may also authorize derivatives in its investment policy.

The University enters into futures contracts for the purpose of acting as a substitute for investment in equity and fixed-income securities. A futures contract is an agreement between two parties to buy and sell a security or financial index, interest rate or foreign currency at a set price on a future date. They are standardized contracts that can be easily bought and sold and are exchange-traded. Upon entering into such a contract, the University is required to pledge to the broker an amount of cash or securities equal to the minimum initial margin requirements of the exchange on which the contract is traded. Pursuant to the contract, the University agrees to receive from, or pay to, the counterparty an amount of cash equal to the daily fluctuation in the value of the contract. These contracts are settled on a daily basis, with the resulting realized gain or loss included in the statement of revenues, expenses and changes in net position. The settlement amount at the end of each day for each of the contracts, or variation margin, is included in investments and represents the fair value of the contracts.

Forward contracts are similar to futures contracts, although they are not exchange-traded. Foreign currency exchange contracts are forward contracts used to hedge against foreign currency exchange rate risks on non-U.S. dollar-denominated investment securities and to increase or decrease exposure to various foreign currencies.

An options contract gives the University the right, but not the obligation, to buy or sell a specified security or index at a fixed price during a specified period for a nonrefundable fee (the "premium"). The maximum loss to the University is limited to the premium originally paid for covered options. The University initially records premiums paid for the purchase of these options in the statement of net position as an investment which is subsequently adjusted to reflect the fair value of the options, with unrealized gains and losses included in the statement of revenues, expenses and changes in net position.

Rights and warrants provide the holder with the right, but not the obligation, to buy a stock at a predetermined price for a finite period of time. Warrants usually have a longer time period to expiration. The holder of a right or warrant is permitted to buy at a price that may be below the actual market price for that stock. Warrants and rights cease to exist and become worthless if not used by their expiration date.

An interest rate swap is a contractual agreement entered into between the University and a counterparty under which each agrees to exchange periodic fixed or variable payments for an agreed period of time based upon a notional amount of principal or value of the underlying contract. The payments correspond to an equity index, an interest rate or to currency. A credit default swap is an agreement whereby the seller will compensate the buyer in the event of a loan default. A swaption is an option granting its owner the right but not the obligation to enter into an underlying swap. The University considers its futures, forward contracts, options, credit default swaps, swaptions, rights, warrants and certain interest rate swaps to be investment derivatives.

As a means to lower the University's borrowing costs, when compared against fixed-rate bonds at the time of issuance, the University entered into interest rate swap agreements in connection with certain of its variable-rate Medical Center Pooled Revenue Bonds and General Revenue Bonds. The University determined that certain of its interest rate swaps are derivative instruments that meet the criteria for an effective hedge. Certain of the interest rate swaps are considered hybrid instruments since, at the time of execution, the fixed rate on each of the swaps was off-market and the University received an up-front payment. As such, these swaps are each comprised of a derivative instrument, an at-the-market swap that is an effective hedge, and a companion instrument, a borrowing represented by the up-front payment. The unamortized amount of the borrowing under the companion instruments was \$71.4 million and \$75.2 million at June 30, 2019 and 2018, respectively.

Due to the upcoming phase out of LIBOR (the London Interbank Offered Rate), the University amended certain interest rate swap agreements to change the index rate from LIBOR to the Federal Funds Rate in 2019. As a result, the University terminated hedge accounting for certain previous LIBOR swap agreements and commenced hedge accounting for the new agreements. The result of terminating hedge accounting for the LIBOR swaps was to recognize a loss of \$8.6 million in other nonoperating expenses. To commence hedge accounting for the new Federal Funds Rate swap agreements through 2023, an additional borrowing for the off-the-market rate swap of \$8.8 million was recognized. In 2019, to reduce rollover risk, the University also entered into new interest rate swap agreements commencing in 2023 through 2039.

The fair value balances and notional amounts of derivative instruments outstanding at June 30, categorized by type, and the changes in fair value of such derivatives are as follows:

University of California

(in thousands of dollars)

CATEGORY	NOTIONAL AMOUNT		FAIR VALUE-POSITIVE (NEGATIVE)			CHANGES IN FAIR VALUE		
	2019	2018	CLASSIFICATION	2019	2018	CLASSIFICATION	2019	2018
INVESTMENT DERIVATIVES								
<i>Futures contracts:</i>								
<i>Domestic equity futures:</i>								
Long positions	\$58,652	\$211,945	Investments	\$888	(\$5,755)	Net appreciation (depreciation)	(\$14,735)	(\$5,789)
Short positions			Investments			Net appreciation (depreciation)	7	
<i>Foreign equity futures:</i>								
Long positions	1,174	6,492	Investments	14	15	Net appreciation (depreciation)	(604)	8,090
Futures contracts, net				902	(5,740)		(15,332)	2,301
<i>Foreign currency exchange contracts, net:</i>								
Long positions	241	1,636	Investments	1	(15)	Net appreciation (depreciation)	1,299	(1)
Short positions	133,966		Investments	(565)		Net appreciation (depreciation)	2,368	(7)
Foreign currency exchange contracts, net				(564)	(15)		3,667	(8)
<i>Other:</i>								
Stock rights/warrants			Investments	207	235	Net appreciation (depreciation)	(10)	38
Other, net				207	235		(10)	38
Total investment derivatives				\$545	(\$5,520)		(\$11,675)	\$2,331
CASH FLOW HEDGES								
<i>Effective interest rate swaps:</i>								
Pay fixed, receive variable	\$1,435,260	\$838,850	Other assets (liabilities)	(\$130,161)	(\$54,839)	Deferred (inflows) outflows	(\$75,322)	\$35,393

University of California Campus Foundations

(in thousands of dollars)

CATEGORY	NOTIONAL AMOUNT		FAIR VALUE-POSITIVE (NEGATIVE)			CHANGES IN FAIR VALUE		
	2019	2018	CLASSIFICATION	2019	2018	CLASSIFICATION	2019	2018
INVESTMENT DERIVATIVES								
Options/swaptions	\$55,128	\$54,231	Investments	(\$388)	(\$355)	Net appreciation (depreciation)	\$672	\$3,168
Swaps	169,999	250,603	Investments			Net appreciation (depreciation)	(10,847)	16,090
Total investment derivatives				(\$388)	(\$355)		(\$10,175)	\$19,258

University of California Retirement System

(in thousands of dollars)

CATEGORY	NOTIONAL AMOUNT		FAIR VALUE—POSITIVE (NEGATIVE)			CHANGES IN FAIR VALUE		
	2019	2018	CLASSIFICATION	2019	2018	CLASSIFICATION	2019	2018
INVESTMENT DERIVATIVES								
<i>Futures contracts:</i>								
<i>Domestic equity futures:</i>								
Long positions	\$401,208	\$926,476	Investments	\$5,228	(\$20,156)	Net appreciation (depreciation)	(\$39,204)	(\$19,697)
Short positions		(16,189)	Investments		665	Net appreciation (depreciation)	1,836	947
<i>Foreign equity futures:</i>								
Long positions	66,200	58,219	Investments	732	(924)	Net appreciation (depreciation)	538	61,531
Short positions		(11,875)	Investments		77	Net appreciation (depreciation)	809	(1,077)
Futures contracts, net				5,960	(20,338)		(36,021)	41,704
<i>Foreign currency exchange contracts, net:</i>								
Long positions	12,830	35,282	Investments	65	(320)	Net appreciation (depreciation)	(2,915)	7,332
Short positions	206,476		Investments	(870)		Net appreciation (depreciation)	5,469	(10,695)
Foreign currency exchange contracts, net				(805)	(320)		2,554	(3,363)
<i>Other:</i>								
Stock rights/warrants		2	Investments	1,330	1,516	Net appreciation (depreciation)	135	332
Other, net				1,330	1,516		135	332
Total investment derivatives				\$6,485	(\$19,142)		(\$33,332)	\$38,673

Objectives and Terms of Hedging Derivative Instruments

The objectives and terms of the hedging derivative instruments outstanding at June 30, along with the credit rating of the associated counterparty, are as follows:

UNIVERSITY OF CALIFORNIA (in thousands of dollars)

TYPE	OBJECTIVE	NOTIONAL AMOUNT		EFFECTIVE DATE	MATURITY DATE	CASH PAID OR RECEIVED	TERMS	COUNTERPARTY CREDIT RATING	FAIR VALUE	
		2019	2018						2019	2018
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	\$60,485	\$64,075	2007	2032	None	Pay fixed 3.5897%; receive 58% of 1-Month LIBOR* plus 0.48%	Aa2/A+	(\$8,319)	(\$6,435)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	124,775	124,775	2016	2030 through 2043	None	Pay fixed 4.6359%; receive 67% of 3-Month LIBOR* plus 0.69%**	Aa2/A+	(41,528)	(31,577)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	400,000		2019	2023	None	Pay fixed 1.8982%; receive 70% of Federal Funds Rate + 0.0925%	Aa2/AA-	(12,295)	
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds		400,000	2013	2019	None	Pay fixed 1.8982%; receive 70% of 1-Month LIBOR*	Aa2/AA-		466
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	100,000		2019	2023	None	Pay fixed 1.9057%; receive 70% of Federal Funds Rate + 0.0925%	Aa2/AA-	(3,105)	
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds		100,000	2013	2019	None	Pay fixed 1.9057%; receive 70% of 1-Month LIBOR*	Aa2/AA-		80
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	100,000		2019	2023	None	Pay fixed 1.8980%; receive 70% of Federal Funds Rate + 0.0975%	Aa2/A+	(3,053)	
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds		100,000	2013	2019	None	Pay fixed 1.8980%; receive 70% of 1-Month LIBOR*	Aa2/A+		118
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	24,250	24,250	2016	2045	None	Pay fixed 4.741%; receive 67% of 3-Month LIBOR* +0.79%	Aa2/A+	(11,198)	(8,307)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	25,750	25,750	2016	2047	None	Pay fixed 4.741%; receive 67% of 3-Month LIBOR* +0.79%	Aa2/A+	(12,440)	(9,184)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	500,000		2023	2039	None	Pay fixed 1.9817%; receive 70% of Federal Funds Rate	Aa2/AA-	(32,712)	
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	100,000		2023	2039	None	Pay fixed 1.8999%; receive 70% of Federal Funds Rate	Aa2/A+	(5,511)	
Interest rate swaps, net		\$1,435,260	\$838,850						(\$130,161)	(\$54,839)

* London Interbank Offered Rate (LIBOR).

**Weighted average spread.

Hedging Derivative Instrument Risk Factors

Credit Risk

The University could be exposed to credit risk if the interest rate swap counterparties to the contracts are unable to meet the terms of the contracts. Contracts with positive fair values are exposed to credit risk. The University faces a maximum possible loss equivalent to the amount of the derivative's fair value, less any collateral held by the University provided by the counterparty. Contracts with negative fair values are not exposed to credit risk.

Although the University has entered into the interest rate swaps with creditworthy financial institutions to hedge its variable-rate debt, there is credit risk for losses in the event of non-performance by counterparties or unfavorable interest rate movements.

There are no collateral requirements related to the interest rate swap with the \$60.5 million notional amount. Depending on the fair value and the counterparty credit rating for the swaps related to the Medical Center Pooled Revenue Bonds with the counterparty that is currently rated Aa2/A+ with a combined notional amount of \$174.8 million, the University may be entitled to receive collateral to the extent the positive fair value exceeds \$20.0 million as of June 30, 2019. At June 30, 2019 and 2018, there was no collateral required.

Depending on the fair value and the counterparty credit rating for the swaps related to the General Revenue Bonds with the counterparty that is currently rated Aa2/AA- with a combined notional amount of \$500.0 million, the University may be entitled to receive collateral to the extent the positive fair value with the counterparty exceeds \$30.0 million. At June 30, 2019 and 2018, there was no collateral required.

Depending on the fair value and the counterparty credit rating for the swap related to the General Revenue Bonds with the counterparty that is currently rated Aa2/A+ with a notional amount of \$100.0 million, the University may be entitled to receive collateral to the extent the positive fair value with the counterparty exceeds \$20.0 million. At June 30, 2019 and 2018, there was no collateral required.

Interest Rate Risk

There is a risk that the value of the interest rate swaps will decline because of changing interest rates. The values of the interest rate swaps with longer maturities tend to be more sensitive to changing interest rates and, therefore, more volatile than those with shorter maturities.

Basis Risk

There is a risk that the basis for the variable payment received on interest rate swaps will not match the variable payment on the bonds. This exposes the University to basis risk whenever the interest rates on the bonds are reset. The interest rate on the bonds is a tax-exempt interest rate, while the basis of the variable receipt on the interest rate swaps is taxable. Tax-exempt interest rates can change without a corresponding change in the LIBOR rate due to factors affecting the tax-exempt market which do not have a similar effect on the taxable market. However, there is no basis or tax risk related to the swaps with the \$149.0 million total notional amount since the variable rate the University pays to the bondholders matches the variable-rate payments received from the swap counterparty and the interest rates are reset at the same intervals.

Termination Risk

There is termination risk for interest rate swaps associated with variable-rate bonds in the event of non-performance by counterparties in an adverse market resulting in cancellation of the synthetic interest rate and returning the interest rate payments to the variable interest rates on the bonds. In addition, depending on the agreement, certain interest rate swaps may be terminated if a counterparty's credit quality rating, as issued by Moody's or Standard & Poor's, falls below certain thresholds. For the interest rate swap with the \$60.5 million notional amount, the termination threshold is reached when the credit quality rating for either the underlying Medical Center Pooled Revenue Bonds or swap counterparty falls below Baa2 or BBB. For the swaps with the combined \$174.8 million notional amount, the termination threshold is reached when the credit quality rating for the underlying Medical Center Pooled Revenue Bonds falls below Baa3/BBB-, or the interest rate swap counterparty's rating falls below Baa2 or BBB.

For the swaps with notional amounts of \$400.0 million and \$100.0 million with a counterparty that is currently rated Aa2/AA-, the termination threshold is reached when the credit quality rating for the underlying General Revenue Bonds falls below Baa2 or BBB, or the swap counterparty's rating falls below A3 or A-. For the swap with a notional amount of \$100.0 million with a counterparty that is currently rated Aa2/A+, the termination threshold is reached when the credit quality rating for the underlying General Revenue Bonds falls below Baa2 or BBB, or the swap counterparty's rating falls below A3 or A-. Upon termination, the University may also owe a termination payment if there is a realized loss based on the fair value of each interest rate swap.

Rollover Risk

The University is exposed to rollover risk on hedging derivative instruments that are hedges of debt that mature or may be terminated prior to the maturity of the hedged debt. When these hedging derivative instruments terminate, the University will be re-exposed to the risks being hedged by the hedging derivative instruments. The University is exposed to rollover risk on the interest rate swaps that mature in June 2039 because the hedged debt is scheduled to mature in May 2048.

5. FAIR VALUE

Fair value is defined in the accounting standards as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities reported at fair value are organized into a hierarchy based on the levels of inputs observable in the marketplace that are used to measure fair value. Inputs are used in applying the various valuation techniques and take into account the assumptions that market participants use to make valuation decisions. Inputs may include price information, credit data, liquidity statistics and other factors specific to the financial instrument. Observable inputs reflect market data obtained from independent sources. In contrast, unobservable inputs reflect the entity's assumptions about how market participants would value the financial instrument.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used for financial instruments measured at fair value on a recurring basis:

Level 1 – Prices based on unadjusted quoted prices in active markets that are accessible for identical assets or liabilities are classified as Level 1. Level 1 investments include equity securities and other publicly traded securities.

Level 2 – Quoted prices in markets that are not considered to be active, dealer quotations or alternative pricing sources for similar assets or liabilities for which all significant inputs are observable, either directly or indirectly, are classified as Level 2. Level 2 investments include fixed- or variable-income securities, commingled funds, certain derivatives and other assets that are valued using market information.

Level 3 – Investments and other assets classified as Level 3 have significant unobservable inputs, as they trade infrequently or not at all. The inputs into the determination of fair value of these investments and other assets are based upon the best information in the circumstance and may require significant management judgment. Level 3 financial instruments include private equity investments, real estate and beneficial interests in irrevocable split-interest agreements.

Net Asset Value (NAV) – Investments whose fair value is measured at NAV are excluded from the fair value hierarchy. Investments in non-governmental entities that do not have a readily determinable fair value may be valued at NAV. Investments measured at NAV include hedge funds, private equity investments and commingled funds.

Not Leveled – Cash and cash equivalents are not measured at fair value and, thus, are not subject to the fair value disclosure requirements.

The following tables summarize the investments and other assets reported at fair value within the fair value hierarchy as of June 30, 2019:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA					
	TOTAL	QUOTED PRICES IN ACTIVE MARKETS	OTHER OBSERVABLE INPUTS	UNOBSERVABLE INPUTS	NET ASSET VALUE	NOT LEVELED
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$6,297,412	\$6,294,977		\$2,435		
Fixed- or variable-income securities:						
U.S. government-guaranteed	3,373,835	60,324	\$3,313,511			
Other U.S. dollar-denominated	10,230,396	226,062	9,924,334	80,000		
Foreign currency-denominated	98		98			
Commingled funds	12,196,421	875,858		513,232	\$10,742,484	\$64,847
Investment derivatives	545	147	398			
Publicly traded real estate investment trusts	265,160	265,160				
Mortgage loans	766,748			766,748		
Real estate	1,035,477			59,014	976,463	
Other investments	121,256			10,383	110,873	
Campus foundations' investments with the University	(2,892,444)					(2,892,444)
UCRS investment in STIP	(2,687,523)					(2,687,523)
Total investments	\$28,707,381	\$7,722,528	\$13,238,341	\$1,431,812	\$11,829,820	(\$5,515,120)
Securities lending investments of cash collateral	\$954,940		\$955,775			(\$835)
Investments held by trustees	\$1,245,948	\$43,337	\$583,306		\$265,490	\$353,815
Beneficial interests included in other noncurrent assets	\$70,789			\$70,789		

(in thousands of dollars)

	CAMPUS FOUNDATIONS					
	TOTAL	QUOTED PRICES IN ACTIVE MARKETS	OTHER OBSERVABLE INPUTS	UNOBSERVABLE INPUTS	NET ASSET VALUE	NOT LEVELED
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$300,989	\$292,600	\$12	\$8,367	\$10	
Fixed- or variable-income securities:						
U.S. government-guaranteed	357,522		357,522			
Other U.S. dollar-denominated	67,954	652	67,248	54		
Foreign currency-denominated	1,430		1,430			
Commingled funds	8,849,013	681,676	533	11,275	8,115,624	\$39,905
Investment derivatives	(388)		(388)			
Real estate	143,713		1,260	53,600	88,853	
Other investments	258,156	9,178		2,911	243,368	2,699
Total investments	\$9,978,389	\$984,106	\$427,617	\$76,207	\$8,447,855	\$42,604
Securities lending investments of cash collateral	\$36,384		\$36,415			(\$31)
Beneficial interests included in other noncurrent assets	\$81,333			\$81,333		

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM					
	TOTAL	QUOTED PRICES IN ACTIVE MARKETS	OTHER OBSERVABLE INPUTS	UNOBSERVABLE INPUTS	NET ASSET VALUE	NOT LEVELED
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$39,608,395	\$39,608,350		\$45		
Fixed- or variable-income securities:						
U.S. government-guaranteed	6,654,026		\$6,654,026			
Other U.S. dollar-denominated	15,977,772		15,977,772			
Foreign currency-denominated	536		536			
Commingled funds	29,292,865	3,439,009		280,282	\$24,918,337	\$655,237
Investment derivatives	6,485	1,011	5,474			
Publicly traded real estate investment trusts	2,092,822	2,092,822				
Real estate	1,823,802				1,823,802	
Total investments	\$95,456,703	\$45,141,192	\$22,637,808	\$280,327	\$26,742,139	\$655,237
Securities lending investments of cash collateral	\$6,128,526		\$6,133,689			(\$5,163)

The following tables summarize the investments and other assets reported at fair value within the fair value hierarchy as of June 30, 2018:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA					
	TOTAL	QUOTED PRICES IN ACTIVE MARKETS	OTHER OBSERVABLE INPUTS	UNOBSERVABLE INPUTS	NET ASSET VALUE	NOT LEVELED
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$5,557,176	\$5,551,780		\$5,396		
Fixed- or variable-income securities:						
U.S. government-guaranteed	3,399,570	57,592	\$3,341,978			
Other U.S. dollar-denominated	12,790,802	217,954	12,483,517	89,331		
Foreign currency-denominated	113		113			
Commingled funds	10,171,169	796,878	62,531	72,717	\$9,205,816	\$33,227
Investment derivatives	(5,520)	234	(5,754)			
Publicly traded real estate investment trusts	224,036	224,036				
Mortgage loans	510,765			510,765		
Real estate	428,590			25,562	403,028	
Other investments	27,701	13,750		13,951		
Campus foundations' investments with the University	(2,611,651)					(2,611,651)
UCRS investment in STIP	(3,123,754)					(3,123,754)
Total investments	\$27,368,997	\$6,862,224	\$15,882,385	\$717,722	\$9,608,844	(\$5,702,178)
Securities lending investments of cash collateral	\$1,164,707		\$1,164,958			(\$251)
Investments held by trustees	\$415,164				\$382,162	\$33,002
Beneficial interests included in other noncurrent assets	\$55,440			\$55,440		

<i>(in thousands of dollars)</i>	CAMPUS FOUNDATIONS					
	TOTAL	QUOTED PRICES IN ACTIVE MARKETS	OTHER OBSERVABLE INPUTS	UNOBSERVABLE INPUTS	NET ASSET VALUE	NOT LEVELED
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$281,594	\$266,168	\$5,147	\$10,265	\$14	
Fixed- or variable-income securities:						
U.S. government-guaranteed	386,667		386,667			
Other U.S. dollar-denominated	130,192	666	129,472	54		
Commingled funds	8,069,041	692,240	351	1,511	7,352,650	\$22,289
Investment derivatives	(355)		(355)			
Real estate	135,731		3,709	54,224	77,798	
Other investments	236,710	5,161		38,202	191,959	1,388
Total investments	\$9,239,580	\$964,235	\$524,991	\$104,256	\$7,622,421	\$23,677
Securities lending investments of cash collateral	\$45,288		\$45,297			(\$9)
Beneficial interests included in other noncurrent assets	\$75,132			\$75,132		

<i>(in thousands of dollars)</i>	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM					
	TOTAL	QUOTED PRICES IN ACTIVE MARKETS	OTHER OBSERVABLE INPUTS	UNOBSERVABLE INPUTS	NET ASSET VALUE	NOT LEVELED
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$33,324,912	\$32,764,711		\$1,282	\$558,919	
Fixed- or variable-income securities:						
U.S. government-guaranteed	5,881,270		\$5,881,270			
Other U.S. dollar-denominated	18,110,994	365,653	17,745,294	47		
Foreign currency-denominated	576		576			
Commingled funds	30,197,232	5,064,965	2,115		25,461,548	(\$331,396)
Investment derivatives	(19,142)	1,516	(20,658)			
Publicly traded real estate investment trusts	1,711,685	1,711,685				
Real estate	1,665,191				1,665,191	
Total investments	\$90,872,718	\$39,908,530	\$23,608,597	\$1,329	\$27,685,658	(\$331,396)
Securities lending investments of cash collateral	\$6,158,290		\$6,159,570			(\$1,280)

The following table presents significant terms of certain investments at June 30, 2019:

<i>(in thousands of dollars)</i>				
UNIVERSITY OF CALIFORNIA				
INVESTMENT TYPE	FAIR VALUE	UNFUNDED COMMITMENTS	REMAINING LIFE (YEARS)	REDEMPTION TERMS AND RESTRICTIONS
Absolute return	\$4,313,573	\$308,271	0 to 5	Not eligible for redemption and lock-up provisions ranging from 0 to 3 years. For securities not eligible for redemptions the underlying assets are estimated to be liquidated within 3 to 5 years. For securities eligible for redemptions, after initial lock-up expires, redemptions are available on a rolling basis and require 30 to 365 days' prior notification.
Private equity	2,554,119	1,693,703	0 to 15	Not eligible for redemption.
Real assets	627,023	567,390	0 to 15	Not eligible for redemption.
Real estate and real estate investment trusts	1,240,004	554,930	0 to 10	Closed end funds are not eligible for redemption. For open end funds, redemptions are generally on a quarterly basis where the redemption date is the last day of each quarter. Payments of withdrawal requests are generally made within 45 days.
U.S. equity funds	74,076			Redemptions generally require at least 0-90 days written notice of intention to terminate as of a date specified in the notice. Payments of withdrawal requests are generally made within 0-120 days.
Balanced funds	243,152			Redemptions require at least twelve months prior written notice of intention to terminate as of a date specified in the notice. Withdrawals will occur on the last business day of the month and are subject to certain withdrawal guidelines.

<i>(in thousands of dollars)</i>				
CAMPUS FOUNDATIONS				
INVESTMENT TYPE	FAIR VALUE	UNFUNDED COMMITMENTS	REMAINING LIFE (YEARS)	REDEMPTION TERMS AND RESTRICTIONS
Absolute return	\$2,531,318	\$115,585	0 to 3	Generally, lock-up provisions ranging from 0 to 3 years. After initial lock-up expires, redemptions are available require 30 to 180 days' prior notification.
Private equities	1,132,506	780,895	0 to 16	Generally, lock-up provisions ranging from 0 to 16 years. After initial lock-up expires, redemptions are available require 30 to 180 days' prior notification.
Other investments	258,156	120,433	9	Not eligible for redemption.
Real estate and real estate investment trusts	318,687	108,721	0 to 14	Not eligible for redemption.
U.S. equity and Non-U.S. equity funds	2,047,673	18,000	0 to 4	Generally, lock-up provisions ranging from 0 to 4 years. After initial lock-up expires, redemptions are available require 0 to 365 days' prior notification.

<i>(in thousands of dollars)</i>				
UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM				
INVESTMENT TYPE	FAIR VALUE	UNFUNDED COMMITMENTS	REMAINING LIFE (YEARS)	REDEMPTION TERMS AND RESTRICTIONS
Absolute return	\$4,716,290	\$289,483	0 to 5	Not eligible for redemption and lock-up provisions ranging from 0 to 3 years. For securities not eligible for redemptions the underlying assets are estimated to be liquidated within 3 to 5 years. For securities eligible for redemptions, after initial lock-up expires, redemptions are available on a rolling basis and require 30 to 365 days' prior notification.
Private equity	4,458,873	3,742,167	0 to 15	Not eligible for redemption.
Real assets	1,530,725	923,447	0 to 15	Not eligible for redemption.
U.S. equity funds	1,137,570			Redemptions generally require at least 0-90 days written notice of intention to terminate as of a date specified in the notice. Payments of withdrawal requests are generally made within 0-120 days.
Real estate and real estate investment trusts	4,278,585	1,034,982	0 to 10	Closed end funds are not eligible for redemption. For open end funds, redemptions are generally on a quarterly basis where the redemption date is the last day of each quarter. Payments of withdrawal requests are generally made within 45 days.

6. INVESTMENTS HELD BY TRUSTEES

The University has entered into agreements with trustees to maintain trusts for the University's insurance programs, long-term debt requirements, capital projects and certain other requirements. In addition, the state of California retained on deposit certain proceeds from the sale of lease-revenue bonds to be used for capital projects.

Insurance Programs

Investments held by trustees for insurance programs include bank accounts for the voluntary benefits, workers' compensation, general liability and professional medical and hospital liability programs. Cash held by the trustee in the name of the University totaled \$26.3 million and \$10.9 million at June 30, 2019 and 2018, respectively.

Long-Term Debt

Investments held by trustees for future payment of principal and interest in accordance with various indenture and other long-term debt requirements totaled \$302.5 million and \$12.9 million at June 30, 2019 and 2018, respectively. In 2019, investments held by trustees included \$286.5 million to retire General Revenue Bonds maturing on July 1, 2019. Securities held by trustees are held in the name of the University and these trust agreements permit trustees to invest in U.S. and state government or agency obligations, commercial paper or other corporate obligations meeting certain credit rating requirements.

Capital Projects

Proceeds from the sale of the state of California's lease revenue bonds to be used for financing certain University capital projects were deposited in a commingled U.S. bond fund managed by the state of California Treasurer's Office, as trustee, and distributed to the University as the projects are constructed. The fair value of these deposits was \$2.7 million and \$2.6 million at June 30, 2019 and 2018, respectively.

In addition, proceeds from the sale of bonds for the design and construction of third-party blended component unit housing facilities are held by trustees. The fair value of these investments was \$909.8 million and \$385.7 million at June 30, 2019 and 2018, respectively. Substantially all of these investments are of a highly liquid, short-term nature.

7. ACCOUNTS RECEIVABLE

Accounts receivable and the allowance for uncollectible accounts are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA							UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS
	STATE AND FEDERAL GOVERNMENT	MEDICAL CENTERS	INVESTMENT INCOME	PRIVATE GRANTS AND CONTRACTS	MEDICAL PROFESSIONAL FEES	OTHER	TOTAL	
<i>At June 30, 2019</i>								
Accounts receivable	\$783,064	\$2,445,017	\$76,716	\$494,767	\$536,212	\$1,600,789	\$5,936,565	\$37,496
Allowance for uncollectible accounts	(7,695)	(304,538)		(24,692)	(157,343)	(35,617)	(529,885)	
Accounts receivable, net	\$775,369	\$2,140,479	\$76,716	\$470,075	\$378,869	\$1,565,172	\$5,406,680	\$37,496
<i>At June 30, 2018</i>								
Accounts receivable	\$730,025	\$2,239,409	\$66,905	\$438,819	\$413,682	\$640,109	\$4,528,949	\$13,102
Allowance for uncollectible accounts	(6,382)	(265,029)		(23,359)	(140,118)	(32,173)	(467,061)	
Accounts receivable, net	\$723,643	\$1,974,380	\$66,905	\$415,460	\$273,564	\$607,936	\$4,061,888	\$13,102

The University's other accounts receivable are primarily related to investment sales, tuition and fees, auxiliary enterprises, insurance rebates and legal settlements.

The campus foundations' accounts receivable are primarily related to investment income.

Uncollectible accounts have decreased the following revenues for the years ended June 30:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA	
	2019	2018
Student tuition and fees	(\$4,475)	(\$1,002)
<i>Grants and contracts:</i>		
Federal	(570)	(4,656)
State	(1,095)	(778)
Private	(1,280)	73
Local	(63)	(40)
Medical centers	(230,357)	(255,445)
Educational activities	(11,524)	(9,994)
Auxiliary enterprises	(1,159)	101
Other operating revenues	(2,315)	(2,041)
Expense for uncollectible accounts	(\$252,838)	(\$273,782)

Retirement System Contribution

The state of California agreed to make contributions related to certain prior years to the University for UCRP in annual installments over 30 years. During each of the years ended June 30, 2019 and 2018, under the terms of these agreements, the state of California contributed \$5.3 million, including interest at 8.5 percent. At June 30, 2019 and 2018, the remaining amount owed to UCRP by the state was \$4.9 million and \$9.4 million, respectively. These amounts are recorded in the University's statement of net position as a receivable from the state of California and as a liability owed to UCRP.

8. PLEDGES RECEIVABLE

The composition of pledges receivable at June 30 is summarized as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	
	2019	2018	2019	2018
Total pledges receivable outstanding	\$72,286	\$67,676	\$1,090,878	\$1,208,349
Unamortized discount to present value	(1,522)	(632)	(137,971)	(136,882)
Allowance for uncollectible pledges	(12,689)	(9,305)	(64,915)	(65,284)
Total pledges receivable, net	58,075	57,739	887,992	1,006,183
Current portion of pledges receivable	(28,039)	(25,049)	(201,299)	(234,294)
Noncurrent portion of pledges receivable	\$30,036	\$32,690	\$686,693	\$771,889

Future receipts under pledge agreements for each of the five fiscal years subsequent to June 30, 2019 and thereafter are as follows:

(in thousands of dollars)

Year Ending June 30	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS
	2020	\$38,296
2021	11,852	187,785
2022	9,338	81,934
2023	7,386	79,234
2024	3,899	71,522
2025-2029	765	192,993
Beyond 2029	750	249,420
Total payments on pledges receivable	\$72,286	\$1,090,878

Adjustments to the allowance for uncollectible pledges for the University have increased (decreased) the following revenues for the years ended June 30, 2019 and 2018:

(in thousands of dollars)

	2019	2018
Private gifts	\$3,744	(\$4,096)

9. NOTES AND MORTGAGES RECEIVABLE

Notes and mortgages receivable at June 30, 2019 and 2018 along with the allowance for uncollectible amounts, are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA				UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		
	CURRENT	NONCURRENT		TOTAL	CURRENT	NONCURRENT	TOTAL
		NOTES	MORTGAGES				
<i>At June 30, 2019</i>							
Notes and mortgages receivable	\$74,417	\$376,216	\$21,838	\$398,054		\$250	\$250
Allowance for uncollectible amounts	(8,060)	(17,923)	(150)	(18,073)			
Notes and mortgages receivable, net	\$66,357	\$358,293	\$21,688	\$379,981		\$250	\$250
<i>At June 30, 2018</i>							
Notes and mortgages receivable	\$77,411	\$387,236	\$19,105	\$406,341	\$181	\$250	\$431
Allowance for uncollectible amounts	(8,929)	(19,885)	(114)	(19,999)			
Notes and mortgages receivable, net	\$68,482	\$367,351	\$18,991	\$386,342	\$181	\$250	\$431

10. DOE NATIONAL LABORATORY CONTRACTS

Los Alamos National Laboratory

The University is a member of Triad with two other organizations. Effective November 1, 2018, Triad assumed the management and operations of LANL under a contract with the DOE. While the University has an equal membership interest in Triad, the University's distributable management and operation fee is 42.7 percent of Triad. For the year ended June 30, 2019, the University recorded fees of \$7.2 million as part of other operating revenue.

LANS operated and managed the DOE's LANL prior to November 1, 2018. LANS' current earnings or losses were dependent on the percentage of base and incentive fees earned under the terms of the contract, offset by any unallowable or disallowed costs. While the University has a 50-percent membership interest in LANS, its equity in the current earnings or losses is subject to certain limitations and special allocations of both the fees and costs. As a result, the University's equity in the current earnings or losses may range from 17.0 to 50.0 percent. For the years ended June 30, 2019 and 2018, the University recorded \$2.9 million and \$14.4 million, respectively, as its equity in the current earnings of LANS and received \$1.5 million and \$16.7 million, respectively, in cash distributions.

Lawrence Livermore National Laboratory

LLNS manages and operates the DOE's LLNL. LLNS' current earnings or losses are dependent on the percentage of base and incentive fees earned under the terms of the contract, offset by any unallowable or disallowed costs. While the University has a 50-percent membership interest in LLNS, its equity in the current earnings or losses is 36.3 percent as of June 30, 2019 and 2018, respectively. For the years ended June 30, 2019 and 2018, the University recorded \$14.5 million and \$12.2 million, respectively, as its equity in the current earnings of LLNS and received \$14.3 million and \$12.2 million, respectively, in cash distributions.

11. CAPITAL ASSETS

The University's capital asset activity for the years ended June 30 is as follows:

(in thousands of dollars)

	2017	ADDITIONS	DISPOSALS	2018	ADDITIONS	DISPOSALS	2019
ORIGINAL COST							
Land	\$1,162,911	\$45,985	(\$17,768)	\$1,191,128	\$92,360	(\$900)	\$1,282,588
Infrastructure	694,860	49,827	(6,687)	738,000	112,103		850,103
Buildings and improvements	38,025,323	1,823,695	(26,959)	39,822,059	1,660,663	(40,640)	41,442,082
Equipment, software and intangibles	7,609,083	1,157,142	(256,657)	8,509,568	764,842	(251,284)	9,023,126
Libraries and collections	4,152,688	147,676	(24,460)	4,275,904	154,839	(32,683)	4,398,060
Special collections	459,956	71,303	(103)	531,156	14,739	(631)	545,264
Construction in progress	2,520,150	411,104		2,931,254	1,263,084		4,194,338
Capital assets, at original cost	\$54,624,971	\$3,706,732	(\$332,634)	\$57,999,069	\$4,062,630	(\$326,138)	\$61,735,561
	2017	DEPRECIATION AND AMORTIZATION	DISPOSALS	2018	DEPRECIATION AND AMORTIZATION	DISPOSALS	2019
ACCUMULATED DEPRECIATION AND AMORTIZATION							
Infrastructure	\$371,698	\$23,774	(\$4,431)	\$391,041	\$27,477	(\$7)	\$418,511
Buildings and improvements	15,318,861	1,212,499	(26,609)	16,504,751	1,255,205	(21,312)	17,738,644
Equipment, software and intangibles	5,164,786	658,487	(223,448)	5,599,825	682,521	(226,691)	6,055,655
Libraries and collections	3,099,873	132,583	(54,111)	3,178,345	135,025	(20,092)	3,293,278
Accumulated depreciation and amortization	23,955,218	\$2,027,343	(\$308,599)	25,673,962	\$2,100,228	(\$268,102)	27,506,088
Capital assets, net	\$30,669,753			\$32,325,107			\$34,229,473

Service concession arrangements, reported as buildings and improvements, are \$278.7 million of original cost and \$30.7 million of accumulated depreciation at June 30, 2019. Service concession arrangements, reported as buildings and improvements, are \$202.1 million of original cost and \$25.6 million of accumulated depreciation at June 30, 2018.

12. SELF-INSURANCE, OBLIGATIONS UNDER LIFE INCOME AGREEMENTS AND OTHER LIABILITIES

The University's self-insurance, obligations under life income agreements and other liabilities at June 30, 2019 and 2018 are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA				UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS			
	2019		2018		2019		2018	
	CURRENT	NONCURRENT	CURRENT	NONCURRENT	CURRENT	NONCURRENT	CURRENT	NONCURRENT
Self-insurance programs	\$388,880	\$715,417	\$392,634	\$584,186				
Obligations under life income agreements	1,501	\$35,118	1,474	\$35,293	\$18,054	\$150,069	\$19,314	\$149,391
Other liabilities:								
Compensated absences	670,767	345,620	614,056	315,659				
UCRP*	4,891		4,509	4,891				
Accrued interest	138,338		121,812					
Fair value of interest rate swaps		130,161		54,839				
Third-party payor settlements	555,023		497,751					
Deposits	153,516		152,591					
Other	104,177	262,859	113,377	194,007	28,350	278,076	24,866	271,825
Total	\$2,017,093	\$738,640	\$1,898,204	\$569,396	\$46,404	\$278,076	\$44,180	\$271,825

* UCRP has an equivalent amount recorded as a contribution receivable from the University in its statement of fiduciary net position.

Self-Insurance Programs

Self-insured liabilities changed as follows for the years ended June 30:

(in thousands of dollars)

	MEDICAL MALPRACTICE	WORKERS' COMPENSATION	EMPLOYEE & STUDENT HEALTH CARE	GENERAL LIABILITY AND OTHER	TOTAL
<i>Year Ended June 30, 2019</i>					
Liabilities at June 30, 2018	\$215,307	\$455,963	\$114,800	\$190,750	\$976,820
Claims incurred and changes in estimates	52,574	89,647	1,219,818	117,048	1,479,087
Claim payments	(45,253)	(80,946)	(1,179,587)	(45,824)	(1,351,610)
Liabilities at June 30, 2019	\$222,628	\$464,664	\$155,031	\$261,974	\$1,104,297
Discount rate	3.0%	3.0%	Undiscounted	3.0%	
<i>Year Ended June 30, 2018</i>					
Liabilities at June 30, 2017	\$193,155	\$409,007	\$90,178	\$168,372	\$860,712
Claims incurred and changes in estimates	75,112	129,808	973,303	63,290	1,241,513
Claim payments	(52,960)	(82,852)	(948,681)	(40,912)	(1,125,405)
Liabilities at June 30, 2018	\$215,307	\$455,963	\$114,800	\$190,750	\$976,820
Discount rate	2.6% to 4.7%	2.6% to 4.7%	Undiscounted	2.6% to 4.7%	
<i>Year Ended June 30, 2017</i>					
Liabilities at June 30, 2016	\$198,440	\$391,440	\$88,510	\$108,519	\$786,909
Claims incurred and changes in estimates	51,074	104,089	811,137	99,538	1,065,838
Claim payments	(56,359)	(86,522)	(809,469)	(39,685)	(992,035)
Liabilities at June 30, 2017	\$193,155	\$409,007	\$90,178	\$168,372	\$860,712
Discount rate	5.0%	5.0%	Undiscounted	2.0%	

Obligations Under Life Income Agreements

Changes in current and noncurrent obligations under life income agreements for the years ended June 30 are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	
	ANNUITIES	LIFE BENEFICIARIES	ANNUITIES	LIFE BENEFICIARIES
<i>Year Ended June 30, 2019</i>				
Balance at June 30, 2018	\$17,909	\$18,858	\$64,862	\$103,843
New obligations to beneficiaries and changes in liability, net	2,175	1,250	8,594	8,483
Payments to beneficiaries	(2,432)	(1,141)	(7,230)	(10,429)
Obligations under life income agreements at June 30, 2019	17,652	18,967	66,226	101,897
Less: Current portion	(844)	(657)	(7,428)	(10,626)
Noncurrent portion at June 30, 2019	\$16,808	\$18,310	\$58,798	\$91,271
<i>Year Ended June 30, 2018</i>				
Balance at June 30, 2017	\$16,735	\$19,345	\$50,843	\$104,298
New obligations to beneficiaries and changes in liability, net	3,577	778	19,971	9,287
Payments to beneficiaries	(2,403)	(1,265)	(5,952)	(9,742)
Obligations under life income agreements at June 30, 2018	17,909	18,858	64,862	103,843
Less: Current portion	(825)	(649)	(7,436)	(11,878)
Noncurrent portion at June 30, 2018	\$17,084	\$18,209	\$57,426	\$91,965

13. DEBT

The University directly finances the construction, renovation and acquisition of facilities and equipment, or for such other purposes as are authorized by The Regents through the issuance of debt obligations or indirectly through structures that involve legally separate entities reported as blended component units. Commercial paper and bank loans provide interim financing. Long-term financing includes revenue bonds, financing obligations and other borrowings.

The University's outstanding debt at June 30 is as follows:

(in thousands of dollars)

	WEIGHTED AVERAGE INTEREST RATE	INTEREST RATE RANGE	MATURITY YEARS	2019	2018
INTERIM FINANCING:					
Commercial paper		1.23 - 2.63%	2019 - 2020	\$574,483	\$781,804
LONG-TERM FINANCING:					
<i>University of California General Revenue Bonds:</i>					
Fixed rate	4.7%	1.4 - 7.6%	2019 - 2115	11,613,425	11,192,530
Variable rate	1.7%	1.5 - 2.4%	2037 - 2048	750,000	750,000
University of California Limited Project Revenue Bonds	4.8%	1.5 - 6.3%	2020 - 2058	4,922,720	5,019,785
<i>University of California Medical Center Pooled Revenue Bonds:</i>					
Fixed rate	5.6%	1.4 - 6.6%	2020 - 2049	2,462,125	2,501,820
Variable rate	2.1%	1.4 - 2.5%	2020 - 2047	240,810	244,400
Unamortized bond premium				1,297,554	1,368,889
University of California revenue bonds	4.7%			21,286,634	21,077,424
Financing obligations		0.5 - 11.8%	2020 - 2042	188,140	207,118
Other University borrowings		Various	2020 - 2055	801,046	556,513
Blended component unit revenue bonds, net	5.1%	4.0 - 6.5%	2020 - 2052	1,733,839	1,035,918
Total outstanding debt				24,584,142	23,658,777
Less: Commercial paper				(574,483)	(781,804)
Current portion of outstanding debt				(1,696,499)	(1,371,030)
Noncurrent portion of outstanding debt				\$22,313,160	\$21,505,943

Interest expense associated with financing projects during construction, net of any investment income earned on tax-exempt bond proceeds during construction, is capitalized. Total interest expense during the years ended June 30, 2019 and 2018 was \$880.5 million and \$821.2 million, respectively. Interest expense, net of investment income, totaling \$113.1 million and \$74.6 million was capitalized during the years ended June 30, 2019 and 2018, respectively. The remaining \$767.4 million and \$746.6 million in 2019 and 2018 is reported as interest expense in the statement of revenues, expenses and changes in net position.

Outstanding Debt Activity

The activity with respect to the University's current and noncurrent debt, including the revenue bonds associated with blended component units, for the years ended June 30 is as follows:

(in thousands of dollars)

	UNIVERSITY REVENUE BONDS	FINANCING OBLIGATIONS	OTHER UNIVERSITY BORROWINGS	BLENDED COMPONENT UNIT REVENUE BONDS	TOTAL
<i>Year Ended June 30, 2019</i>					
Long-term debt and financing obligations at June 30, 2018	\$21,077,424	\$207,118	\$556,513	\$1,035,918	\$22,876,973
New obligations	653,060	16,327	259,810	662,465	1,591,662
Bond premium, net	22,242			54,670	76,912
Scheduled principal payments	(372,515)	(35,305)	(15,277)	(11,280)	(434,377)
Amortization of bond premium	(93,577)			(7,934)	(101,511)
Long-term debt and financing obligations at June 30, 2019	21,286,634	188,140	801,046	1,733,839	24,009,659
Less: Current portion	(1,620,253)	(42,337)	(12,820)	(21,089)	(1,696,499)
Noncurrent portion at June 30, 2019	\$19,666,381	\$145,803	\$788,226	\$1,712,750	\$22,313,160
<i>Year Ended June 30, 2018</i>					
Long-term debt and financing obligations at June 30, 2017	\$18,443,955	\$195,022	\$378,659	\$672,567	\$19,690,203
New obligations	3,544,885	47,225	284,583	319,530	4,196,223
Bond premium, net	430,715			63,217	493,932
Refinancing or prepayment of outstanding debt	(913,690)		(100,049)		(1,013,739)
Scheduled principal payments	(346,150)	(35,129)	(6,680)	(10,750)	(398,709)
Amortization of bond premium	(82,291)			(8,646)	(90,937)
Long-term debt and financing obligations at June 30, 2018	21,077,424	207,118	556,513	1,035,918	22,876,973
Less: Current portion	(1,308,152)	(38,581)	(6,326)	(17,971)	(1,371,030)
Noncurrent portion at June 30, 2018	\$19,769,272	\$168,537	\$550,187	\$1,017,947	\$21,505,943

Commercial Paper

The University has available a \$2.0 billion commercial paper program, issued in two series, with tax-exempt and taxable components. Commercial paper may be issued for interim financing for capital projects, interim financing of equipment, financing of working capital for the medical centers, standby or interim financing for gift financed projects and working capital for the University.

The program's liquidity is primarily supported by available investments in STIP and TRIP. Commercial paper is collateralized by a pledge of the revenues derived from the ownership or operation of the projects financed and constitute limited obligations of the University. There is no encumbrance, mortgage or other pledge of property securing commercial paper and the paper does not constitute general obligations of the University.

Commercial paper outstanding, including interest rates, at June 30 is as follows:

(in thousands of dollars)

	2019		2018	
	INTEREST RATES	OUTSTANDING	INTEREST RATES	OUTSTANDING
Tax-exempt	1.23 - 1.80%	\$313,066	1.10 - 1.71%	\$457,000
Taxable	2.38 - 2.63%	261,417	1.88 - 2.30%	324,804
Total outstanding		\$574,483		\$781,804

The expectation is that the University will continue to utilize available investments for liquidity support of the commercial paper program. Alternatively, the University may utilize lines of credit from external banks for the purpose of providing additional liquidity support for the commercial paper program. As of June 30, 2019, the University has two revolving credit agreements totaling \$700.0 million. There were no borrowings against the revolving credit lines as of June 30, 2019.

University of California Revenue Bonds

Revenue bonds have financed various auxiliary, administrative, academic, medical center and research facilities of the University. The bonds generally have annual principal and semiannual or monthly interest payments, serial and term maturities, contain sinking fund requirements and may have optional redemption provisions. Revenue bonds are not collateralized by any encumbrance, mortgage or other pledge of property, except pledged revenues, and do not constitute general obligations of The Regents. Revenue Bond Indentures require the University to use the facilities in a way which will not cause the interest on the tax-exempt bonds to be included in the gross income of the bondholders for federal tax purposes. The Indentures permit the University to issue additional bonds as long as certain conditions are met.

General Revenue Bonds are collateralized solely by General Revenues as defined in the General Revenue Bond Indenture. General Revenues are certain operating and nonoperating revenues of the University consisting of gross student tuition and fees; a portion of state appropriations; facilities and administrative cost recovery from contracts and grants; revenues from educational, auxiliary and other activities; and other revenues, including unrestricted investment income. The General Revenue Bond Indenture requires the University to set rates, charges and fees each year sufficient for General Revenues to pay for the annual principal and interest on the bonds and certain other covenants. The pledge of General Revenues for interest rate swap agreements is on a parity basis with the University's General Revenue Bonds. General Revenues for the years ended June 30, 2019 and 2018 were \$17.8 billion and \$16.8 billion, respectively.

Limited Project Revenue Bonds are issued to finance auxiliary enterprises and are collateralized by a pledge consisting of the sum of the gross revenues of the specific projects. The Limited Project Revenue Bond Indenture requires the University to achieve the sum of gross project revenues equal to 1.1 times debt service and to maintain certain other covenants. The pledge of revenues for Limited Project Revenue Bonds is subordinate to the pledge of revenues for General Revenue Bonds, but senior to pledges for commercial paper notes. Pledged revenues for the years ended June 30, 2019 and 2018 were \$1.5 billion.

Medical Center Pooled Revenue Bonds are issued to finance the University's medical center facilities and are collateralized by a joint and several pledges of the gross revenues of all five of the University's medical centers. Medical center gross revenues are excluded from General Revenues. The Medical Center Pooled Revenue Bond Indenture requires the medical centers to set rates, charges and fees each year sufficient for the Medical Centers' total operating and nonoperating revenues to pay for the annual principal and interest on the bonds and certain other covenants. The pledge of medical center revenues for interest rate swap agreements may be at parity with, or subordinate to, Medical Center Pooled Revenue Bonds. Pledged revenues of the medical centers for the years ended June 30, 2019 and 2018 were \$13.4 billion and \$12.2 billion, respectively.

2019 Activity

In March 2019, General Revenue Bonds totaling \$653.1 million, including \$114.4 million in tax-exempt bonds and \$538.7 million in taxable bonds, were issued for working capital purposes and to finance the acquisition, construction, improvement and renovation of certain facilities of the University. The bonds mature at various dates through 2049. Proceeds, including a bond premium of \$22.2 million, were used to pay for project construction and issuance costs and to repay \$286.5 million of outstanding General Revenue Bonds maturing on July 1, 2019. The tax-exempt bonds have a stated weighted average interest rate of 5.0 percent. The taxable bonds have a stated weighted average interest rate of 3.3 percent. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

2018 Activity

In September 2017, Limited Project Revenue Bonds totaling \$860.4 million, including \$733.5 million tax-exempt bonds and \$126.9 million taxable bonds, were issued to finance the acquisition, construction, improvement and renovation of certain facilities of the University. The bonds mature at various dates through 2052. Proceeds, including a bond premium of \$124.2 million, were used to pay for project construction and issuance costs. The taxable bonds have a stated weighted average rate of 2.9 percent. The tax-exempt bonds have a stated weighted average interest rate of 4.9 percent. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

In December 2017, General Revenue Bonds totaling \$625.5 million of tax-exempt bonds were issued to advance refund a portion of General Revenue Bonds, Limited Project Revenue Bonds and Medical Center Pooled Revenue Bonds. The bonds mature at various dates through 2041. The bonds have a stated weighted average interest rate of 4.7 percent. The bond premium of \$113.1 million will be amortized as a reduction to interest expense over the term of the bonds. The refinancing and refunding of previously outstanding bonds resulted in cash flow savings of \$74.6 million and an economic gain of \$59.3 million.

In June 2018, General Revenue Bonds totaling \$1.2 billion, including \$945.8 million in tax-exempt bonds and \$281.9 million in taxable bonds, were issued to finance or refinance the acquisition, construction, improvement and renovation of certain facilities of the

University. The bonds mature at various dates through 2058. Proceeds, including a bond premium of \$144.3 million, were used to pay for project construction and issuance costs and to refund \$112.7 million of outstanding General Revenue Bonds. The tax-exempt bonds have a stated weighted average interest rate of 4.9 percent. The taxable bonds have a stated weighted average interest rate of 4.3 percent. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds. The refinancing and refunding of previously outstanding bonds resulted in cash flow savings of \$13.0 million and an economic gain of \$10.2 million.

In June 2018, Limited Project Revenue Bonds totaling \$831.3 million, including \$736.2 million tax-exempt bonds and \$95.1 million taxable bonds, were issued to finance or refinance the acquisition, construction, improvement and renovation of certain facilities of the University. The bonds mature at various dates through 2058. Proceeds, including a bond premium of \$108.5 million, were used to pay for project construction and issuance costs and to refund \$151.3 million of outstanding Limited Project Revenue Bonds. The taxable bonds have a stated weighted average rate of 3.9 percent. The tax-exempt bonds have a stated weighted average interest rate of 4.9 percent. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds. The refinancing and refunding of previously outstanding bonds resulted in cash flow savings of \$17.7 million and an economic gain of \$13.7 million.

Capital Leases

Capital leases entered into with other lessors, typically for equipment, totaled \$16.3 million and \$47.2 million for the years ended June 30, 2019 and 2018, respectively.

Other University Borrowings

Other University borrowings consist of contractual obligations resulting from the acquisition of land or buildings and the construction and renovation of certain facilities, along with the borrowing component associated with a hybrid derivative instrument.

The University may use uncollateralized revolving lines of credit with commercial banks for general corporate purposes and to provide interim financing for buildings and equipment. Lines of credit commitments for general corporate purposes, with various expiration dates through May 3, 2021, totaled \$400.0 million at June 30, 2019 and \$400 million at June 30, 2018. Outstanding borrowings under these bank lines totaled \$150.0 million and \$150.0 million at June 30, 2019 and 2018, respectively.

Certain of the interest rate swaps are considered hybrid instruments. As such, the interest rate swaps are comprised of a derivative instrument and a companion instrument recorded as a borrowing. The unamortized amount of the borrowing was \$80.0 million and \$75.2 million at June 30, 2019 and 2018, respectively.

In August 2016, the University entered into an agreement with a developer to design, construct, finance, operate and maintain certain auxiliary, administrative, academic and research facilities of one of its campuses, for which the University will finance \$600.0 million of the total costs. Of this amount, \$585.0 million will be paid to the developer over a 48-month period through a series of monthly progress payments. The remainder will cover invoiced costs for infrastructure improvements and equipment. Upon completion of the design-build phase of the project, the University will enter into an ongoing Operations and Maintenance Agreement with the developer through 2055. Payments under this agreement will have two components: the first component of the agreement is related to the operations and maintenance of the facilities, the second component is to service the private debt incurred by the developer during the construction phase. The operations and maintenance component of the payment will be expensed as incurred. The payments for the private debt are being treated as capital leases and are recorded as other borrowings by the University. In the event that the operations and maintenance agreement with the developer is terminated, the outstanding portion of the private debt incurred by the developer would become an obligation of the University. The outstanding amount of the borrowing was \$539.7 million and \$296.9 million at June 30, 2019 and 2018, respectively.

As of June 30, 2019, CHRCO had no amounts outstanding under its revolving credit facility for \$25.0 million. The interest rate on the credit facility is 3.5 percent as of June 30, 2019 and the facility expires on August 31, 2020.

Blended Component Unit Revenue Bonds

Student Housing

The University has entered into ground leases with legally separate nonprofit corporations that develop and own student housing projects and related amenities and improvements on three University campuses through the use of project limited liability corporations (LLC). Each LLC, through a conduit issuer, has outstanding Student Housing LLC Revenue Bonds to finance the construction of the student housing facilities. Each LLC manages the premises. The University's reversionary interest in the land is not subordinated. All costs associated with the ownership, operation and management of the improvements are the obligation of each LLC. Student rental rates are established in order to provide for operating expenses and maintain the required debt service coverage ratios. The bonds generally have annual principal and semiannual interest payments, serial and term maturities, certain sinking fund

requirements and optional redemption provisions. They are not collateralized by any encumbrance, mortgage or other pledge of property, except pledged revenues of the student housing projects, and do not constitute general obligations of The Regents.

In August 2017, one of the LLCs, through a conduit issuer, issued additional Student Housing LLC Revenue Bonds totaling \$148.6 million. The bonds mature at various dates through 2050 and have a stated weighted average interest rate of 5.0 percent. Proceeds, including a bond premium of \$24.2 million, were used to pay for project construction and issuance costs. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

In December 2018, two other LLCs, through a conduit issuer, issued additional Student Housing LLC Revenue Bonds totaling \$662.5 million. The bonds mature at various dates through 2052 and have a stated weighted average interest rate of 4.8 percent. Proceeds, including a bond premium of \$54.7 million, were used to pay for project construction and issuance costs. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

At June 30, 2019 and 2018, the LLCs, through a conduit issuer, has outstanding Student Housing LLC Revenue Bonds totaling \$1.2 billion and \$501.3 million, respectively. The bonds mature at various dates through 2052 and have a weighted average interest rate of 4.9 percent.

Subsequent Events

In July 2019, one of the LLC's, through its conduit issuer, issued additional Student Housing LLC Revenue Bonds totaling \$175.1 million. The bonds mature at various dates through 2052 and have a stated weighted average interest rate of 5.0 percent. Proceeds, including a bond premium of \$35.4 million were used to pay for project construction and issuance costs. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

Research Facilities

The University has a public/private partnership, for the purpose of developing, constructing and managing a neuroscience research and laboratory building and a psychiatry youth and family center with a legally separate, nonprofit corporation (the Corporation). In connection with these facilities, the University entered into ground leases with the Corporation. The Corporation has entered into a sub-ground lease with a developer to construct, own and manage the facilities. The University agreed to lease all of the space in the building from the developer. The University's base rent payments are equal to the principal and interest payments on the bonds are issued by a conduit issuer and loaned to the nonprofit corporation to finance the construction of the building. As security on the bonds, the developer has assigned all payments received from the University for the space lease to the bond trustee.

In December 2017, the Corporation, through a conduit issuer, issued additional revenue bonds totaling \$171.0 million. The bonds mature at various dates through 2052 and have a stated weighted average interest rate of 5.0 percent. Proceeds, including a bond premium of \$39.0 million, were used to pay for construction and issuance costs of the psychiatry youth and family center. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

At June 30, 2019, the Corporation, through a conduit issuer, has outstanding tax-exempt revenue bonds totaling \$190.7 million and taxable revenue bonds totaling \$188.0 million. The tax-exempt revenue bonds mature at various dates from 2021 to 2052 and have a weighted average interest rate of 5.0 percent. The tax-exempt revenue bonds generally have annual serial maturities, semiannual interest payments and optional redemption provisions. The taxable bonds mature from 2026 to 2049 and have an interest rate of 6.5 percent. The taxable bonds were issued as Build America Bonds, under which the U.S. Treasury is expected to send the conduit issuer 35.0 percent of the semiannual interest cost on the taxable bonds, making the net interest rate 4.2 percent post-subsidy. The taxable bonds have a term maturity with various certain annual sinking fund requirements, semiannual interest payments and optional redemption provisions.

In addition, the University entered into a ground lease with another legally separate, nonprofit corporation (the Consortium). The Consortium entered into an agreement with a developer to develop and own a research laboratory facility designed to expand collaborative work in stem cell research and facilitate its translation into tools and techniques to diagnose and treat degenerative diseases and other ailments. The developer constructed the research laboratory facility. All costs associated with the ownership, operation and management of the laboratory research facility are the obligation of the Consortium. The University, along with the other collaborative research partners, will lease space in the building.

The Consortium, through a conduit issuer, has outstanding revenue bonds totaling \$50.7 million and \$52.0 million at June 30, 2019 and 2018, respectively. The bonds mature at various dates through 2040 and have a weighted average interest rate of 4.5 percent. The bonds generally have annual principal and semiannual interest payments, serial and term maturities, certain sinking fund requirements and optional redemption provisions. Lease payments from the occupants of the building are pledged as collateral on the bonds. To the extent the lease payments are not sufficient to pay the debt service, the University is obligated to pay the shortfall.

Future Debt Service and Hedging Derivative Interest Rate Swaps

Future debt service payments for the University's fixed- and variable-rate debt for each of the five fiscal years subsequent to June 30, 2019, and thereafter are as presented below. Although not a prediction by the University of the future interest cost of the variable-rate bonds, these amounts assume that current interest rates on variable-rate bonds will not change. As these rates vary, variable-rate bond interest payments will vary.

(in thousands of dollars)

	COMMERCIAL PAPER	MEDICAL CENTER REVENUE BONDS	UNIVERSITY REVENUE BONDS	FINANCING OBLIGATIONS	OTHER UNIVERSITY BORROWINGS	BLENDED COMPONENT UNIT REVENUE BONDS	TOTAL PAYMENTS	PRINCIPAL	INTEREST
<i>Year Ending June 30</i>									
2020	\$577,090	\$192,875	\$1,395,954	\$49,260	\$14,102	\$92,256	\$2,321,537	\$1,332,605	\$988,932
2021		202,769	1,334,870	41,560	170,379	100,139	1,849,717	880,613	969,104
2022		201,726	1,113,976	18,532	20,534	102,253	1,457,021	511,391	945,630
2023		201,105	1,111,213	13,844	20,659	107,002	1,453,823	528,770	925,053
2024		195,557	1,138,281	8,670	19,220	107,830	1,469,558	565,887	903,671
2025 - 2029		939,845	6,033,317	39,337	120,722	552,264	7,685,485	3,596,808	4,088,677
2030 - 2034		885,745	5,655,527	35,980	89,505	555,438	7,222,195	3,976,920	3,245,275
2035 - 2039		901,866	4,658,981	36,543	87,964	538,346	6,223,700	3,856,234	2,367,466
2040 - 2044		945,327	3,485,586	22,290	87,104	409,499	4,949,806	3,518,066	1,431,740
2045 - 2049		622,764	2,082,438		84,879	386,218	3,176,299	2,461,062	715,237
2050 - 2054			618,097		100,300	137,926	856,323	465,544	390,779
2055 - 2115			5,330,121				5,330,121	1,442,029	3,888,092
Total future debt service	577,090	5,289,579	33,958,361	266,016	815,368	3,089,171	43,995,585	\$23,135,929	\$20,859,656
Less: Interest component of future payments	(2,607)	(2,586,644)	(16,672,216)	(77,876)	(14,322)	(1,505,991)	(20,859,656)		
Principal portion of future payments	574,483	2,702,935	17,286,145	188,140	801,046	1,583,180	23,135,929		
Adjusted by:									
Unamortized bond premium		169,271	1,128,283			150,659	1,448,213		
Total debt	\$574,483	\$2,872,206	\$18,414,428	\$188,140	\$801,046	\$1,733,839	\$24,584,142		

Long-term debt does not include \$1.6 billion of defeased liabilities at June 30, 2019. Investments that have maturities and interest rates sufficient to fund retirement of these liabilities are being held in irrevocable trusts for the debt service payments. Neither the assets of the trusts nor the outstanding obligations are included in the University's statement of net position.

General Revenue Bonds of \$750.0 million are variable-rate demand bonds which primarily reset daily and, in the event of a failed remarketing, can be put back to The Regents for tender. The University has classified these bonds as current liabilities as of June 30, 2019.

Medical Center Pooled Revenue Bonds of \$91.8 million are variable-rate demand bonds which give the debt holders the ability to tender the bonds back to the University upon demand. The University has classified these bonds as current liabilities as of June 30, 2019.

For the University's cash flow hedges, future debt service payments for the University's variable-rate debt and net receipts or payments on the associated hedging derivative instruments for each of the five fiscal years subsequent to June 30, 2019, and thereafter are as presented below. Although not a prediction by the University of the future interest cost of the variable-rate bonds or the impact of the interest rate swaps, using rates as of June 30, 2019, combined debt service requirements of the variable-rate debt and net swap payments are as follows:

(in thousands of dollars)

	VARIABLE-RATE BONDS		INTEREST RATE SWAP, NET	TOTAL PAYMENTS
	PRINCIPAL	INTEREST		
<i>Year Ending June 30</i>				
2020	\$3,725	\$13,614	\$5,754	\$23,093
2021	3,860	13,664	5,679	23,203
2022	3,995	13,609	5,593	23,197
2023	7,510	13,555	5,526	26,591
2024	7,805	13,512	5,951	27,268
2025 - 2029	44,065	64,893	29,437	138,395
2030 - 2034	41,725	60,787	24,834	127,346
2035 - 2039	31,580	57,098	21,184	109,862
2040 - 2044	163,910	51,840	7,639	223,389
2045 - 2048	527,085	19,376	1,301	547,762
Total	\$835,260	\$321,948	\$112,898	\$1,270,106

14. DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The University's composition of deferred outflows and inflows of resources at June 30 are summarized as follows:

(in thousands of dollars)

	SERVICE CONCESSION ARRANGEMENTS	NET PENSION LIABILITY	NET RETIREE HEALTH BENEFITS LIABILITY	DEBT REFUNDING	INTEREST RATE SWAP AGREEMENTS	ROYALTY SALES	IRREVOCABLE SPLIT-INTEREST AGREEMENTS	ASSET RETIREMENT OBLIGATIONS	TOTAL
<i>At June 30, 2019</i>									
Deferred outflows of resources		\$6,271,978	\$3,908,951	\$316,136	\$130,161			\$73,996	\$10,701,222
Deferred inflows of resources	\$248,002	142,132	5,896,383	1,340		\$437,968	\$102,260		6,828,085
<i>At June 30, 2018</i>									
Deferred outflows of resources		\$727,344	\$3,515,860	\$351,360	\$54,839			\$19,523	\$4,668,926
Deferred inflows of resources	\$176,447	275,145	5,645,528	1,388		\$421,341	\$89,855		6,609,704

The campus foundations' deferred inflows of resources are primarily related to irrevocable split-interest agreements.

15. THE UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)

Most University employees participate in UCRS. UCRS consists of UCRP, a governmental defined benefit plan funded with University and employee contributions; UCRSP, which includes defined contribution plans with options to participate in internally or externally managed investment portfolios generally funded with employee non-elective and elective contributions and UC-VERIP, a defined benefit plan for University employees who were members of UC-VERIP and who elected early retirement. Other retirement plans also include the CHRCO Pension Plan, a defined benefit plan fully funded with CHRCO contributions and the Orange County Employee Retirement System (OCERS) retirement plan, a cost-sharing multi-employer defined benefit pension plan. The Regents has the authority to establish and amend the benefit plans except for the CHRCO Pension Plan and OCERS retirement plan. Administration authority with respect to UCRS plans is vested with the President of the University as plan administrator. CHRCO administers the CHRCO Pension Plan as the Sponsor and plan assets are held by US Bank (the Trustee).

Condensed financial information related to each plan in UCRS and the changes in pension liability for UCRP, UC-VERIP and the CHRCO Pension Plan for the year ended June 30, 2019 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA					
	UNIVERSITY OF CALIFORNIA RETIREMENT PLAN	UNIVERSITY OF CALIFORNIA UC-VERIP	SUBTOTAL	UNIVERSITY OF CALIFORNIA RETIREMENT SAVINGS PROGRAM	TOTAL	CHILDREN'S HOSPITAL & RESEARCH CENTER AT OAKLAND PENSION PLAN
CONDENSED STATEMENT OF PLAN FIDUCIARY NET POSITION						
Investments at fair value	\$71,133,046	\$65,726	\$71,198,772	\$24,257,931	\$95,456,703	\$501,110
Participants' interests in mutual funds				1,691,773	1,691,773	
Investment of cash collateral	3,933,691	3,642	3,937,333	2,191,193	6,128,526	
Other assets	1,249,426	930	1,250,356	238,863	1,489,219	
Total assets	76,316,163	70,298	76,386,461	28,379,760	104,766,221	501,110
Collateral held for securities lending	3,932,614	3,641	3,936,255	2,190,594	6,126,849	
Other liabilities	2,104,586	1,879	2,106,465	410,109	2,516,574	2,500
Total liabilities	6,037,200	5,520	6,042,720	2,600,703	8,643,423	2,500
Net position held in trust	\$70,278,963	\$64,778	\$70,343,741	\$25,779,057	\$96,122,798	\$498,610
CONDENSED STATEMENT OF CHANGES IN PLANS' FIDUCIARY NET POSITION						
Contributions	\$3,365,193		\$3,365,193	\$1,449,864	\$4,815,057	\$31,200
Net appreciation (depreciation) in fair value of investments	2,780,821	\$2,526	2,783,347	918,238	3,701,585	
Investment and other income, net	1,237,774	1,222	1,238,996	485,414	1,724,410	25,203
Total additions	7,383,788	3,748	7,387,536	2,853,516	10,241,052	56,403
Benefit payment and participant withdrawals	3,816,434	4,213	3,820,647	1,454,549	5,275,196	15,143
Other deductions	61,981	5	61,986	6,014	68,000	2,711
Total deductions	3,878,415	4,218	3,882,633	1,460,563	5,343,196	17,854
Increase in net position held in trust	3,505,373	(470)	3,504,903	1,392,953	4,897,856	38,549
Net position held in trust						
Beginning of year	66,773,590	65,248	66,838,838	24,386,104	91,224,942	460,061
End of year	\$70,278,963	\$64,778	\$70,343,741	\$25,779,057	\$96,122,798	\$498,610
CHANGES IN TOTAL PENSION LIABILITY						
Service cost	\$1,946,612		\$1,946,612			\$11,430
Interest	5,576,660	\$1,983	5,578,643			34,165
Difference between expected and actual experience	334,605	(79)	334,526			
Changes of benefit terms						5,214
Changes of assumptions or other inputs	7,816,717	714	7,817,431			(9,540)
Benefits paid, including refunds of employee contributions	(3,816,434)	(4,213)	(3,820,647)			(15,143)
Net change in total pension liability	11,858,160	(1,595)	11,856,565			26,126
Total pension liability:						
Beginning of year	76,546,448	29,540	76,575,988			484,209
End of year	\$88,404,608	\$27,945	\$88,432,553			\$510,335
Net pension liability (asset), end of year	\$18,125,645	(\$36,833)	\$18,088,812			\$11,725

Additional information on the retirement plans can be obtained from the 2018-2019 annual reports of the University of California Retirement System which can be found at <http://reportingtransparency.universityofcalifornia.edu/>.

University of California Retirement Plan

UCRP provides lifetime retirement income, disability protection, death benefits, and post-retirement and pre-retirement survivor benefits to eligible employees of the University, and its affiliates. Membership is required in UCRP for all employees appointed to work at least 50 percent time for one year or more or for an indefinite period or for a definite period of a year or more. An employee may also become eligible by completing 1,000 hours within a 12-month period. Generally, five years of service are required for entitlement to plan benefits. The amount of pension benefit is determined under the basic formula of covered compensation times age factor times years of service credit. The maximum monthly benefit cannot exceed 100 percent of the employee's highest average plan compensation over a 36-month period, subject to certain limits imposed under the Internal Revenue Code or plan provisions. Annual cost-of-living adjustments are made to monthly benefits according to a specified formula based on the Consumer Price Index. Ad hoc COLAs may be granted subject to funding availability.

The University's membership in UCRP consisted of the following at June 30, 2019:

	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	UNIVERSITY OF CALIFORNIA
Retirees and beneficiaries receiving benefits	65,863	13,221	79,084
Inactive members entitled to, but not receiving benefits	91,600	9,264	100,864
Active members:			
Vested	72,776	1,627	74,403
Nonvested	52,802	722	53,524
Total active members	125,578	2,349	127,927
Total membership	283,041	24,834	307,875

Contributions

Contributions to UCRP are based upon rates determined by The Regents. The Regents' funding policy provides for contributions at rates to maintain UCRP on an actuarially sound basis. While the University's independent actuary annually determines the total funding policy contributions, the University is not required to contribute an amount equal to the total funding contribution. The actual contributions and the contribution rates of the University and employees are based on numerous factors, including the availability of funds to the University, the impact of employee contributions on the competitiveness of the University's total remuneration package, and collective bargaining agreements.

The Regents determines the portion of the total contribution to be made by the employer and by the employees, and employee contribution rates for represented employees are subject to collective bargaining. Effective July 1, 2014, employee member contributions range from 7.0 percent to 9.0 percent. The University pays a uniform contribution rate of 14.0 percent of covered payroll on behalf of all UCRP members. The University contribution rate will be increased starting July 1, 2020 by 0.5 percent per year, on July 1st, for six years to 17.0 percent.

Employee contributions to UCRP are accounted for separately and currently accrue interest at 6.0 percent annually. Upon termination, members may elect a refund of their contributions plus accumulated interest; vested terminated members who are eligible to retire may also elect monthly retirement income or possibly a lump sum equal to the present value of their accrued benefits.

Both current employees and retirees at LBNL participate in UCRP. The University makes contributions to UCRP for LBNL employees based upon rates authorized by The Regents and is reimbursed by the DOE. The University also makes contributions to UCRP for LANL and LLNL retirees and terminated vested members whose benefits were retained in UCRP at the time the joint ventures were formed. The contributions for the LANL and LLNL are actuarially determined based upon a contractual arrangement with the DOE that incorporates a formula targeted to maintain the LANL and LLNL segments within UCRP at a 100-percent funded level. The University is reimbursed by the DOE for these contributions. To the extent the University has recorded a net pension liability (and related deferred inflows and outflows of resources) that will be reimbursed under DOE contracts, a receivable from the DOE is recorded. As of June 30, 2019 and 2018, the University reported \$911.5 million and \$316.7 million, respectively, as other noncurrent Department of Energy receivables for pension liabilities. Contributions of \$225.6 million and \$307.9 million were deposited into UCRP on behalf of the DOE for the years ended June 30, 2019 and 2018, respectively.

Net Pension Liability

All UCRP assets are available to pay any member's benefit. However, assets and liabilities for the campus and medical center segment of UCRP are internally tracked separately from the DOE national laboratory segments of UCRP. The net pension liability for UCRP was as follows:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	UNIVERSITY OF CALIFORNIA
<i>At June 30, 2019</i>			
UCRP net position	\$61,056,391	\$9,222,572	\$70,278,963
Total pension liability	78,279,508	10,125,100	88,404,608
Net pension liability	\$17,223,117	\$902,528	\$18,125,645
<i>At June 30, 2018</i>			
UCRP net position	\$57,608,162	\$9,165,428	\$66,773,590
Total pension liability	67,065,682	9,480,766	76,546,448
Net pension liability	\$9,457,520	\$315,338	\$9,772,858

The University's net pension liability was measured as of June 30 and was calculated using the plan net position valued as of the measurement date and total pension liability determined based upon rolling forward the total pension liability from the results of the actuarial valuations as of July 1, one year prior to the measurement date. Actuarial valuations represent a long-term perspective and involve estimates of the value of reported benefits and assumptions about the probability of occurrence of events far into the future. The University's net pension liability was calculated using the following methods and assumptions:

	2019	2018
Inflation	2.5%	3.0 %
Investment rate of return	6.75	7.25
Projected salary increases	3.65 - 5.95	3.75 - 6.15
Cost-of-living adjustments	2.0	2.0

Actuarial assumptions are subject to periodic revisions as actual results are compared with past expectations and new estimates are made about the future.

The actuarial assumptions were changed in 2019 based upon the results of an experience study conducted for the period July 1, 2014 through June 30, 2018. In 2019, for preretirement mortality rates, the Pub-2010 Teacher Employee Amount-Weighted Above-Median Mortality Table was used. For post-retirement, healthy mortality rates were based on the Pub-2010 Healthy Teacher Amount-Weighted Above-Median Mortality Table multiplied by 90 percent for male Faculty members, 95 percent for female Faculty members, 100 percent for other male members and 110 percent for other female members. For beneficiaries of retired members, rates were based on the Pub-2010 Contingent Survivor Amount-Weighted Above-Median Mortality Table multiplied by 100 percent for males and 90 percent for females. For disabled members, rates were based on the Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table. All mortality tables above were projected generationally with the two-dimensional mortality improvement scale MP-2018.

The actuarial assumptions used in 2018 were based upon the results of an experience study conducted for the period July 1, 2010 through June 30, 2014. In 2018, for preretirement mortality rates, the RP-2014 White Collar Employee Mortality Tables (separate table for males and females) projected with the two-dimensional MP-2014 projection scale to 2029 were used. For post-retirement, healthy mortality rates were based on the RP-2014 White Collar Healthy Annuitant Mortality Table projected with the two-dimensional MP-2014 projection scale to 2029, and with ages then set forward one year. For disabled members, rates were based on the RP-2014 Disabled Retiree Mortality Table projected with the two-dimensional MP-2014 projection scale to 2029, and with ages then set back one year for males and set forward five years for females.

The long-term expected investment rate of return assumption for UCRP was determined in 2019 using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

	TARGET ALLOCATION	LONG-TERM EXPECTED REAL RATE OF RETURN
Asset class:		
U.S. equity	27.6%	5.6%
Developed international equity	16.8	6.5
Emerging market equity	5.6	8.6
Core bonds	13.0	1.5
High yield bonds	2.5	3.7
Treasury Inflation-Protected Securities	2.0	1.2
Emerging market debt	2.5	3.9
Private equity	10.0	9.2
Real estate	7.0	6.6
Absolute return	10.0	3.3
Real assets	3.0	5.6
Total	100.0%	5.4%

Discount Rate

The discount rate used to estimate the net pension liability as of June 30, 2019 and 2018 was 6.75 percent and 7.25 percent, respectively. To calculate the discount rate, cash flows into and out of UCRP were projected in order to determine whether UCRP has sufficient cash in future periods for projected benefit payments for current members. For this purpose, University, state and member contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected University and member contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions of future plan members, are not included. UCRP was projected to have assets sufficient to make projected benefit payments for current members for all future years as of June 30, 2019 and 2018.

Sensitivity of the Net Pension Liability to the Discount Rate Assumption

The following presents the June 30, 2019 net pension liability of the University calculated using the June 30, 2019 discount rate assumption of 6.75 percent, as well as what the net pension liability would be if it were calculated using a discount rate different than the current assumption:

<i>(in thousands of dollars)</i>	1% DECREASE (5.75%)	CURRENT DISCOUNT (6.75%)	1% INCREASE (7.75%)
UCRP	\$30,096,724	\$18,125,645	\$8,250,405
UC-VERIP	(35,386)	(36,833)	(38,139)

Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred outflows of resources and deferred inflows of resources for pensions were related to the following sources:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	TOTAL UCRP	UC-VERIP	TOTAL
<i>At June 30, 2019</i>					
DEFERRED OUTFLOWS OF RESOURCES					
Difference between expected and actual experience	\$451,810		\$451,810		\$451,810
Changes of assumptions or other inputs	5,796,896		5,796,896		5,796,896
Total	\$6,248,706		\$6,248,706		\$6,248,706
DEFERRED INFLOWS OF RESOURCES					
Difference between expected and actual experience	\$7,617		\$7,617		\$7,617
Net difference between projected and actual earnings on pension plan investments	114,396	\$8,955	123,351	\$109	123,460
Total	\$122,013	\$8,955	\$130,968	\$109	\$131,077

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	TOTAL UCRP	UC-VERIP	TOTAL
<i>At June 30, 2018</i>					
DEFERRED OUTFLOWS OF RESOURCES					
Difference between expected and actual experience	\$244,188	\$1,696	\$245,884		\$245,884
Changes of assumptions or other inputs	458,349		458,349		458,349
Total	\$702,537	\$1,696	\$704,233		\$704,233
DEFERRED INFLOWS OF RESOURCES					
Difference between expected and actual experience	\$55,427		\$55,427		\$55,427
Net difference between projected and actual earnings on pension plan investments	208,589	\$4,484	213,073	\$14	213,087
Total	\$264,016	\$4,484	\$268,500	\$14	\$268,514

The net amount of deferred outflows of resources and deferred inflows of resources as of June 30, 2019 related to pensions that will be recognized in pension expense during the next five years are as follows:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	TOTAL UCRP	UC-VERIP	TOTAL
2020	\$2,016,006	\$55,212	\$2,071,218	\$441	\$2,071,659
2021	1,015,452	(96,850)	918,602	(785)	917,817
2022	1,658,459	10,137	1,668,596	64	1,668,660
2023	1,439,808	22,546	1,462,354	171	1,462,525
Total	\$6,129,725	(\$8,955)	\$6,120,770	(\$109)	\$6,120,661

Defined Contribution Plan

Effective July 1, 2016, newly hired (or becoming eligible) employees can elect a defined contribution option instead of participating in UCRP. For employees who elect this option, both the University and the participants make mandatory contributions, on a pretax basis, on eligible pay up to the IRS compensation limit. The participant contributes 7.0 percent and the University contributes 8.0 percent. University contributions are fully vested after one year of service. For employees who elect to participate in UCRP and who are subject to the California Public Employees' Pension Reform Act (PEPRA) maximum, both the University and the participants make mandatory DC Plan retirement contributions on a pretax basis. For designated faculty, the University contributes 5.0 percent to the DC Plan on all eligible pay up to the IRC compensation limit. For staff, the University contributes 3.0 percent to the DC Plan on eligible pay above the PEPRA maximum up to the IRC compensation limit. Both designated faculty and staff contribute 7.0 percent on eligible pay above the PEPRA maximum up to the IRC compensation limit. The University may also contribute on behalf of eligible senior managers. Employer contributions to the DC Plan were \$48.5 million and \$29.8 million for the years ended June 30, 2019 and 2018, respectively.

The DC Plan Pretax Account also includes mandatory contributions from part-time, seasonal and temporary employees at the University who are not currently participating in UCRP or another defined benefit plan to which the University contributes (Safe Harbor participants). Safe Harbor participation includes certain University student employees and resident aliens with F-1 and J-1 visa status. Safe Harbor participants contribute 7.5 percent of their gross salary (up to the Social Security wage base) to the Plan in lieu of deductions for Social Security taxes.

All University employees, except students who normally work fewer than 20 hours per week, are eligible to make voluntary contributions to the DC Plan After-Tax Account and defer taxation on the earnings until the accumulations are withdrawn. The maximum amount participants may contribute annually to the After-Tax Account is determined by the IRC §415(c) limit. The University may also make DC Plan contributions on behalf of eligible senior managers.

The Supplemental Defined Contribution Plan (SDC Plan) accepts employer contributions on behalf of certain designated employees. Employer contributions are fully vested and there is no provision for employee contributions. There were no assets or employer contributions to the SDC Plan for the years ended June 30, 2019 and 2018.

Tax Deferred 403(b) Plan

The University's Tax-Deferred 403(b) Plan (403(b) Plan) accepts pretax employee contributions.

The University also makes 403(b) Plan retirement contributions on the summer or equivalent term salaries of eligible academic employees who teach, conduct research or provide administrative service during the summer session or an equivalent term. To be eligible, employees must hold academic year appointments and be active members of UCRP or another defined benefit plan to which the University contributes. The contribution rate is 7.0 percent of eligible salary, of which 3.5 percent is University-paid and 3.5 percent is employee-paid, both on a pretax basis. The University may also make contributions in behalf of certain members of management. Employer contributions to the 403(b) Plan were \$8.0 million and \$8.7 million for the years ended June 30, 2019 and 2018.

457(b) Deferred Compensation Plan

The University's 457(b) Deferred Compensation Plan (457(b) Plan) accepts pretax employee contributions. There were no employer contributions to the 457(b) Plan for the years ended June 30, 2019 and 2018.

Participants in the DC Plan, the SDC Plan, the 403(b) Plan and the 457(b) Plan may direct their elective and nonelective contributions to investment funds managed by the Chief Investment Officer. They may also invest account balances in certain mutual funds. The participants' interests in mutual funds is shown separately in the statement of plans' fiduciary net position.

University of California Voluntary Early Retirement Incentive Program

UC-VERIP is a defined benefit pension plan providing lifetime supplemental retirement income and survivor benefits to UC-VERIP members who elected early retirement under provisions of the Plan. The University contributed to VERIP on behalf of these UC-VERIP members. As of July 1, 2019, there are 450 retirees or beneficiaries receiving benefits under this voluntary early retirement program.

The University and the DOE laboratories previously made contributions to the Plan sufficient to maintain the promised benefits. The actuarially determined contributions are zero for the years ended June 30, 2019 and 2018.

Children's Hospital and Research Center at Oakland Pension Plan

CHRCO has a noncontributory defined benefit plan subject to the single employer defined benefit under ERISA rules that covers active and retired employees. The CHRCO Pension Plan was amended effective January 1, 2012 to exclude unrepresented employees hired or rehired on or after January 1, 2012. The CHRCO Pension Plan provides retirement, disability and death benefits to plan participants. Benefits are based on a participant's length of service, age at retirement and average compensation as defined by the CHRCO Pension Plan.

The net pension liability for the Plan was calculated based upon the following assumptions as of June 30, 2019: 3.0 percent inflation, 7.0 percent investment rate of return, 4.0 percent projected salary increases and no cost-of-living adjustments. CHRCO recognized pension expense of \$27.1 million at June 30, 2019. The net pension liability for the Plan was calculated based upon the following assumptions as of June 30, 2018: 3.0 percent inflation, 7.0 percent investment rate of return, 5.0 percent salary increases through 2017, 4.0 percent afterward and no cost-of-living adjustments. CHRCO recognized pension expense of \$22.3 million at June 30, 2018.

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an experience review conducted during 2019. In 2019, mortality rates were based on the RP-2014 mortality (base year 2006) with fully generational projected mortality improvements using projection scale MP-2018.

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an experience review conducted during 2017. In 2018, mortality rates were based on the RP-2016 mortality with fully generational projected mortality improvements using modified scale MP-2016. The MP-2016 projection scale was modified for this valuation to utilize the Social Security Administration's intermediate cost projection scale and a 15-year convergence period.

Additional information on the CHRCO Pension Plan can be found in the annual reports, which can be obtained by writing to the Children's Hospital of Oakland, Finance Department, 747 52nd Street, Oakland, California 94609.

Membership in the CHRCO Plan consisted of the following at June 30, 2019:

Retirees and beneficiaries receiving benefits	1,031
Inactive members entitled to, but not yet receiving benefits	1,152
Active members	1,856
Total membership	4,039

Contributions

Employer contributions are determined under IRC Section 430. Employees are not required or permitted to contribute to the Plan.

Net Pension Liability

The net pension liability for CHRCO was measured as of June 30 and the total pension liability was determined by an actuarial valuation as of January 1, rolled forward to June 30. The target allocation and projected arithmetic real rates of return, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption for each major asset class for the CHRCO Pension Plan are as follows for June 30, 2019:

	PORTFOLIO PERCENTAGE	LONG-TERM EXPECTED REAL RATE OF RETURN
Asset class:		
Domestic equity	49.3%	4.3%
Developed international equity	11.6	5.9
Emerging market equity	1.5	8.4
Core fixed income	37.6	2.2
Total	100.0%	

Discount Rate

The discount rate used to measure the total pension liability was 7.0 percent for June 30, 2019 and 2018. The projection of cash flows used to determine the discount rate assumes that CHRCO will make contributions to the plan under IRC Section 430's minimum requirements for a period of eight years, and that all future assumptions are met. Based on these assumptions, the pension plan's fiduciary net position is projected to be available to make all projected future benefit payments for current active and inactive employees.

Sensitivity of the Net Pension Liability to the Discount Rate Assumption

The following presents the June 30, 2019 net pension liability calculated using the June 30, 2019 discount rate assumption of 7.0 percent, as well as what the net pension liability would be if it were calculated using a discount rate different than the current assumption:

<i>(in thousands of dollars)</i>	1% DECREASE (6.0%)	CURRENT DISCOUNT (7.0%)	1% INCREASE (8.0%)
Net pension liability	\$84,367	\$11,725	(\$48,305)

Deferred Outflows of Resources and Deferred Inflows of Resources

As of June 30, deferred outflows of resources and deferred inflows of resources were as follows:

<i>(in thousands of dollars)</i>	2019	2018
DEFERRED OUTFLOWS OF RESOURCES		
Difference between expected and actual experience	\$8,106	\$5,714
Changes of benefit terms	94	178
Changes of assumptions	9,550	15,659
Net difference between projected and actual earnings on pension plan investments	2,506	
Total	\$20,256	\$21,551
DEFERRED INFLOWS OF RESOURCES		
Difference between expected and actual experience	\$1,050	\$1,709
Changes of assumptions	7,993	
Net difference between projected and actual earnings on pension plan investments		267
Total	\$9,043	\$1,976

The net amount of deferred outflows of resources and deferred inflows of resources related to pensions that will be recognized in pension expense during the next five years is as follows:

<i>(in thousands of dollars)</i>	
<i>Year Ending June 30</i>	
2020	\$9,044
2021	959
2022	965
2023	1,239
2024	(633)
Thereafter	(361)
Total	\$11,213

Orange County Employees Retirement System (OCERS)

OCERS administers a cost-sharing, multi-employer defined benefit pension plan for the County of Orange, City of San Juan Capistrano and thirteen special districts. Certain employees of one of the University's medical centers were eligible to continue to participate in OCERS at the time the county hospital was acquired by the University.

OCERS provides retirement, disability and death benefits. Retirement benefits are tiered based upon date of OCERS membership. Participation in OCERS for the University's employees is closed. The University's share of net pension liability, deferred inflows of resources, deferred outflows of resources and pension expense have been determined based upon its specific actuarial accrued liability and a share of assets allocated in accordance with a formula set forth in OCERS' policy. The fiduciary net position and changes in net position have been measured consistent with the accounting policies used by OCERS. Pursuant to an agreement between the University and the County of Orange (OC), the University and OC will equally split the contributions and net pension liability. The amounts reported in the financial statements reflect the University's share of the net pension liability, deferred inflows and outflows and pension expense.

Additional information on OCERS can be obtained from the 2018-2019 annual reports of the Orange County Employees Retirement System at <http://www.ocers.org>.

Membership in the OCERS Plan consisted of the following at December 31, 2018: 17,674 retired members and beneficiaries, 6,026 inactive members, 21,929 active members.

Contributions

Contribution rates are set by the OCERS Board of Trustees.

Net Pension Liability

The University's proportionate share of the net pension liability was \$17.4 million and \$13.8 million as of June 30, 2019 and 2018, respectively. The net pension liability for OCERS was measured as of June 30, 2019 and 2018, and the total pension liability was determined by an actuarial valuation as of December 31, 2018 and 2017 rolled forward to June 30, 2019 and 2018, respectively. The actuarial assumptions used in 2019 and 2018 were based on the results of an experience study for the period from January 1, 2014 through December 31, 2016.

The net pension liability for the Plan was calculated based upon the following assumptions as of June 30, 2019 and 2018: 2.8 percent inflation, 7.0 percent investment rate of return, 4.25 to 12.25 percent projected salary increases for general members and 2.8 percent cost-of-living adjustments.

The target allocation and projected arithmetic real rates of return, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption for each major asset class for the OCERS Plan are as follows:

	ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM	
	TARGET ALLOCATION	LONG-TERM EXPECTED REAL RATE OF RETURN
Asset class:		
Global equity	35.0%	6.4%
Core bonds	13.0	1.0
High-yield bonds	4.0	3.5
Bank loan	2.0	2.9
Treasury Inflation-Protected Securities	4.0	1.0
Emerging market debt	4.0	3.8
Real estate	10.0	4.3
Core infrastructure	2.0	5.5
Natural resources	10.0	7.9
Risk mitigation	5.0	4.7
Mezzanine/distressed debts	3.0	6.5
Private equity	8.0	9.5
Total	100.0%	

Discount Rate

The discount rate used to measure the total pension liability was 7.0 percent for June 30, 2019 and 2018. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rate. For this purpose, only employer contributions will be made at rates equal to the actuarially determined contribution rates.

Sensitivity of the Net Pension Liability to the Discount Rate Assumption

The following presents the current-period net pension liability calculated using the June 30, 2019 discount rate assumption of 7.0 percent, as well as what the net pension liability would be if it were calculated using a discount rate different than the current assumption:

<i>(in thousands of dollars)</i>	ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM		
	1% DECREASE (6.0%)	CURRENT DISCOUNT RATE (7.0%)	1% INCREASE (8.0%)
Net pension liability	\$25,314	\$17,404	\$10,975

Deferred Outflows of Resources and Deferred Inflows of Resources

As of June 30, deferred outflows of resources and deferred inflows of resources were as follows:

<i>(in thousands of dollars)</i>	2019	2018
DEFERRED OUTFLOWS OF RESOURCES		
Changes of assumptions or other inputs	\$949	\$1,186
Difference between expected and actual experience	542	374
Net difference between projected and actual earnings on pension plan investments	1,525	
Total	\$3,016	\$1,560
DEFERRED INFLOWS OF RESOURCES		
Difference between expected and actual experience	\$1,751	\$2,286
Changes of assumptions or other inputs	261	482
Net difference between projected and actual earnings on pension plan investments		1,887
Total	\$2,012	\$4,655

The net amount of deferred outflows of resources and deferred inflows of resources related to pensions that will be recognized in pension expense during the next five years and thereafter is as follows:

<i>(in thousands of dollars)</i>	
<i>Year Ending June 30</i>	
2020	\$288
2021	(56)
2022	80
2023	641
2024	51
Total	\$1,004

16. RETIREE HEALTH BENEFIT COSTS AND OBLIGATIONS

The University administers single-employer health and welfare plans to provide health and welfare benefits, primarily medical, dental and vision, to eligible retirees (and their eligible family members) of the University of California and its affiliates through the University of California Retiree Health Benefit Trust (UCRHBT or Trust). The Regents has the authority to establish and amend the plan. While retiree health benefits are not a legal obligation of the University and can be cancelled or modified at any time, accounting standards require the University to recognize a net retiree health liability based on the current practices of providing retiree health benefits.

Campus and medical center contributions toward retiree health benefits, at rates determined by the University, are made to UCRHBT. The University receives retiree health contributions from retirees that are deducted from their UCRP benefit payments or are received from the retiree through direct pay. The University acts as a third-party administrator on behalf of UCRHBT and pays health care insurers and administrators amounts currently due under the University's retiree health benefit plans for retirees. UCRHBT reimburses the University for these amounts.

LBNL participates in the University's retiree health plans. LBNL does not participate in UCRHBT; therefore, the DOE has no interest in the Trust's assets. The University directly pays health care insurers and administrators amounts currently due under the University's retiree health benefit plans for retirees who previously worked at LBNL, and is reimbursed by the DOE. To the extent the University has recorded a net retiree health benefits liability (and related deferred inflows and outflows of resources) that will be reimbursed under DOE contracts, a receivable from the DOE is recorded. The University recorded receivables from the DOE of \$667.6 million and \$656.9 million for 2019 and 2018, respectively, representing the DOE's share of the net retiree health benefits liability.

Condensed financial information for the changes in retiree health benefits liability for the year ended June 30, 2019 is as follows:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
Contributions	\$515,048	\$22,209	\$537,257
Investment income, net	3,195		3,195
Total additions	518,243	22,209	540,452
Insurance premiums, net	(490,615)	(22,209)	(512,824)
Other deductions	(4,300)		(4,300)
Total deductions	(494,915)	(\$22,209)	(517,124)
Increase in net position held in UCRHBT	23,328		23,328
Net position held in UCRHBT, beginning of year	133,581		133,581
Net position held in UCRHBT, end of year	\$156,909		\$156,909

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
CHANGES IN TOTAL RETIREE HEALTH BENEFITS LIABILITY			
Service cost	\$798,249	\$17,405	\$815,654
Interest	734,693	23,828	758,521
Changes of benefit terms	(28,401)	(914)	(29,315)
Difference between expected and actual experience	(1,175,284)	(43,862)	(1,219,146)
Changes of assumptions and other inputs	1,091,609	32,430	1,124,039
Benefits paid	(490,615)	(22,209)	(512,824)
Retiree contributions	82,710	3,110	85,820
Net change in total retiree health benefits liability	1,012,961	9,788	1,022,749
Total retiree health benefits liability			
Beginning of year	18,388,092	607,754	18,995,846
End of year	19,401,053	617,542	20,018,595
Net retiree health benefits liability, end of year	\$19,244,144	\$617,542	\$19,861,686

Benefits

Retirees are eligible for medical and dental benefits. The costs of the medical and dental benefits are shared between the University and the retiree. The University does not contribute toward the cost of other benefits available to retirees. Retirees employed by the University prior to 1990 and not rehired after that date are eligible for the University's maximum contribution if they retire before age 55 and have at least 10 years of service, or if they retire at age 55 or later and have at least five years of service. Retirees employed by the University after 1989 and prior to July 2013 become eligible for a percentage of the University's contribution starting at 50 percent of the maximum University contribution with 10 years of service, increasing to 100 percent after 20 years of service. Retirees who are employed by the University after July 1, 2013, and retire at the age of 56 or older, become eligible for a percentage of the University's contribution based on age and years of service. Retirees are eligible for the maximum University contribution at age 65 with 20 or more years of service. Retirees pay the excess, if any, of the premium over the applicable portion of the University's contribution.

Membership in a defined benefit plan to which the University contributes or participation in the DC Plan as a result of a Savings Choice election is required to become eligible for retiree health benefits. Participation in the retiree health benefit plans consisted of the following at June 30, 2019:

	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
Retirees and beneficiaries receiving benefits	43,631	1,863	45,494
Active members entitled to, but not yet receiving benefits	131,678	2,375	134,053
Total membership	175,309	4,238	179,547

Contributions

The University does not pre-fund retiree health benefits and instead provides for benefits based upon projected pay-as-you-go financing. University and retiree contributions toward premiums made under purchased plan arrangements are determined by applying the health plan contract rates across the number of participants in the respective plans. Premium rates for the self-insured plan contributions are set by the University based upon a trend analysis of the historic cost, utilization, demographics and administrative expenses to provide for the claims incurred and the actuarially determined level of incurred but not reported liability. The assessment rates were \$2.70 and \$2.80 per \$100 of UCRP covered payroll effective July 1, 2018 and 2017, respectively.

In addition to the explicit University contribution provided to retirees, there is an “implicit subsidy.” The gross premiums for members that are not currently eligible for Medicare benefits are the same for active employees and retirees, based on a blend of their health costs. Retirees, on average, are expected to have higher health care costs than active employees. This is primarily due to the older average age of retirees. Since the same gross premiums apply to both groups, the premiums paid for active employees by the University are subsidizing the premiums for retirees. This effect is called the implicit subsidy. The implicit subsidy associated with retiree health costs paid during the past year is also considered to be a contribution from the University.

Net Retiree Health Benefits Liability

The University’s net retiree health benefits liability was measured as of June 30 based on rolling forward the results of the actuarial valuations as of July 1, one year prior to the measurement date. Actuarial valuations represent a long-term perspective and involve estimates of the value of reported benefits and assumptions about the probability of occurrence of events far into the future. Significant actuarial methods and assumptions used to calculate the University’s net retiree health benefits liability were:

<i>(shown as percentage)</i>	2019	2018
Discount rate	3.50%	3.87%
Inflation	2.5	3.0
Investment rate of return	2.5	3.0
Health care cost trend rates	Initially ranges from 4.4 to 9.4 decreasing to an ultimate rate of 4.0 for 2077 and later years.	Initially ranges from 5.0 to 9.3 decreasing to an ultimate rate of 5.0 for 2033 and later years.

Actuarial assumptions are subject to periodic revisions as actual results are compared with past expectations and new estimates are made about the future. The actuarial assumptions were changed in 2019 based upon the results of an experience study conducted for the period July 1, 2014 through June 30, 2018. For pre-retirement mortality rates, the Pub-2010 Teacher Employee Headcount-Weighted Above-Median Mortality Table were used. For post-retirement, healthy mortality rates were based on the Pub-2010 Healthy Teacher Retiree Headcount-Weighted Above-Median Mortality Table and multiplied by 90 percent for faculty members or 115 percent and 110 percent for other male and female members, respectively. For beneficiaries of retired members, rates were based on the Pub-2010 Contingent Survivor Headcount-Weighted Above-Median Mortality Table. For disabled members, rates were based on the Pub-2010 Non-Safety Disabled Retiree-Headcount Weighted Mortality Table. All mortality rates are projected generationally with the two-dimensional mortality improvement scale MP-2018.

The actuarial assumptions used in 2018 were based upon the results of an experience study conducted for the period of July 1, 2010 through June 30, 2014. For pre-retirement mortality rates, the RP-2014 White Collar Employee Mortality Tables (separate table for males and females) projected with the two-dimensional MP-2014 projection scale to 2029 were used. For post-retirement, healthy mortality rates are based on the RP-2014 White Collar Healthy Annuitant Mortality Table projected with the two-dimensional MP-2014 projection scale to 2029, and with ages then set forward one year. For disabled members, rates are based on the RP-2014 Disabled Retiree Mortality Table projected with the two-dimensional MP-2014 projection scale to 2029, and with ages then set back one year for males and set forward five years for females. For disabled members, rates are based on the RP-2014 Disabled Retiree Mortality Table, projected with the two-dimensional MP-2014 projection scale to 2029 and with ages then set back one year for males and set forward five years for females.

Sensitivity of Net Retiree Health Benefits Liability to the Health Care Cost Trend Rate

The following presents the June 30, 2019 net retiree health benefits liability of the University calculated using the June 30, 2019 health care cost trend rate assumption with initial trend ranging from 4.4 percent to 9.4 percent grading down to an ultimate trend of 4.0 percent over 58 years, as well as what the net retiree health benefits liability would be if it were calculated using a health care cost trend rate different than the current assumption:

<i>(in thousands of dollars)</i>	1% DECREASE (3.4% to 8.4%) DECREASING TO (3.0%)	CURRENT TREND (4.4% to 9.4%) DECREASING TO (4.0%)	1% INCREASE (5.4% to 10.4%) DECREASING TO (5.0%)
Net retiree health benefits liability	\$16,376,081	\$19,861,686	\$24,479,845

Discount Rate

The discount rate used to estimate the net retiree health benefits liability as of June 30, 2019 and 2018 was 3.50 percent and 3.87 percent, respectively. The discount rate was based on the Bond Buyer 20-year tax-exempt general obligations municipal bond index rate since UCHRBT plan assets are not sufficient to make benefit payments.

Sensitivity of Net Retiree Health Benefits Liability to the Discount Rate Assumption

The following presents the June 30, 2019 net retiree health benefits liability of the University calculated using the June 30, 2019 discount rate assumption of 3.5 percent, as well as what the net retiree health benefits liability would be if it were calculated using a discount rate different than the current assumption:

<i>(in thousands of dollars)</i>	1% DECREASE (2.5%)	CURRENT DISCOUNT (3.5%)	1% INCREASE (4.5%)
Net retiree health benefits liability	\$23,772,386	\$19,861,686	\$16,787,001

Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred outflows of resources and deferred inflows of resources for retiree health benefits were related to the following sources:

(in thousands of dollars)

2019	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
DEFERRED OUTFLOWS OF RESOURCES			
Difference between expected and actual experience	\$64,528	\$3,200	\$67,728
Changes of assumptions or other inputs	3,743,309	94,691	3,838,000
Net difference between projected and actual earnings on plan investments	3,223		3,223
Total	\$3,811,060	\$97,891	\$3,908,951
DEFERRED INFLOWS OF RESOURCES			
Difference between expected and actual experience	\$2,969,290	\$83,537	\$3,052,827
Changes of assumptions or other inputs	2,779,110	64,446	2,843,556
Total	\$5,748,400	\$147,983	\$5,896,383

(in thousands of dollars)

2018	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
DEFERRED OUTFLOWS OF RESOURCES			
Difference between expected and actual experience	\$74,770	\$4,142	\$78,912
Changes of assumptions or other inputs	3,340,913	92,220	3,433,133
Net difference between projected and actual earnings on plan investments	3,815		3,815
Total	\$3,419,498	\$96,362	\$3,515,860
DEFERRED INFLOWS OF RESOURCES			
Difference between expected and actual experience	\$2,279,073	\$62,148	\$2,341,221
Changes of assumptions or other inputs	3,220,923	83,384	3,304,307
Total	\$5,499,996	\$145,532	\$5,645,528

The net amount of deferred outflows of resources and deferred inflows of resources as of June 30, 2019 related to retiree health benefits that will be recognized in retiree health benefit expense during the next five years and thereafter are as follows:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
2020	(\$226,060)	(\$10,510)	(\$236,570)
2021	(226,400)	(10,510)	(236,910)
2022	(226,816)	(15,371)	(242,187)
2023	(227,201)	(12,299)	(239,500)
2024	(345,574)	(1,402)	(346,976)
Thereafter	(685,289)		(685,289)
Total	(\$1,937,340)	(\$50,092)	(\$1,987,432)

17. ENDOWMENTS AND GIFTS

Endowments and gifts are held and administered either by the University or by the campus foundations.

University of California

The value of endowments and gifts held and administered by the University, exclusive of income distributed to be used for operating purposes, at June 30, 2019 and 2018 are as follows:

<i>(in thousands of dollars)</i>	UNIVERSITY OF CALIFORNIA			
	RESTRICTED NONEXPENDABLE	RESTRICTED EXPENDABLE	UNRESTRICTED	TOTAL
<i>At June 30, 2019</i>				
Endowments	\$1,176,981	\$3,308,042	\$6,291	\$4,491,314
Funds functioning as endowments		2,802,208	5,170,260	7,972,468
Gifts		1,819,515	15,244	1,834,759
University endowments and gifts	\$1,176,981	\$7,929,765	\$5,191,795	\$14,298,541
<i>At June 30, 2018</i>				
Endowments	\$1,148,699	\$3,123,815	\$5,861	\$4,278,375
Funds functioning as endowments		2,653,219	4,439,270	7,092,489
Gifts		1,630,200		1,630,200
University endowments and gifts	\$1,148,699	\$7,407,234	\$4,445,131	\$13,001,064

The University's endowment income distribution policies are designed to preserve the value of the endowment in real terms (after inflation) and to generate a predictable stream of spendable income. Endowment investments are managed to achieve the maximum long-term total return. As a result of this emphasis on total return, the proportion of the annual income distribution provided by dividend and interest income and by capital gains may vary significantly from year to year. The University's policy is to retain the realized and unrealized appreciation with the endowment after the annual income distribution has been made. The net appreciation available to meet future spending needs is subject to the approval of The Regents and amounted to \$2.7 billion and \$2.6 billion at June 30, 2019 and 2018, respectively.

The portion of investment returns earned on endowments held by the University and distributed at the end of each year to support current operations for the following year is based upon a rate that is approved by The Regents. The annual income distribution transferred to the campuses from endowments held by the University was \$352.7 million and \$315.1 million for the years ended June 30, 2019 and 2018, respectively. The portion of this annual income distribution from accumulated capital gains, in addition to the dividend and interest income earned during the year, was \$350.0 million and \$283.4 million for the years ended June 30, 2019 and 2018, respectively. Accumulated endowment income available for spending in the future, including the annual income distribution, was \$729.9 million and \$689.4 million at June 30, 2019 and 2018, respectively.

Campus Foundations

The value of endowments and gifts held by the campus foundations and administered by each of their independent Board of Trustees at June 30 are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS			
	RESTRICTED NONEXPENDABLE	RESTRICTED EXPENDABLE	UNRESTRICTED	TOTAL
<i>At June 30, 2019</i>				
Endowments	\$4,885,413	\$1,523,428		\$6,408,841
Funds functioning as endowments		1,918,902		1,918,902
Gifts		1,575,430	\$538,714	2,114,144
Campus foundations' endowments and gifts	\$4,885,413	\$5,017,760	\$538,714	\$10,441,887
<i>At June 30, 2018</i>				
Endowments	\$4,408,143	\$1,465,623		\$5,873,766
Funds functioning as endowments		1,839,813		1,839,813
Gifts		1,660,232	\$429,581	2,089,813
Campus foundations' endowments and gifts	\$4,408,143	\$4,965,668	\$429,581	\$9,803,392

18. SEGMENT INFORMATION

The University's medical centers' and CHRCO's revenues are pledged in support of the outstanding University of California Medical Center Pooled Revenue Bonds. The medical centers' operating revenues and expenses consist primarily of revenues associated with patient care and the related costs of providing that care.

Condensed financial statement information related to each of the University's medical centers for the year ended June 30, 2019 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA MEDICAL CENTERS				
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO
<i>Year Ended June 30, 2019</i>					
Revenue bonds outstanding	\$301,785	\$315,320	\$704,990	\$694,035	\$906,245
Related debt service payments	31,187	18,209	43,460	42,844	56,641
Bonds due serially through	2048	2049	2049	2049	2049
CONDENSED STATEMENT OF NET POSITION					
Current assets	\$1,356,413	\$731,126	\$1,901,162	\$794,978	\$1,896,612
Capital assets, net	1,115,955	766,783	1,671,098	1,609,016	2,427,895
Other assets	119,465	9,348	140,421	27,191	334,053
Total assets	2,591,833	1,507,257	3,712,681	2,431,185	4,658,560
Total deferred outflows of resources	746,421	312,113	858,937	701,535	1,352,434
Current liabilities	457,064	237,264	503,481	295,493	708,871
Long-term debt	320,819	329,673	876,922	771,188	917,096
Other noncurrent liabilities	2,774,731	1,261,246	2,996,536	2,122,303	4,070,505
Total liabilities	3,552,614	1,828,183	4,376,939	3,188,984	5,696,472
Total deferred inflows of resources	408,817	226,433	547,364	284,341	617,396
Net investment in capital assets	766,483	431,447	762,330	813,976	1,505,229
Restricted	13,283	9,348	24,776		97,383
Unrestricted	(1,402,943)	(676,041)	(1,139,791)	(1,154,581)	(1,905,486)
Total net position	(\$623,177)	(\$235,246)	(\$352,685)	(\$340,605)	(\$302,874)

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA MEDICAL CENTERS				
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION					
Operating revenues	\$2,329,290	\$1,278,934	\$2,858,931	\$2,067,448	\$4,819,214
Operating expenses	(2,267,844)	(1,119,677)	(2,538,061)	(2,054,330)	(4,746,178)
Depreciation expense	(84,354)	(84,675)	(152,840)	(102,640)	(212,222)
Operating income (loss)	(22,908)	74,582	168,030	(89,522)	(139,186)
Nonoperating revenues (expenses), net	16,360	(9,519)	17,603	(27,678)	44,172
Income before other changes in net position	(6,548)	65,063	185,633	(117,200)	(95,014)
Health systems support	(29,033)	(85,051)	(218,228)	(127,684)	(146,232)
Transfers (to) from University, net	(22,611)	39,622		(9,005)	
Changes in allocation for pension payable to University	(3,651)	(2,767)	3,866	(5,486)	(14,359)
Other, including donated assets	2,164	8,937	14,268	9,542	127,498
Increase (decrease) in net position	(59,679)	25,804	(14,461)	(249,833)	(128,107)
Net position - beginning of year	(563,498)	(261,050)	(338,224)	(90,772)	(174,767)
Net position - end of year	(\$623,177)	(\$235,246)	(\$352,685)	(\$340,605)	(\$302,874)
CONDENSED STATEMENT OF CASH FLOWS					
Net cash provided (used) by:					
Operating activities	\$320,161	\$237,729	\$541,026	\$274,655	\$431,764
Noncapital financing activities	(42,723)	(43,178)	(212,664)	(132,833)	(105,869)
Capital and related financing activities	(157,342)	(99,024)	(166,534)	(98,788)	(176,740)
Investing activities	(41,970)	27,858	9,091	4,673	(25,986)
Net increase in cash and cash equivalents	78,126	123,385	170,919	47,707	123,169
Cash and cash equivalents* - beginning of year	741,159	331,844	943,930	293,548	823,411
Cash and cash equivalents* - end of year	\$819,285	\$455,229	\$1,114,849	\$341,255	\$946,580

*Cash and cash equivalents on the medical centers' financial statements are included in the University's Short Term Investment Pool.

Condensed financial statement information related to each of the University's medical centers for the year ended June 30, 2018 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA MEDICAL CENTERS				
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO
<i>Year Ended June 30, 2018</i>					
Revenue bonds outstanding	\$319,685	\$316,560	\$717,840	\$700,975	\$910,600
Related debt service payments	31,566	18,199	41,504	42,372	56,315
Bonds due serially through	2048	2049	2049	2049	2049
CONDENSED STATEMENT OF NET POSITION					
Current assets	\$1,139,430	\$588,986	\$1,666,222	\$754,844	\$1,648,154
Capital assets, net	1,080,332	759,413	1,717,689	1,661,760	2,375,485
Other assets	151,231	41,547	105,689	24,352	293,397
Total assets	2,370,993	1,389,946	3,489,600	2,440,956	4,317,036
Total deferred outflows of resources	330,997	128,954	454,015	401,567	775,863
Current liabilities	408,938	230,244	471,304	246,776	655,904
Long-term debt	342,030	335,335	908,811	792,429	922,666
Other noncurrent liabilities	2,126,078	979,793	2,454,479	1,619,329	3,105,237
Total liabilities	2,877,046	1,545,372	3,834,594	2,658,534	4,683,807
Total deferred inflows of resources	388,442	234,578	447,245	274,761	583,859
Net investment in capital assets	698,049	421,341	780,373	847,607	1,447,759
Restricted	45,783	41,547	10,884		77,245
Unrestricted	(1,307,330)	(723,938)	(1,129,481)	(938,379)	(1,699,771)
Total net position	(\$563,498)	(\$261,050)	(\$338,224)	(\$90,772)	(\$174,767)

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA MEDICAL CENTERS				
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION					
Operating revenues	\$2,221,761	\$1,177,504	\$2,514,065	\$1,938,229	\$4,370,406
Operating expenses	(1,969,238)	(963,940)	(2,246,262)	(1,720,386)	(4,025,824)
Depreciation expense	(76,331)	(78,723)	(147,785)	(93,379)	(216,292)
Operating income	176,192	134,841	120,018	124,464	128,290
Nonoperating revenues (expenses), net	15,612	(12,761)	9,872	(24,959)	46,189
Income before other changes in net position	191,804	122,080	129,890	99,505	174,479
Health systems support	(30,285)	(48,173)	(212,827)	(124,055)	(116,286)
Transfers (to) from University, net	(19,570)	6,198	12,629	(3,034)	15,850
Changes in allocation for pension payable to University	2,032	9,523	(1,148)	(10,528)	(3,175)
Other, including donated assets	1,066	1,566	(466)	(17,984)	122,071
Increase (decrease) in net position	145,047	91,194	(71,922)	(56,096)	192,939
Net position - beginning of year	(708,545)	(352,244)	(266,302)	(34,676)	(367,706)
Net position - end of year	(\$563,498)	(\$261,050)	(\$338,224)	(\$90,772)	(\$174,767)
CONDENSED STATEMENT OF CASH FLOWS					
Net cash provided (used) by:					
Operating activities	\$237,543	\$126,943	\$353,639	\$170,516	\$380,406
Noncapital financing activities	(42,810)	(49,646)	(268,614)	(129,729)	(78,010)
Capital and related financing activities	(137,245)	(109,604)	(171,333)	(154,010)	(134,092)
Investing activities	55,262	21,289	22,477	11,949	28,383
Net increase (decrease) in cash and cash equivalents	112,750	(11,018)	(63,831)	(101,274)	196,687
Cash and cash equivalents* - beginning of year	628,409	342,862	1,007,761	394,822	626,724
Cash and cash equivalents* - end of year	\$741,159	\$331,844	\$943,930	\$293,548	\$823,411

*Cash and cash equivalents on the medical centers' financial statements are included in the University's Short Term Investment Pool.

Summarized financial information for each medical center is from the medical centers' audited financial statements. Certain revenue, such as financial support from the state for clinical teaching programs, is classified as state educational appropriations rather than medical center revenue in the University's statement of revenues, expenses and changes in net position. However, in the medical centers' audited financial statements and for segment reporting purposes, these revenues are classified as operating revenue. Additional information on the individual University of California medical centers can be obtained from their audited financial statements which are available at <http://reportingtransparency.universityofcalifornia.edu>.

Certain revenue generating projects (including student and faculty housing, parking facilities, student centers, recreation and events facilities, student health facilities and athletics facilities) are also financed by Limited Project Revenue Bonds; however, assets and liabilities are not required to be accounted for separately.

19. BLENDED COMPONENT UNIT INFORMATION

Condensed financial statement information related to certain of the University's blended component units for the year ended June 30, 2019 is as follows:

(in thousands of dollars)

	FIAT LUX	CHRCO	RESEARCH	HOUSING
CONDENSED STATEMENTS OF NET POSITION				
Current assets	\$296,425	\$328,387	\$54,824	\$597,182
Capital assets, net		330,502	147,469	522,928
Other assets	912,625	296,882	318,340	187,781
Total assets	1,209,050	955,771	520,633	1,307,891
Total deferred outflows of resources		20,256	5,801	
Current liabilities	264,370	197,066	10,234	55,924
Other noncurrent liabilities	752,362	143,891	469,289	1,278,931
Total liabilities	1,016,732	340,957	479,523	1,334,855
Total deferred inflows of resources		24,994		
Net investment in capital assets		227,984	37,441	25,232
Restricted		83,004	4,631	(9,188)
Unrestricted	192,318	299,088	4,839	(43,008)
Total net position	\$192,318	\$610,076	\$46,911	(\$26,964)
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION				
Operating revenues	\$275,675	\$653,675	\$14,893	\$90,917
Operating expenses	(258,705)	(619,035)	(3,128)	(42,277)
Depreciation expense		(35,887)	(2,582)	(15,104)
Operating income (loss)	16,970	(1,247)	9,183	33,536
Nonoperating revenues (expenses), net	53,966	44,063	(6,366)	(18,190)
Income before other changes in net position	70,936	42,816	2,817	15,346
Other, including donated assets		4,730		
Increase in net position	70,936	47,546	2,817	15,346
Net position – beginning of year	121,382	562,530	44,094	(42,310)
Net position – end of year	\$192,318	\$610,076	\$46,911	(\$26,964)
CONDENSED STATEMENT OF CASH FLOWS				
<i>Net cash provided (used) by:</i>				
Operating activities	\$87,500	\$48,781	\$11,183	\$100,284
Noncapital financing activities		31,735		
Capital and related financing activities		(48,572)	(46,477)	671,932
Investing activities	(138,034)	(12,945)	328	(750,496)
Net increase (decrease) in cash and cash equivalents	(50,534)	18,999	(34,966)	21,720
Cash and cash equivalents – beginning of year	56,321	141,548	192,422	17,233
Cash and cash equivalents – end of year	\$5,787	\$160,547	\$157,456	\$38,953

Condensed financial statement information related to certain of the University's blended component units for the year ended June 30, 2018 is as follows:

(in thousands of dollars)

	FIAT LUX	CHRCO	RESEARCH	HOUSING
CONDENSED STATEMENTS OF NET POSITION				
Current assets	\$314,210	\$311,603	\$35,922	\$219,120
Capital assets, net		325,396	113,603	354,533
Other assets	775,010	269,174	371,738	133
Total assets	1,089,220	906,173	521,263	573,786
Total deferred outflows of resources		21,551	6,077	
Current liabilities	282,264	193,228	9,822	35,606
Other noncurrent liabilities	685,574	156,024	473,424	580,490
Total liabilities	967,838	349,252	483,246	616,096
Total deferred inflows of resources		15,942		
Net investment in capital assets		222,341	37,698	11,882
Restricted		66,759	189,523	131,887
Unrestricted	121,382	273,430	(183,127)	(186,079)
Total net position	\$121,382	\$562,530	\$44,094	(\$42,310)
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION				
Operating revenues	\$239,201	\$591,608	\$14,812	\$94,376
Operating expenses	(283,309)	(582,955)	(2,305)	(50,843)
Depreciation expense		(35,946)	(3,114)	(14,987)
Operating income (loss)	(44,108)	(27,293)	9,393	28,546
Nonoperating revenues (expenses), net	17,473	44,428	(9,671)	(22,453)
Income (loss) before other changes in net position	(26,635)	17,135	(278)	6,093
Other, including donated assets	3	2,014		
Increase (decrease) in net position	(26,632)	19,149	(278)	6,093
Net position – beginning of year	148,014	543,381	44,372	(48,403)
Net position – end of year	\$121,382	\$562,530	\$44,094	(\$42,310)
CONDENSED STATEMENT OF CASH FLOWS				
<i>Net cash provided (used) by:</i>				
Operating activities	\$67,426	\$37,520	\$12,557	\$20,514
Noncapital financing activities	3	23,462		
Capital and related financing activities		(56,953)	178,913	159,480
Investing activities	(11,810)	18,657	(2,317)	(174,983)
Net increase in cash and cash equivalents	55,619	22,686	189,153	5,011
Cash and cash equivalents – beginning of year	702	118,862	3,269	12,222
Cash and cash equivalents – end of year	\$56,321	\$141,548	\$192,422	\$17,233

CHRCO's other assets include investments in the UCSF Foundation's Endowed Investment Pool of \$243.2 million and \$234.4 million at June 30, 2019 and 2018.

Additional information on the blended component units can be found in their separately issued audited financial statements.

20. CAMPUS FOUNDATIONS INFORMATION

Under University policies approved by The Regents, each individual campus may establish a separate foundation to provide valuable assistance in fundraising, public outreach and other support for the missions of the campus and the University. Although independent boards govern these foundations, their assets are dedicated for the benefit of the University of California.

Condensed financial statement information related to the University's campus foundations, including their allocated share of the assets and liabilities associated with securities lending transactions in the University's investment pools, for the year ended June 30, 2019 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS					
	BERKELEY	SAN FRANCISCO	LOS ANGELES	SAN DIEGO	ALL OTHER	TOTAL
CONDENSED STATEMENT OF NET POSITION						
Current assets	\$140,203	\$459,416	\$681,249	\$147,368	\$181,497	\$1,609,733
Noncurrent assets	2,301,104	1,846,848	3,127,358	968,994	1,664,074	9,908,378
Total assets	2,441,307	2,306,264	3,808,607	1,116,362	1,845,571	11,518,111
Current liabilities	19,706	35,277	314,259	7,598	42,564	419,404
Noncurrent liabilities	78,739	284,009	32,166	7,563	25,668	428,145
Total liabilities	98,445	319,286	346,425	15,161	68,232	847,549
Total deferred inflows of resources	63,275	31,377	50,162	63,377	20,484	228,675
Restricted	2,268,502	1,955,202	2,922,558	1,012,372	1,744,539	9,903,173
Unrestricted	11,085	399	489,462	25,452	12,316	538,714
Total net position	\$2,279,587	\$1,955,601	\$3,412,020	\$1,037,824	\$1,756,855	\$10,441,887
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION						
Operating revenues	\$147,008	\$251,426	\$347,424	\$57,320	\$116,152	\$919,330
Operating expenses	(228,154)	(341,081)	(329,950)	(107,952)	(163,076)	(1,170,213)
Operating income (loss)	(81,146)	(89,655)	17,474	(50,632)	(46,924)	(250,883)
Nonoperating revenues	106,490	80,891	94,558	58,847	90,241	431,027
Income (loss) before other changes in net position	25,344	(8,764)	112,032	8,215	43,317	180,144
Permanent endowments	118,880	113,882	122,232	32,584	70,773	458,351
Increase in net position	144,224	105,118	234,264	40,799	114,090	638,495
Net position – beginning of year	2,135,363	1,850,483	3,177,756	997,025	1,642,765	9,803,392
Net position – end of year	\$2,279,587	\$1,955,601	\$3,412,020	\$1,037,824	\$1,756,855	\$10,441,887
CONDENSED STATEMENT OF CASH FLOWS						
<i>Net cash provided (used) by:</i>						
Operating activities	(\$75,071)	(\$92,845)	\$19,883	(\$54,226)	(\$37,255)	(\$239,514)
Noncapital financing activities	91,333	114,840	115,297	27,944	46,445	395,859
Investing activities	(14,153)	(33,522)	(130,481)	26,288	6,740	(145,128)
Net increase (decrease) in cash and cash equivalents	2,109	(11,527)	4,699	6	15,930	11,217
Cash and cash equivalents – beginning of year	6,279	396,869	4,599	1,039	38,591	447,377
Cash and cash equivalents – end of year	\$8,388	\$385,342	\$9,298	\$1,045	\$54,521	\$458,594

Condensed financial statement information related to the University's campus foundations, including their allocated share of the assets and liabilities associated with securities lending transactions in the University's investment pools, for the year ended June 30, 2018 is as follows:

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS						
	BERKELEY	SAN FRANCISCO	LOS ANGELES	SAN DIEGO	ALL OTHER	TOTAL
CONDENSED STATEMENT OF NET POSITION						
Current assets	\$107,922	\$474,253	\$686,801	\$154,696	\$174,747	\$1,598,419
Noncurrent assets	2,192,958	1,715,100	2,875,851	912,566	1,576,866	9,273,341
Total assets	2,300,880	2,189,353	3,562,652	1,067,262	1,751,613	10,871,760
Current liabilities	16,540	37,777	301,390	7,868	51,559	415,134
Noncurrent liabilities	79,454	272,184	32,680	7,781	29,117	421,216
Total liabilities	95,994	309,961	334,070	15,649	80,676	836,350
Total deferred inflows of resources	69,523	28,909	50,826	54,588	28,172	232,018
Restricted	2,132,259	1,850,079	2,785,000	973,135	1,633,338	9,373,811
Unrestricted	3,104	404	392,756	23,890	9,427	429,581
Total net position	\$2,135,363	\$1,850,483	\$3,177,756	\$997,025	\$1,642,765	\$9,803,392
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION						
Operating revenues	\$181,523	\$356,891	\$526,446	\$167,338	\$109,197	\$1,341,395
Operating expenses	(237,177)	(293,986)	(354,556)	(99,789)	(150,696)	(1,136,204)
Operating income (loss)	(55,654)	62,905	171,890	67,549	(41,499)	205,191
Nonoperating revenues	156,996	198,747	202,766	55,599	109,614	723,722
Income before other changes in net position	101,342	261,652	374,656	123,148	68,115	928,913
Permanent endowments	79,970	104,342	79,895	35,167	109,333	408,707
Increase in net position	181,312	365,994	454,551	158,315	177,448	1,337,620
Net position – beginning of year	1,954,051	1,484,489	2,723,205	838,710	1,465,317	8,465,772
Net position – end of year	\$2,135,363	\$1,850,483	\$3,177,756	\$997,025	\$1,642,765	\$9,803,392
CONDENSED STATEMENT OF CASH FLOWS						
<i>Net cash provided (used) by:</i>						
Operating activities	(\$82,042)	(\$81,653)	\$116,294	(\$35,615)	(\$47,818)	(\$130,834)
Noncapital financing activities	61,846	105,665	67,843	26,744	93,434	355,532
Investing activities	21,888	161,997	(184,816)	8,657	(39,147)	(31,421)
Net increase (decrease) in cash and cash equivalents	1,692	186,009	(679)	(214)	6,469	193,277
Cash and cash equivalents – beginning of year	4,587	210,860	5,278	1,253	32,122	254,100
Cash and cash equivalents – end of year	\$6,279	\$396,869	\$4,599	\$1,039	\$38,591	\$447,377

Additional information on the foundations can be found in the foundations' separately issued annual reports, which can be obtained by contacting the individual foundation.

21. COMMITMENTS AND CONTINGENCIES

Contractual Commitments

Amounts committed but unexpended for construction projects totaled \$1.6 billion at June 30, 2019. The University has a remaining commitment to contribute \$89.8 million for investments in joint ventures at June 30, 2019.

The University leases land, buildings and equipment under agreements recorded as operating leases. Operating lease expenses for the years ended June 30, 2019 and 2018 were \$362.4 million and \$335.5 million, respectively. The terms of the operating leases extend through October 2042.

Future minimum payments on operating leases with an initial or remaining non-cancelable term in excess of one year are as follows:

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA	
<i>Year Ending June 30</i>	
2020	\$291,506
2021	240,089
2022	183,958
2023	143,443
2024	107,000
2025 - 2029	252,443
2030 - 2034	86,793
2035 - 2039	18,884
2040 - 2043	1,324
Total	\$1,325,440

Contingencies

Substantial amounts are received and expended by the University, including its medical centers, under federal and state programs, and are subject to audit by cognizant governmental agencies. This funding relates to research, student aid, medical center operations and other programs. University management believes that any liabilities arising from such audits will not have a material effect on the University's financial position.

The University and the campus foundations are contingently liable in connection with certain other claims and contracts, including those currently in litigation, arising in the normal course of its activities. Although there are inherent uncertainties in any litigation, University management and general counsel are of the opinion that the outcome of such matters will not have a material effect on the University's financial position.

Required Supplementary Information *(Unaudited)*

UCRP

The schedule of changes in net pension liability includes multiyear trend information about whether the pension assets are increasing or decreasing over time relative to the pension liabilities. The University's schedule of changes in the net pension liability for UCRP as of June 30 is:

(in thousands of dollars)

	2019	2018	2017	2016
TOTAL PENSION LIABILITY				
Service cost	\$1,946,612	\$1,873,004	\$1,807,143	\$1,710,241
Interest on the total pension liability	5,576,660	5,295,733	5,035,267	4,784,904
Difference between expected and actual experience	334,605	138,419	74,664	136,167
Changes of assumptions or other inputs	7,816,717			
Benefits paid, including refunds of employee contributions	(3,816,434)	(3,587,554)	(3,320,990)	(3,105,641)
Net change in total pension liability	11,858,160	3,719,602	3,596,084	3,525,671
Total pension liability - beginning of year	76,546,448	72,826,846	69,230,762	65,705,091
Total pension liability - end of year	88,404,608	76,546,448	72,826,846	69,230,762
PLAN NET POSITION				
Contributions - employer	2,408,650	2,335,874	2,385,576	2,426,683
Contributions - member	956,543	941,144	891,987	845,036
Contributions - state		169,000	171,000	96,000
Net investment income	4,018,595	4,837,552	7,866,281	(1,104,655)
Benefits paid, including refunds of employee contributions	(3,816,434)	(3,587,554)	(3,320,990)	(3,105,642)
Administrative expense	(61,981)	(36,684)	(44,128)	(48,340)
Net change in plan net position	3,505,373	4,659,332	7,949,726	(890,918)
Plan net position - beginning of year	66,773,590	62,114,258	54,164,532	55,055,450
Plan net position - end of year	70,278,963	66,773,590	62,114,258	54,164,532
Net pension liability - end of year	\$18,125,645	\$9,772,858	\$10,712,588	\$15,066,230

(in thousands of dollars)

	2015	2014	2013	2012
TOTAL PENSION LIABILITY				
Service cost	\$1,589,267	\$1,519,183	\$1,456,761	\$1,531,094
Interest on the total pension liability	4,538,846	4,316,728	4,112,461	3,871,146
Difference between expected and actual experience	(112,155)	(320,624)	(183,253)	(212,758)
Changes of assumptions or other inputs	2,136,793		(3,312,815)	4,923,778
Benefits paid, including refunds of employee contributions	(2,976,992)	(2,687,540)	(2,487,369)	(2,273,071)
Net change in total pension liability	5,175,759	2,827,747	(414,215)	7,840,189
Total pension liability - beginning of year	60,529,332	57,701,585	58,115,800	50,275,611
Total pension liability - end of year	65,705,091	60,529,332	57,701,585	58,115,800
PLAN NET POSITION				
Contributions - employer	2,510,046	1,580,876	810,056	1,851,460
Contributions - member	793,012	577,466	415,641	272,420
Net investment income	1,993,801	8,009,980	4,833,339	115,863
Benefits paid, including refunds of employee contributions	(2,976,993)	(2,687,540)	(2,487,369)	(2,273,071)
Administrative expense	(48,283)	(37,641)	(37,426)	(32,839)
Net change in plan net position	2,271,583	7,443,141	3,534,241	(66,167)
Plan net position - beginning of year	52,783,867	45,340,726	41,806,485	41,872,652
Plan net position - end of year	55,055,450	52,783,867	45,340,726	41,806,485
Net pension liability - end of year	\$10,649,641	\$7,745,465	\$12,360,859	\$16,309,315

The University's schedule of net pension liability for UCRP as of June 30 is:

(in thousands of dollars)	2019	2018	2017	2016
Total pension liability	\$88,404,608	\$76,546,448	\$72,826,846	\$69,230,762
Plan net position	70,278,963	66,773,590	62,114,258	54,164,532
Net pension liability	\$18,125,645	\$9,772,858	\$10,712,588	\$15,066,230
Ratio of plan net position to total pension liability	79.5%	87.2%	85.3%	78.2%
Covered payroll	\$12,168,209	\$11,923,489	\$11,301,506	\$10,689,424
Net pension liability as a percentage of covered payroll	149.0%	82.0%	94.8%	140.9%

(in thousands of dollars)	2015	2014	2013	2012
Total pension liability	\$65,705,091	\$60,529,332	\$57,701,585	\$58,115,800
Plan net position	55,055,450	52,783,867	45,340,726	41,806,485
Net pension liability	\$10,649,641	\$7,745,465	\$12,360,859	\$16,309,315
Ratio of plan net position to total pension liability	83.8%	87.2%	78.6%	71.9%
Covered payroll	\$10,047,570	\$9,372,583	\$8,921,077	\$8,594,147
Net pension liability as a percentage of covered payroll	106.0%	82.6%	138.6%	189.8%

The University's schedule of employer contributions for UCRP as of June 30 is:

(in thousands of dollars)

YEAR ENDED JUNE 30	ACTUARILLY DETERMINED CONTRIBUTIONS	CONTRIBUTIONS IN RELATION TO ACTUARIAL CONTRIBUTIONS	CONTRIBUTION DEFICIENCY (EXCESS)	COVERED PAYROLL	CONTRIBUTIONS AS A PERCENTAGE OF COVERED PAYROLL
2019	\$2,742,671	\$2,408,650	\$334,021	\$12,168,209	20%
2018	2,669,169	2,504,874	164,295	11,923,489	21
2017	2,654,710	2,556,576	98,134	11,301,506	23
2016	2,610,953	2,522,683	88,270	10,689,424	24
2015	2,664,384	2,510,046	154,338	10,047,570	25
2014	2,472,697	1,580,876	891,821	9,372,583	17
2013	2,062,022	810,056	1,251,966	8,921,077	9
2012	1,806,205	1,851,459	(45,254)	8,594,147	22
2011	1,695,137	1,677,921	17,216	8,140,629	21
2010	454	148,445	(147,991)	7,973,921	2

NOTES TO SCHEDULE

Methods and assumptions used to determined contribution rates:

Valuation date	Actuarially determined contribution rates are calculated as of July 1, two years prior to the end of the fiscal year in which contributions are reported.
Actuarial cost method	Entry age actuarial cost method.
Amortization method	Level dollar, closed periods.
Remaining amortization period	18.83 years as of July 1, 2018. The July 1, 2010 amortization bases were combined into a single amortization base and amortized over 30 years. Any changes in Unfunded Actuarial Accrued Liability (UAAL) due to actuarial experience gains or losses after July 1, 2010, are separately amortized over a fixed (closed) 30-year period effective with that valuation. Any changes in UAAL due to a change in actuarial assumptions or plan provisions are separately amortized over a fixed (closed) 15-year period. Any changes in UAAL due to actuarial experience gains or losses or a change in actuarial assumptions after July 1, 2014, are separately amortized over a fixed (closed) 20-year period.
Asset valuation method	The market value of assets less unrecognized returns in each of the last five years. An unrecognized return is equal to the difference between the actual and the expected return on a market value basis and is recognized over a five-year period.

	June 30, 2019 measurement date	June 30, 2018 measurement date
Inflation	2.50%.	3.00%.
Investment rate of return	6.75%, net of pension plan investment expenses, including inflation.	7.25%, net of pension plan investment expenses, including inflation.
Projected salary increases	3.65 - 5.95%, varying by service, including inflation.	3.75 - 6.15%, varying by service, including inflation.
Cost-of-living adjustments	2.00%.	2.00%.
Mortality	Active and inactive: Pub-2010 Teacher Employee Amount-Weighted Above-Median Mortality Table. Healthy: Pub-2010 Healthy Teacher Amount-Weighted Above-Median Mortality Table, multiplied by 90 percent for male Faculty members, 95 percent for female Faculty members, 100 percent for other male members and 110 percent for other female members. Beneficiaries of retired members: Pub-2010 Contingent Survivor Amount-Weighted Above-Median Mortality Table multiplied by 100 percent for males and 90 percent for females. Disabled: Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table. All mortality tables listed above are projected generationally with the two-dimensional mortality improvement scale MP-2018.	Active and inactive: RP-2014 White Collar Employee Mortality Table, projected with the two-dimensional MP-2014 projection scale to 2029. Healthy: RP-2014 White Collar Healthy Annuitant Mortality Table, projected with the two-dimensional MP-2014 projection scale to 2029 with ages set forward one year. Disabled: RP-2014 Disabled Retiree Mortality Table, projected with the two-dimensional MP-2014 projection scale to 2029 and with ages then set back one year for males and set forward five years for females.

UC-VERIP

The University's schedule of changes in net pension liability for UC-VERIP as of June 30 is:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016
TOTAL PENSION LIABILITY				
Interest on the total pension liability	\$1,983	\$2,042	\$2,463	\$2,533
Difference between expected and actual experience	(79)	(436)	(189)	(650)
Changes of assumptions or other inputs	714			
Benefits paid, including refunds of employee contributions	(4,213)	(4,610)	(4,738)	(4,937)
Net change in total pension liability (surplus)	(1,595)	(3,004)	(2,464)	(3,054)
Total pension liability - beginning of year	29,540	32,544	35,008	38,062
Total pension liability - end of year	27,945	29,540	32,544	35,008
PLAN NET POSITION				
Net investment income	3,748	4,885	8,666	(1,425)
Benefits paid, including refunds of employee contributions	(4,213)	(4,610)	(4,738)	(4,937)
Administrative expense	(5)	(5)	(6)	(7)
Net change in plan net position	(470)	270	3,922	(6,369)
Plan net position - beginning of year	65,248	64,978	61,056	67,425
Plan net position - end of year	64,778	65,248	64,978	61,056
Net pension surplus - end of year	(\$36,833)	(\$35,708)	(\$32,434)	(\$26,048)
<hr/>				
<i>(in thousands of dollars)</i>	2015	2014	2013	2012
TOTAL PENSION LIABILITY				
Interest on the total pension liability	\$2,704	\$2,857	\$3,052	\$3,227
Changes of benefit terms				11,186
Difference between expected and actual experience	242	(436)	(241)	172
Changes of assumptions or other inputs	1,837			1,268
Benefits paid, including refunds of employee contributions	(5,081)	(5,169)	(5,278)	(5,369)
Net change in total pension liability (surplus)	(298)	(2,748)	(2,467)	10,484
Total pension liability - beginning of year	38,360	41,108	43,575	33,091
Total pension liability - end of year	38,062	38,360	41,108	43,575
PLAN NET POSITION				
Net investment income	2,550	11,035	7,144	90
Benefits paid, including refunds of employee contributions	(5,081)	(5,169)	(5,278)	(5,369)
Administrative expense	(6)	(6)	(7)	(7)
Net change in plan net position	(2,537)	5,860	1,859	(5,286)
Plan net position - beginning of year	69,962	64,102	62,243	67,529
Plan net position - end of year	67,425	69,962	64,102	62,243
Net pension surplus - end of year	(\$29,363)	(\$31,602)	(\$22,994)	(\$18,668)

The University's schedule of net pension asset for UC-VERIP as of June 30 is:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016
Total pension liability	\$27,945	\$29,540	\$32,544	\$35,008
Plan net position	64,778	65,248	64,978	61,056
Net pension surplus	(\$36,833)	(\$35,708)	(\$32,434)	(\$26,048)
Ratio of plan net position to total pension liability	231.8%	220.9%	199.7%	174.4%

<i>(in thousands of dollars)</i>	2015	2014	2013	2012
Total pension liability	\$38,062	\$38,360	\$41,108	\$43,575
Plan net position	67,425	69,962	64,102	62,243
Net pension surplus	(\$29,363)	(\$31,602)	(\$22,994)	(\$18,668)
Ratio of plan net position to total pension liability	177.1%	182.4%	155.9%	142.8%

The University is not required to make contributions to the UC-VERIP due to its fully funded status.

CHRCO PENSION PLAN

The schedule of changes in the net pension liability for the CHRCO Pension Plan as of June 30:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016	2015	2014
TOTAL PENSION LIABILITY						
Service cost	\$11,430	\$11,304	\$9,910	\$10,410	\$9,448	\$9,274
Interest on the total pension liability	34,165	31,854	29,672	27,782	24,683	22,453
Changes of benefit terms		92	33	24	40	142
Difference between expected and actual experience	5,214	3,609	2,442	(3,690)	762	2,487
Changes of assumptions or other inputs	(9,540)			3,613	33,105	
Benefits paid, including refunds of employee contributions	(15,143)	(12,802)	(11,767)	(9,509)	(8,082)	(6,994)
Net change in total pension liability	26,126	34,057	30,290	28,630	59,956	27,362
Total pension liability - beginning of year	484,209	450,152	419,862	391,232	331,276	303,914
Total pension liability - end of year	510,335	484,209	450,152	419,862	391,232	331,276
PLAN NET POSITION						
Contributions - employer	31,200	33,600	28,800	24,000	18,000	14,500
Net investment income	25,203	33,269	41,256	214	11,797	48,704
Benefits paid, including refunds of employee contributions	(15,143)	(12,802)	(11,767)	(9,509)	(8,082)	(6,994)
Administrative expense	(2,711)	(3,014)	(2,727)	(1,816)	(1,222)	(718)
Net change in plan net position	38,549	51,053	55,562	12,889	20,493	55,492
Total plan net position - beginning of year	460,061	409,008	353,446	340,557	320,064	264,572
Total plan net position - end of year	498,610	460,061	409,008	353,446	340,557	320,064
Net pension liability - end of year	\$11,725	\$24,148	\$41,144	\$66,416	\$50,675	\$11,212

The schedule of net pension liability for the CHRCO Pension Plan as of June 30 is:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016	2015	2014
Total pension liability	\$510,335	\$484,209	\$450,152	\$419,862	\$391,232	\$331,276
Plan net position	498,610	460,061	409,008	353,446	340,557	320,064
Net pension liability	\$11,725	\$24,148	\$41,144	\$66,416	\$50,675	\$11,212
Ratio of plan net position to total pension liability	97.7%	95.0%	90.9%	84.2%	87.0%	96.6%
Covered payroll	\$190,599	\$187,639	\$184,083	\$165,672	\$177,986	\$175,189
Net pension liability as a percentage of covered payroll	6.2%	12.9%	22.4%	40.1%	28.5%	6.4%

The schedule of employer contributions for the CHRCO Pension Plan as of June 30 is:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016	2015	2014
Actuarially calculated employer contributions	\$17,870	\$7,710	\$5,642	\$7,823	\$12,239	\$21,282
Contributions in relation to the actuarially calculated employer contribution	31,200	33,600	28,800	24,000	18,000	14,500
Annual contribution deficiency (excess)	(\$13,330)	(\$25,890)	(\$23,158)	(\$16,177)	(\$5,761)	\$6,782
Covered payroll	\$190,599	\$187,639	\$184,083	\$165,672	\$177,986	\$175,189
Actual contributions as a percentage of covered payroll	16.4%	17.9%	15.6%	14.5%	10.1%	8.3%

NOTES TO SCHEDULE

Methods and assumptions used to determine contribution rates:

Valuation date	Actuarially calculated contributions are calculated as of January 1 of the end of the fiscal year in which contributions are reported.
Actuarially determined contribution	The Plan is subject to funding requirements under ERISA. The contribution shown is the IRC Section 430 minimum contribution prior to offset by credit balances prorated for the number of months in the fiscal year. For the period January 1, 2014 to June 30, 2014, the amount shown does not reflect changes in the Highway and Transportation Funding Act of 2014 (HATFA). The contribution for July 1, 2014 and thereafter includes HATFA.
Contributions in relation to the actuarially determined contribution	The amount shown is equal to the contributions contributed to the Plan during the fiscal year shown.
Actuarial cost method	Unit Credit Actuarial Cost Method.
Amortization method	Level dollar, closed amortization.
Remaining amortization period	7 years for changes in unfunded liabilities that occur each valuation date.
Asset valuation method	The actuarial value of assets is equal to the two-year average of Plan asset values as of the valuation date. The two-year average is the average of the two prior years' adjusted market value of assets and the current year's market value of assets. For this purpose, the prior years' market value of assets is adjusted to reflect benefit payments, administrative expenses, contributions and expected returns for the prior years. The resulting actuarial value of assets is adjusted to be within 10% of the market value of assets at the valuation date, as required by IRC Section 430.
Inflation	3.0%.
Investment rate of return	7.0%, net of pension plan investment expenses, including inflation.
Projected salary increases	5.0%, including inflation through 2017, 4.0% afterward.
Cost-of-living adjustments	N/A.
Mortality	Adjusted RP-2014 Mortality Table for males or females with back up base table to 2006, as appropriate, with generational adjustments for mortality improvements based on Scale MP-2017.

OCERS

The schedule of the University's proportionate share of OCERS' net pension liability is presented below:

(in thousands of dollars)

AS OF JUNE 30	PROPORTION OF THE NET PENSION LIABILITY	PROPORTIONATE SHARE OF NET PENSION LIABILITY	COVERED PAYROLL	PROPORTIONATE SHARE OF THE NET PENSION LIABILITY AS A PERCENTAGE OF ITS COVERED PAYROLL	PLAN FIDUCIARY NET POSITION AS A PERCENTAGE OF THE TOTAL PENSION LIABILITY
2019	0.3%	\$17,404			34.0%
2018	0.3	13,822	\$15	92,146.7%	37.6
2017	0.3	18,057	44	41,038.6	34.5
2016	0.3	18,092	285	6,348.1	34.8

University Retiree Health Benefits Program

The schedule of changes in the net retiree health benefits liability includes multiyear trend information about whether the net retiree health benefits liability is increasing or decreasing over time. The University's net retiree health benefits liability includes liabilities for campuses, medical centers and LBNL. The University's schedule of changes in the net retiree health benefits liability as of, and for, the year ending June 30 is:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016	2015
TOTAL RETIREE HEALTH BENEFITS LIABILITY					
Service cost	\$815,654	\$835,154	\$1,004,644	\$830,041	\$702,935
Interest on the total retiree health benefits liability	758,521	716,777	646,279	735,294	719,853
Changes of benefit terms	(29,315)				
Difference between expected and actual experience	(1,219,146)	(1,173,742)	101,280	(1,948,111)	
Changes of assumptions or other inputs	1,124,039	(354,585)	(3,827,924)	3,925,503	1,402,476
Retiree contributions	85,820	79,849	72,716	65,705	56,340
Benefits paid	(512,824)	(504,745)	(467,846)	(451,166)	(435,189)
Net change in total retiree health benefits liability	1,022,749	(401,292)	(2,470,851)	3,157,266	2,446,415
Total retiree health benefits liability - beginning of year	18,995,846	19,397,138	21,867,989	18,710,723	16,264,308
Total retiree health benefits liability - end of year	20,018,595	18,995,846	19,397,138	21,867,989	18,710,723
PLAN NET POSITION					
University contributions	451,437	453,988	432,953	410,945	367,416
Retiree contributions	85,820	79,849	72,716	65,705	56,340
Net investment income	3,195	1,634	606	155	41
Insurance premiums	(512,824)	(504,745)	(467,846)	(451,166)	(435,189)
Other deductions	(4,300)	(3,859)	(4,256)	(3,743)	(3,147)
Net change in retiree health benefits net position	23,328	26,867	34,173	21,896	(14,539)
Retiree health benefits net position - beginning of year	133,581	106,714	72,541	50,645	65,184
Retiree health benefits net position - end of year	156,909	133,581	106,714	72,541	50,645
Net retiree health benefits liability - end of year	\$19,861,686	\$18,862,265	\$19,290,424	\$21,795,448	\$18,660,078

The University's schedule of net retiree health benefits liability as of June 30 is:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016	2015
Total retiree health benefits liability	\$20,018,595	\$18,995,846	\$19,397,138	\$21,867,989	\$18,710,723
Retiree health benefits net position	156,909	133,581	106,714	72,541	50,645
Net retiree health benefits liability	\$19,861,686	\$18,862,265	\$19,290,424	\$21,795,448	\$18,660,078
Ratio of retiree health benefits net position to total retiree health benefits liability	0.8%	0.7%	0.6%	0.3%	0.3%
Covered payroll	\$12,717,122	\$12,391,018	\$11,495,997	\$10,689,424	\$10,047,570
Net retiree health benefits liability as a percentage of covered payroll	156.2%	152.2%	167.8%	203.9%	185.7%

University of California Retiree Health Benefit Trust

The schedule of changes in the net retiree health benefits liability includes multiyear trend information about whether the trust assets are increasing or decreasing over time relative to the total retiree health benefits liability for the campuses and medical centers. UCRHBT's schedule of changes in net retiree health benefits liability as of, and for, the year ending June 30 is:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016	2015
TOTAL RETIREE HEALTH BENEFIT LIABILITY					
Service cost	\$798,249	\$816,483	\$981,745	\$806,817	\$683,320
Interest on the total retiree health benefits liability	734,693	694,562	625,947	711,365	695,999
Changes of benefit terms	(28,401)				
Difference between expected and actual experience	(1,175,284)	(1,149,032)	95,254	(1,875,009)	
Changes of assumptions or other inputs	1,091,609	(353,516)	(3,707,921)	3,798,113	1,358,761
Retiree contributions	82,710	76,873	69,968	65,705	56,340
Benefits paid	(490,615)	(483,479)	(447,604)	(433,849)	(418,244)
Net change in total retiree health benefits liability	1,012,961	(398,109)	(2,382,611)	3,073,142	2,376,176
Total retiree health benefits liability - beginning of year	18,388,092	18,786,201	21,168,812	18,095,670	15,719,494
Total retiree health benefits liability - end of year	19,401,053	18,388,092	18,786,201	21,168,812	18,095,670
PLAN NET POSITION					
University contributions	432,338	435,698	415,459	393,628	350,471
Retiree contributions	82,710	76,873	69,968	65,705	56,340
Net investment income	3,195	1,634	606	155	41
Insurance premiums	(490,615)	(483,479)	(447,604)	(433,849)	(418,244)
Other deductions	(4,300)	(3,859)	(4,256)	(3,743)	(3,147)
Net change in UCRHBT net position	23,328	26,867	34,173	21,896	(14,539)
UCRHBT net position - beginning of year	133,581	106,714	72,541	50,645	65,184
UCRHBT net position - end of year	156,909	133,581	106,714	72,541	50,645
Net retiree health benefits liability - end of year	\$19,244,144	\$18,254,511	\$18,679,487	\$21,096,271	\$18,045,025

UCRHBT's schedule of net retiree health benefits liability as of June 30 is:

<i>(in thousands of dollars)</i>	2019	2018	2017	2016	2015
Total retiree health benefits liability	\$19,401,053	\$18,388,092	\$18,786,201	\$21,168,812	\$18,095,670
UCRHBT net position	156,909	133,581	106,714	72,541	50,645
Net retiree health benefits liability	\$19,244,144	\$18,254,511	\$18,679,487	\$21,096,271	\$18,045,025
Ratio of UCRHBT net position to total retiree health benefits liability	0.8%	0.7%	0.6%	0.3%	0.3%
Covered payroll	\$12,381,741	\$12,087,000	\$11,196,485	\$10,396,827	\$9,758,795
Net retiree health benefits liability as a percentage of covered payroll	155.4%	151.0%	166.8%	202.9%	184.9%

UNIVERSITY OF CALIFORNIA
 Summary Schedule of Expenditures of Federal Awards
 For the Fiscal Year Ended June 30, 2019

	Total Expenditures
	<u>2019</u>
Summary of Expenditures	
STUDENT FINANCIAL ASSISTANCE CLUSTER	\$1,839,660,025
DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER	
Federal Agency Direct Awards Expended	11,393,342
Pass-Through/Partial Pass-Through Funds Expended	<u>114,779</u>
Total Department of Agriculture - Cooperative Extension Cluster	11,508,121
RESEARCH AND DEVELOPMENT CLUSTER	
Federal Agency Direct Awards Expended	3,301,008,697
Pass-Through/Partial Pass-Through Funds Expended	<u>481,189,401</u>
Total Research and Development Cluster	3,782,198,098
DEPARTMENT OF HEALTH AND HUMAN SERVICES - TITLE IV FOSTER CARE PROGRAM CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	<u>31,280,392</u>
Total Department of Health and Human Services - Title IV Foster Care Program Cluster	31,280,392
DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	<u>16,008,053</u>
Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster	16,008,053
DEPARTMENT OF HEALTH AND HUMAN SERVICES - HEALTH CENTER PROGRAM CLUSTER	
Federal Agency Direct Awards Expended	1,576,758
Pass-Through and Partial Pass-Through Funds Expended	<u>456,693</u>
Total Department of Health and Human Services - Health Center Program Cluster	2,033,451
DEPARTMENT OF HEALTH AND HUMAN SERVICES - MEDICAID CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	<u>5,223,562</u>
Total Department of Health and Human Services - Medicaid Cluster	5,223,562
DEPARTMENT OF INTERIOR - FISH AND WILDLIFE CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	<u>198,799</u>
Total Department of Interior - Fish and Wildlife Cluster	198,799
DEPARTMENT OF TRANSPORTATION - HIGHWAY PLANNING AND CONSTRUCTIONS CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	<u>95,510</u>
Total Department of Transportation - Highway Planning and Construction Cluster	95,510
DEPARTMENT OF COMMERCE - ECONOMIC DEVELOPMENT CLUSTER	
Federal Agency Direct Awards Expended	<u>176,106</u>
Total Department of Commerce - Economic Development Cluster	176,106
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT - HOPE VI CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	<u>5,479</u>
Total Department of Housing and Urban Development - Hope VI Cluster	5,479
DEPARTMENT OF HEALTH AND HUMAN SERVICES - 477 CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	<u>4,291,799</u>
Total Department of Health and Human Services - 477 Cluster	4,291,799
DEPARTMENT OF LABOR - WIOA CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	<u>-203,888</u>
Total Department of Labor - WIOA Cluster	-203,888

UNIVERSITY OF CALIFORNIA
 Summary Schedule of Expenditures of Federal Awards
 For the Fiscal Year Ended June 30, 2019

	Total Expenditures
	2019
Summary of Expenditures	
DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	2,222,727
Total Department of Transportation - Federal Transit Cluster	<u>2,222,727</u>
DEPARTMENT OF TRANSPORTATION- HIGHWAY SAFETY CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	1,190,633
Total Department of Transportation - Highway Safety Cluster	<u>1,190,633</u>
DEPARTMENT OF EDUCATION - TRIO CLUSTER	
Federal Agency Direct Awards Expended	12,993,182
Pass-Through and Partial Pass-Through Funds Expended	2,982
Total Department of Education - TRIO Cluster	<u>12,996,164</u>
DEPARTMENT OF HEALTH AND HUMAN SERVICES - AGING CLUSTER	
Pass-Through and Partial Pass-Through Funds Expended	36,493
Total Department of Health and Human Services - Aging Cluster	<u>36,493</u>
OTHER PROGRAMS	
Federal Agency Direct Awards Expended	111,671,471
Pass-Through/Partial Pass-Through Funds Expended	47,248,852
Total Other Programs	<u>158,920,323</u>
Total Federal Awards Expended	<u><u>\$5,867,841,847</u></u>

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Cluster Programs and Federal Agencies	Federal Direct / Pass-Through and Partial Pass-Through	Agency/PassThrough Identifier or Other Identifier	Federal CFDA #		FY 2019	
			Prefix	Extension	Federal Expenditures	Passed through to Subrecipients
STUDENT FINANCIAL ASSISTANCE						
DEPARTMENT OF EDUCATION	Direct					
	FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITIES GRANT	VARIOUS	84	007	\$12,157,178	12,157,178
	Direct					
	FEDERAL WORK-STUDY PROGRAM	VARIOUS	84	033	16,723,112	16,723,112
	Direct					
	FEDERAL PERKINS LOAN PROGRAM BEGINNING BALANCE	VARIOUS	84	038	190,367,020	
	FEDERAL PERKINS LOAN PROGRAM NEW LOAN	VARIOUS	84	038		0
	FEDERAL PERKINS LOAN PROGRAM ADMINISTRATIVE COST ALLOWANCE	VARIOUS	84	038		0
					190,367,020	
	Direct					
	FEDERAL PELL GRANTS	VARIOUS	84	063	440,574,573	440,574,573
	Direct					
	FEDERAL DIRECT STUDENT LOAN PROGRAM	VARIOUS	84	268	1,105,933,397	1,105,933,397
	Direct					
	TEACHER EDUCATION ASSISTANCE FOR COLLEGE AND HIGHER EDUCATION GRANTS (TEACH)	VARIOUS	84	379		174,689
						174,689
DEPARTMENT OF EDUCATION Total						1,765,929,969
DEPARTMENT OF HEALTH AND HUMAN SERVICES	Direct					
	NURSING FACULTY LOAN PROGRAM BEGINNING BALANCE	VARIOUS	93	264	812,361	
	NURSING FACULTY LOAN PROGRAM NEW LOAN	VARIOUS	93	264		0
					812,361	
	Direct					
	HLTH PROFESSIONS STUDENT LOANS/LOANS FOR DISADVANTAGED STUDENTS/PRIMARY CARE LOAN BEG BAL	VARIOUS	93	342	58,761,681	
	HLTH PROFESSIONS STUDENT LOANS/LOANS FOR DISADVANTAGED STUDENTS/PRIMARY CARE-NEW LOAN	VARIOUS	93	342	11,087,278	
					69,848,959	
	Direct					
	NURSING STUDENT LOAN PROGRAM BEGINNING BALANCE	VARIOUS	93	364	1,398,829	
	NURSING STUDENT LOAN PROGRAM NEW LOAN	VARIOUS	93	364	277,309	
					1,676,138	
	Direct					
	ARRA-NURSING FACULTY LOAN PROGRAM BEGINNING BALANCE	VARIOUS	93	408	92,598	
	ARRA-NURSING FACULTY LOAN PROGRAM NEW LOAN	VARIOUS	93	408		0
					92,598	
	Direct					
	SCHOLARSHIPS FOR STUDENTS FROM DISADVANTAGED BACKGROUND	VARIOUS	93	925	1,300,000	
					1,300,000	
DEPARTMENT OF HEALTH AND HUMAN SERVICES Total						73,730,056
STUDENT FINANCIAL ASSISTANCE Total						1,839,660,025
DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION						
DEPARTMENT OF AGRICULTURE	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	203	48,539	48,539
	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	202	20,971	20,971
	Passthrough/Partial Passthrough					
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	201701416	10	203	1,214	1,214
	Direct					

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF AGRICULTURE	DEPARTMENT OF AGRICULTURE	VARIOUS	10	500	11,323,832	\$22,500
	Passthrough/Partial Passthrough					
	KANSAS STATE UNIVERSITY	22C17	10	500	32,109	
	KANSAS STATE UNIVERSITY	31A16	10	500	-5,225	
	KANSAS STATE UNIVERSITY	88A22	10	500	29,026	
	WASHINGTON STATE UNIVERSITY	2015-49200-24227	10	500	23,313	
	WASHINGTON STATE UNIVERSITY	80B82	10	500	33,542	
	WESTERN CENTER FOR RISK MANAGEMENT EDUCATION	108815_G003870	10	500	800	
					11,437,397	22,500
	DEPARTMENT OF AGRICULTURE Total				11,508,121	22,500
	DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION Total				11,508,121	22,500
RESEARCH AND DEVELOPMENT						
DEPARTMENT OF AGRICULTURE						
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	73A96	10	001	-39	
	CALIFORNIA STRAWBERRY NURSERYMEN ASSOCIATION	201503945	10	001	23,121	
	NATIONAL ACADEMY OF SCIENCES	2000006101	10	001	22,028	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	ARS NACA 58-6080-7-009	10	001	25,167	
	VENTUREWELL	DAA3-19-65152-1	10	001	4,950	
					75,226	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17-0413-001-SF	10	025	7,481	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17-0426-001-SF	10	025	1,004	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	009982	10	025	47,196	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0297-003-SF	10	025	27,000	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0326-001-SF	10	025	52,889	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0430-001-SF	10	025	14,539	
	CITRUS RESEARCH PROGRAM	007880	10	025	-677	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE/MISCELLANEOUS AGENCIES	AP18PPQS&T00C159	10	025	18,248	
					167,680	
	Passthrough/Partial Passthrough					
	CALAVERAS UNIFIED SCHOOL DISTRICT	201603165	10	170	18,285	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008618	10	170	55,129	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008684	10	170	287,245	82,401
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008685	10	170	27,392	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008687	10	170	73,391	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	201502786-01	10	170	-5,279	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	2016-160036	10	170	126,733	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	24B08	10	170	13,260	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	24B67	10	170	80,894	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	32A39	10	170	-2,832	-2,656
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	38A04	10	170	8,086	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	38A06	10	170	7,710	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	84743	10	170	-6	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A38	10	170	47,339	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A41	10	170	19,761	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A42	10	170	1,744	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A52	10	170	61,924	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A84	10	170	60,533	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	A17-0306-001	10	170	77,281	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SA16-3202-UCB	10	170	43,084	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15026	10	170	239	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15033	10	170	-1,362	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15035	10	170	-75	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15037	10	170	16,160	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15040	10	170	5,673	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15050	10	170	-1,959	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15058	10	170	28	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16015	10	170	34,149	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16022	10	170	50,866	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16032	10	170	36,262	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16035	10	170	113,644	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16036	10	170	247,908	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16041	10	170	44,079	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16050	10	170	147,784	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16054	10	170	98,170	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16066	10	170	83,507	18,787
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17-0275-034-SC	10	170	47,382	6,542

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			Prefix	Extension	Federal Expenditures		
DEPARTMENT OF AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17-0275-036-SC	10	170	68,158		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17-0275-047-SC	10	170	153,785		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17027502-SC	10	170	121,574		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	1702750325C	10	170	155,349		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	32B40	10	170	30,260		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	37A26	10	170	150		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	72B71	10	170	75,883		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	73B67	10	170	96,422		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	74B02	10	170	96,115		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	74B03	10	170	119,488	13,139	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	74B26	10	170	127,905		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	75B23	10	170	218,738		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	A18-0352-001	10	170	89,957		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	AM170100XXXXG011	10	170	188,455		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SC16053C	10	170	13,192		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15009	10	170	687		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16037	10	170	21,884		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	009926	10	170	211,654	43,249	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	010307	10	170	43,481		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	010360	10	170	1,847		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	010404	10	170	50,321		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	010498	10	170	13,672		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	16-0555-051-SC	10	170	55,911		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-019-SC	10	170	22,989		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-026-SC	10	170	7,470		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-027-SC	10	170	45,345		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-028-SC	10	170	29,490		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-030-SC	10	170	13,130		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-044-SC	10	170	2,234		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-053-SC	10	170	36,742		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-056-SC	10	170	43,133		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0001-057-SC	10	170	43,940		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26C79	10	170	62,520		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26C84	10	170	62,822		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26C85	10	170	75,213	26,685	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26C86	10	170	42,650		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26C99	10	170	10,961		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	27C00	10	170	61,759	21,043	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	27C13	10	170	29,442		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	27C17	10	170	11,328		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	27C34	10	170	145,613		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	27C35	10	170	20,053		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	27C59	10	170	23,141		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	28C39	10	170	8,335		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	29C35	10	170	8,758		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	73B07	10	170	108,196		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	AM180100XXXXG003	10	170	1,892		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16046	10	170	179,811		
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	Y18 - 4017	10	170	1,084		
	CENTER FOR PRODUCE SAFETY	2016CPS02	10	170	-120		
	CENTER FOR PRODUCE SAFETY	21B07	10	170	48,635		
	CENTER FOR PRODUCE SAFETY	SCB16069	10	170	43,382		
	CENTER FOR PRODUCE SAFETY	2018CPS07	10	170	141,682		
	CENTER FOR PRODUCE SAFETY	USDA-AMS-TM-SCBGP-G-17-003	10	170	118,976		
	CENTER FOR PRODUCE SAFETY	18-0275-077-SC	10	170	55,564		
	CORNELL UNIVERSITY	2018CPS04	10	170	54,975		
	RIVERSIDE UNIFIED SCHOOL DISTRICT	88A55	10	170	94,041		
	UNIVERSITY CORPORATION AT MONTEREY BAY	008739	10	170	91,820		
	UNIVERSITY CORPORATION AT MONTEREY BAY	86B78	10	170	53,510		
	WASHINGTON STATE UNIVERSITY	16SCBGP0035	10	170	46,521		
	TOGETHER WE CAN INC	SA15-2865-02	10	170	4,202		
	BACHAND & ASSOCIATES	2030.02-1.00	10	170	435		
	TEXAS AGRILIFE RESEARCH	TX-SCM-17-04	10	170	24,624		
					5,755,311	209,191	
		Passthrough/Partial Passthrough					
		CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	009374	10	171	185,360	
					185,360		
		Passthrough/Partial Passthrough					

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			Prefix	Extension	Federal Expenditures		
DEPARTMENT OF AGRICULTURE	COLORADO STATE UNIVERSITY	73889	10	200	20,047		
	COLORADO STATE UNIVERSITY	75855	10	200	12,635		
	SAN BERNARDINO COMMUNITY COLLEGE DISTRICT	86661	10	200	60,435		
	UNIVERSITY OF FLORIDA	008150	10	200	121,760		
	UNIVERSITY OF FLORIDA	008151	10	200	3,545		
	UNIVERSITY OF WASHINGTON	UWSC8213	10	200	4,511		
	UNIVERSITY OF WASHINGTON	UWSC8839	10	200	5,980		
	UNIVERSITY OF WASHINGTON	UWSC10035	10	200	30,002	11,503	
	UNIVERSITY OF WASHINGTON	UWSC10036	10	200	11,181		
	UNIVERSITY OF WASHINGTON	UWSC10037	10	200	1,383		
	UNIVERSITY OF WASHINGTON	UWSC9733	10	200	4,968		
	UNIVERSITY OF WASHINGTON	UWSC10994	10	200	36,449		
	UNIVERSITY OF WASHINGTON	UWSC10997	10	200	9,747		
	UNIVERSITY OF WASHINGTON	UWSC10998	10	200	1,456		
	RESOURCES FOR THE FUTURE, INC.	201700337	10	200	56,320		
					380,418	11,503	
	Passthrough/Partial Passthrough	TINY FARMS INC.	A19-1936	10	212	32,291	
					32,291		
	Passthrough/Partial Passthrough	CALIFORNIA STATE UNIVERSITY SACRAMENTO/UNIVERSITY ENTERPRISES, INC.	2017-38640-26913	10	215	39,450	
		MONTANA STATE UNIVERSITY	35C03	10	215	7,879	
		UTAH STATE UNIVERSITY	20163864025383	10	215	13,107	
		UTAH STATE UNIVERSITY	20183864023779	10	215	16,847	
		UTAH STATE UNIVERSITY	200592-446	10	215	11,743	
		UTAH STATE UNIVERSITY	200592-448	10	215	24,372	
		UTAH STATE UNIVERSITY	201207-579	10	215	17,057	
		UTAH STATE UNIVERSITY	201207-596	10	215	13,935	
		UTAH STATE UNIVERSITY	82B78	10	215	5,759	
		NEW MEXICO STATE UNIVERSITY	Q01786	10	215	21,833	
						171,982	
Passthrough/Partial Passthrough	CORNELL UNIVERSITY	23A04	10	217	15,502		
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	320000126618052	10	217	72,781		
					88,283		
Passthrough/Partial Passthrough	CALIFORNIA STATE UNIVERSITY FULLERTON/CSU FULLERTON AUXILIARY SERVICES	S-6286-UCSB	10	223	7,594		
					7,594		
Passthrough/Partial Passthrough	NORTHWEST INDIAN COLLEGE	A18-0315-001	10	227	33,862		
	NORTHWEST INDIAN COLLEGE	A19-0376-001	10	227	21		
					33,883		
Passthrough/Partial Passthrough	UNIVERSITY OF MARYLAND	A16-0574-003	10	250	55,622		
					55,622		
Passthrough/Partial Passthrough	TUFTS UNIVERSITY	101383-00001-BITLER	10	253	18,280		
	TUFTS UNIVERSITY	101383-00001-PAGE	10	253	30,973		
					49,253		
Passthrough/Partial Passthrough	UNIVERSITY OF GEORGIA	RC293636/S000870	10	307	-8,542		
	UNIVERSITY OF GEORGIA	36A32	10	307	1,232		
	UNIVERSITY OF GEORGIA	SUB00001850	10	307	648		
	WASHINGTON STATE UNIVERSITY	007902	10	307	117,734		
					111,072		
Passthrough/Partial Passthrough	UNIVERSITY OF GEORGIA	RR644-418/5054566	10	308	45,849		
					45,849		
Passthrough/Partial Passthrough	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15046	10	309	3,506	3,506	

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DEPARTMENT OF AGRICULTURE	CLEMSON UNIVERSITY	20145118122372	10	309	236,592		
	CLEMSON UNIVERSITY	82094	10	309	21,294		
	CORNELL UNIVERSITY	8198010922	10	309	218,740		
	CORNELL UNIVERSITY	72A94	10	309	-9,768		
	KANSAS STATE UNIVERSITY	S15193	10	309	269,450		
	MICHIGAN STATE UNIVERSITY	2014-51181-22378	10	309	59,193		
	NEW MEXICO CONSORTIUM, INC.	008045	10	309	183,746	120,285	
	NORTH CAROLINA STATE UNIVERSITY	008663	10	309	69,163		
	NORTH CAROLINA STATE UNIVERSITY	2016022807	10	309	206,476		
	NORTH CAROLINA STATE UNIVERSITY	2017-0398-11	10	309	137,976		
	NORTH CAROLINA STATE UNIVERSITY	24B87	10	309	17,618		
	NORTH CAROLINA STATE UNIVERSITY	89167	10	309	25,448		
	NORTH CAROLINA STATE UNIVERSITY	20B88	10	309	27,834		
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	22B67	10	309	30,499		
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	6069PP2016NINO	10	309	30,287		
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0849-PP2018-NINO	10	309	30,800		
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	29C62	10	309	131,605		
	TEXAS A&M RESEARCH FOUNDATION	72B72	10	309	4,278		
	TEXAS A&M UNIVERSITY - COLLEGE STATION	M1803482	10	309	46,435		
	UNIVERSITY OF FLORIDA	UFDSP00011008	10	309	160,875		
	UNIVERSITY OF FLORIDA	009448	10	309	189,793		
	UNIVERSITY OF FLORIDA	UFDSP00011788	10	309	60,142		
	UNIVERSITY OF FLORIDA	009522	10	309	132,793		
	WASHINGTON STATE UNIVERSITY	133336-G003925	10	309	29,788		
	WASHINGTON STATE UNIVERSITY	24C25	10	309	9,934		
					2,324,497	123,791	
		Passthrough/Partial Passthrough					
		COLORADO STATE UNIVERSITY	2016-68007-25006	10	310	54,660	
		IOWA STATE UNIVERSITY	416-41-B7A	10	310	17,334	
		KANSAS STATE UNIVERSITY	S16114	10	310	15,303	
		KANSAS STATE UNIVERSITY	20166800725066	10	310	26,317	
		MICHIGAN STATE UNIVERSITY	74A11	10	310	99,086	
		OHIO STATE UNIVERSITY	20186800327466	10	310	38,327	
		OREGON STATE UNIVERSITY	C0486A-B	10	310	8,379	
		OREGON STATE UNIVERSITY	2018-67023-27690	10	310	9,135	
		PURDUE UNIVERSITY	20146701721831	10	310	1,334	
		RECOMBINETICS, INC	201403217	10	310	73,929	
		TEXAS A&M RESEARCH FOUNDATION	M1701755-CYC1	10	310	21,921	
		TEXAS A&M UNIVERSITY - COLLEGE STATION	009234	10	310	33,538	
		UNIVERSITY OF COLORADO BOULDER	82B20	10	310	9,256	
	UNIVERSITY OF FLORIDA	009625	10	310	114,998		
	UNIVERSITY OF GEORGIA	29A08	10	310	36,066		
	UNIVERSITY OF ILLINOIS	007414	10	310	30,928		
	UNIVERSITY OF MARYLAND	32470Z5768002	10	310	512		
	UNIVERSITY OF MASSACHUSETTS AMHERST	16009070A00	10	310	2,343		
	UNIVERSITY OF MASSACHUSETTS AMHERST	009822	10	310	52,083		
	UNIVERSITY OF MINNESOTA	H005365301	10	310	51,549		
	UNIVERSITY OF TENNESSEE	009776	10	310	111,428		
	UNIVERSITY OF VERMONT	24B85	10	310	17,467		
	UNIVERSITY OF VERMONT	2018-68008-28091	10	310	9,630		
	WASHINGTON STATE UNIVERSITY	123694G003751	10	310	58,077		
	UNIVERSITY OF NORTH CAROLINA AT GREENSBORO	009009	10	310	74,358		
					967,957		
	Passthrough/Partial Passthrough						
	OKLAHOMA STATE UNIVERSITY	2568930.UCM1	10	320	9,146		
	OREGON STATE UNIVERSITY	2014-385022-22598	10	320	133,464		
					142,611		
	Passthrough/Partial Passthrough						
	UNIVERSITY CORPORATION AT MONTEREY BAY	21B68	10	326	28,150		
					28,150		
	Passthrough/Partial Passthrough						
	CORNELL UNIVERSITY	2017-70020-27259	10	328	26,091		
	OREGON STATE UNIVERSITY	C0494AB	10	328	39,417		
	OREGON STATE UNIVERSITY	C0537A-C	10	328	1,311		
					66,819		

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DEPARTMENT OF AGRICULTURE	Passthrough/Partial Passthrough UNIVERSITY OF ARIZONA	20177000627273	10	329	5,346 5,346	
	Passthrough/Partial Passthrough UTAH STATE UNIVERSITY	200612-00001-345	10	330	19,512	
	Passthrough/Partial Passthrough WASHINGTON STATE UNIVERSITY	2016-70005-25650	10	330	45,000 64,512	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	76B33	10	331	120,284 120,284	
	Passthrough/Partial Passthrough HELUNA HEALTH	21C80	10	557	18,219	
	Passthrough/Partial Passthrough HELUNA HEALTH	24C75	10	557	73,699 91,918	
	Passthrough/Partial Passthrough WESTAT	71B60	10	585	10,760	
	Passthrough/Partial Passthrough WESTAT	30944	10	585	19 10,779	
	Passthrough/Partial Passthrough CALIFORNIA CITRUS QUALITY COUNCIL	201700468	10	604	102,752	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008095	10	604	-2,786	
	Passthrough/Partial Passthrough CITRUS RESEARCH PROGRAM	009795	10	604	165,402	
	Passthrough/Partial Passthrough CITRUS RESEARCH PROGRAM	009797	10	604	26,326	
	Passthrough/Partial Passthrough CITRUS RESEARCH PROGRAM	009798	10	604	144,780	
	Passthrough/Partial Passthrough CITRUS RESEARCH PROGRAM	010622	10	604	73,880	
	Passthrough/Partial Passthrough RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	6133-TASCGMRL-CA	10	604	21,555	15,450
	Passthrough/Partial Passthrough RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	25C18	10	604	9,172	
	Passthrough/Partial Passthrough RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	TASC 2018-08	10	604	24,750 565,830	22,500 37,950
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15051	10	612	-2,452 -2,452	
	Passthrough/Partial Passthrough TREEPEOPLE INC	0002	10	664	33,517 33,517	
	Passthrough/Partial Passthrough MONTANA STATE UNIVERSITY	G114-19-W5957	10	680	6,931 6,931	
	Passthrough/Partial Passthrough NATURE CONSERVANCY	23C89	10	912	15,151 15,151	
	Direct DEPARTMENT OF AGRICULTURE	VARIOUS	10	RD	56,838,445	8,765,268
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16045	10	RD	140,000	5,181
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17-0218-000-SA	10	RD	59,355	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	21B90	10	RD	38,846	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	18892	10	RD	1	
	Passthrough/Partial Passthrough CALIFORNIA STATE UNIVERSITY, NORTHRIDGE	2017-67018-26173	10	RD	18,199	
	Passthrough/Partial Passthrough LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	87460	10	RD	13,426	
	Passthrough/Partial Passthrough NATIONAL FISH AND WILDLIFE FOUNDATION	0806.16.052206	10	RD	12,043	
	Passthrough/Partial Passthrough NATIONAL FISH AND WILDLIFE FOUNDATION	0806.17.055495	10	RD	68,219	
	Passthrough/Partial Passthrough NATIONAL FISH AND WILDLIFE FOUNDATION	0806.17.055660	10	RD	130,090	
	Passthrough/Partial Passthrough NATIONAL FISH AND WILDLIFE FOUNDATION	81B22	10	RD	2,023	
	Passthrough/Partial Passthrough NATIONAL FISH AND WILDLIFE FOUNDATION	0808.17.057446	10	RD	102,666	
	Passthrough/Partial Passthrough NATIONAL FISH AND WILDLIFE FOUNDATION	0808.17.057447	10	RD	117,914	
Passthrough/Partial Passthrough NATIONAL FISH AND WILDLIFE FOUNDATION	0808.17.057481	10	RD	163,371		
Passthrough/Partial Passthrough NORTH CAROLINA STATE UNIVERSITY	89638	10	RD	99,548		
Passthrough/Partial Passthrough OAK RIDGE NATIONAL LABORATORY	005934	10	RD	82,171		
Passthrough/Partial Passthrough PUBLIC HEALTH INSTITUTE	72B54	10	RD	27,776	22,136	

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DEPARTMENT OF AGRICULTURE	TAHOE RESOURCE CONSERVATION DISTRICT	SWP 1	10	RD	25,311	
	THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	2017011	10	RD	9,437	
	UNIVERSITY OF MINNESOTA	H006588501	10	RD	27,982	
	UNIVERSITY OF MINNESOTA	AG-3151-P-17-0234	10	RD	23,238	
	UNIVERSITY OF NEBRASKA	25623902350306	10	RD	3,859	
	UNIVERSITY OF OREGON	239120A	10	RD	12,181	
	UNIVERSITY OF UTAH	009622	10	RD	5,461	
	UNIVERSITY OF WISCONSIN-MADISON	2018-70005-28737	10	RD	2,878	
	WESTAT	72B02	10	RD	17,848	
	AMERICAN RIVERS	60358	10	RD	15,676	
	FOUNDATION FOR FOOD AND AGRICULTURE RESEARCH	550830	10	RD	35,320	
					58,093,286	8,792,585
	DEPARTMENT OF AGRICULTURE Total				69,694,963	9,175,019
	DEPARTMENT OF COMMERCE	Passthrough/Partial Passthrough				
	MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	1611447	11	012	399,062	
	MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	1710308:4	11	012	41,542	
	MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	A16-0171-005	11	012	148,986	
	SOUTHEASTERN UNIVERSITY'S RESEARCH ASSOCIATION	A00-0975-007	11	012	72,747	
	UNIVERSITY OF MARYLAND	A16-0218-003	11	012	52,149	
	UNIVERSITY OF WASHINGTON	762824	11	012	24,986	
					739,472	
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE UNIVERSITY, NORTH RIDGE	A18-0060-S002	11	417	2,251	
	UNIVERSITY OF SOUTHERN CALIFORNIA	75193327	11	417	-18	
	UNIVERSITY OF SOUTHERN CALIFORNIA	75199714	11	417	47,333	
	MISSISSIPPI ALABAMA SEA GRANT CONSORTIUM	19-07-008	11	417	9,958	
					59,525	
	Passthrough/Partial Passthrough					
	GLOBAL SCIENCES & TECHNOLOGY, INC.	78177	11	431	6,859	
	GLOBAL SCIENCES & TECHNOLOGY, INC.	PSA-PROTECH-18-UCI01-CYC1	11	431	18,864	
	UNIVERSITY OF WASHINGTON	UWSC9314	11	431	43,055	
	RIVERSIDE TECHNOLOGY, INC.	PROTECH-UCI-CYC1	11	431	8,404	
					77,182	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1670009	11	432	207,806	
	ECS FEDERAL, INC	1721570326	11	432	29,642	
	ECS FEDERAL, INC	23A01	11	432	2,987	
	THE CULTURED ABALONE FARM LLC	201603461	11	432	6,503	
	UNIVERSITY OF SOUTHERN CALIFORNIA	75198802:5	11	432	102	
					247,041	
	Passthrough/Partial Passthrough					
	PACIFIC STATES MARINE FISHERIES COMMISSION	17103G	11	437	13,990	
	PACIFIC STATES MARINE FISHERIES COMMISSION	19-07G	11	437	53,806	
					67,796	
	Passthrough/Partial Passthrough					
	BERING SEA FISHERMEN'S ASSOCIATION	A19-0747-001	11	438	1,390	
					1,390	
	Passthrough/Partial Passthrough					
	SEWARD ASSOCIATION FOR THE ADVANCEMENT OF MARINE SCIENCE	A17-0159-002	11	439	166,289	
					166,289	
	Passthrough/Partial Passthrough					
	NATIONAL FISH AND WILDLIFE FOUNDATION	0303.16.052922	11	454	50,612	
					50,612	
	Passthrough/Partial Passthrough					
	NATIONAL FISH AND WILDLIFE FOUNDATION	A18-0506-001	11	463	86,370	
	SONOMA COUNTY WATER AGENCY	TW 1415-102	11	463	101,247	
					187,617	
	Passthrough/Partial Passthrough					
	UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	SUBAWD000647	11	467	12,585	
					12,585	

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DEPARTMENT OF COMMERCE	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1670004	11	472	731,435	
	NORTH PACIFIC RESEARCH BOARD	A18-0177-001	11	472	-18,448	
	NORTH PACIFIC RESEARCH BOARD	1810	11	472	313	
					713,301	
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE COASTAL CONSERVANCY	17-022	11	478	98,857	
					98,857	
	Passthrough/Partial Passthrough					
	NATIONAL FISH AND WILDLIFE FOUNDATION	0302.16.053210	11	482	3,329	
					3,329	
	Passthrough/Partial Passthrough					
	APPLIED TECHNOLOGY COUNCIL	1061-24-770 (SB1341-13-CQ-000	11	609	53,779	
					53,779	
	Passthrough/Partial Passthrough					
	IOWA STATE UNIVERSITY	426-17-02B-CYC7	11	619	795,842	
					795,842	
	Passthrough/Partial Passthrough					
	XCSPEC, INC.	A18-0775	11	620	83,383	
					83,383	
	Direct					
	DEPARTMENT OF COMMERCE	VARIOUS	11	RD	34,616,645	3,158,502
	Passthrough/Partial Passthrough					
	COUNTY OF SONOMA	1415039	11	RD	15,000	
	CODAR OCEAN SENSORS	59095	11	RD	74	
					34,631,719	3,158,502
DEPARTMENT OF COMMERCE Total					37,989,718	3,158,502
DEPARTMENT OF DEFENSE	Passthrough/Partial Passthrough					
	CHARLES RIVER ANALYTICS	009762	12	001	91,272	
	HYPRES, INC.	010306	12	001	33,295	
	HYPRES, INC.	010558	12	001	20,220	
	TRISTAN TECHNOLOGIES	008776	12	001	113,738	
	TRISTAN TECHNOLOGIES	010395	12	001	20,106	
	INTELLIGENT AUTOMATION, INC.	010383	12	001	22,675	
					301,306	
	Passthrough/Partial Passthrough					
	CALIFORNIA PARKS AND RECREATION, DEPARTMENT OF	C1370032	12	114	794,530	
					794,530	
	Passthrough/Partial Passthrough					
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LANG (W81XWH-10-1-0657)	12	240	34,501	
					34,501	
	Passthrough/Partial Passthrough					
	ARIZONA STATE UNIVERSITY/TEMPE	SUB 17-066 (N00014-16-1-3206)	12	300	-6,466	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000447	12	300	140	
	CHARLES RIVER ANALYTICS	85856	12	300	7,753	
	COLUMBIA UNIVERSITY	SUB 1(GG012351) N00014-15-1-26	12	300	8,561	
	COLUMBIA UNIVERSITY	SUB 1(GG013984)(N000014-18-1-2	12	300	4,529	
	CRAYTEX, LLC	79369	12	300	93,313	
	DREXEL UNIVERSITY	840115-2	12	300	155,141	
	DUKE UNIVERSITY	13-ONR-1111	12	300	161,421	
	GEORGIA INSTITUTE OF TECHNOLOGY	RG923-G1	12	300	422,353	
	GEORGIA INSTITUTE OF TECHNOLOGY	RH804-G1	12	300	122,191	
	GEORGIA INSTITUTE OF TECHNOLOGY	RK015-G4	12	300	219,136	
	HIGH-TEST LABORATORIES, INC.	SUB 2568-002 (N111-053)	12	300	27,428	
	HLS RESEARCH, INC.	SUB 20184849 (N00014-17-C-7041	12	300	27,480	
	INDIANA UNIVERSITY	A18-0115	12	300	6,451	
	JOHNS HOPKINS UNIVERSITY	2002694585	12	300	175,096	
	LEIDOS, INC.	87879	12	300	51	
	LUNA INNOVATIONS INCORPORATED	59423	12	300	6,629	

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DEPARTMENT OF DEFENSE	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710004237:2	12	300	142,767		
	NEW YORK UNIVERSITY	F7112-01:07	12	300	3,092		
	NORTH CAROLINA STATE UNIVERSITY	SUB 2015-1959-03 (N00014-15-1-	12	300	448,794		
	NORTHWESTERN UNIVERSITY	59829	12	300	-87,180		
	OHIO STATE UNIVERSITY	60063949	12	300	108,301		
	PRINCETON UNIVERSITY	80312	12	300	98,626		
	PURDUE UNIVERSITY	410478961	12	300	40,157		
	SIEMENS CORPORATION	1037-01-CYC1	12	300	119,370		
	SMRU LIMITED	A17-0639-001	12	300	71,418		
	STANFORD UNIVERSITY	60744755-114407-UCB	12	300	376,853		
	TETRA TECH, INC.	A18-0925-001	12	300	19,086		
	UNIVERSITY OF ARIZONA	008996	12	300	-1,794		
	UNIVERSITY OF ARIZONA	206874	12	300	167,916		
	UNIVERSITY OF ARIZONA	429405	12	300	103,903		
	UNIVERSITY OF ARIZONA	SUB 200257(N00014-14-1-0505)	12	300	74,190		
	UNIVERSITY OF ARIZONA	217733:7	12	300	190,981		
	UNIVERSITY OF ARIZONA	390506:2	12	300	226,367		
	UNIVERSITY OF COLORADO BOULDER	1553360 (N0014-15-1-2809)	12	300	310,960		
	UNIVERSITY OF COLORADO BOULDER	SUB 1557550(OCG6761B)	12	300	21,370		
	UNIVERSITY OF ILLINOIS	088800-16605	12	300	6,167		
	UNIVERSITY OF MARYLAND	88883	12	300	6,502		
	UNIVERSITY OF MASSACHUSETTS AMHERST	SUB 17-009730 B 00 (N00014-17-	12	300	81,655		
	UNIVERSITY OF MASSACHUSETTS AMHERST	010076	12	300	265,980		
	UNIVERSITY OF MASSACHUSETTS AMHERST	18-010467 C 00	12	300	230,923		
	UNIVERSITY OF MINNESOTA	A006141804	12	300	202,886		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5103081 (N00014-15-1-2578)	12	300	102,263		
	UNIVERSITY OF NOTRE DAME (INCL GEM)	203349UCSD	12	300	69,721		
	UNIVERSITY OF ROCHESTER	SUB 417132G/GR510677 (N00014-1	12	300	1,972		
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 84902573 (N00014-17-1-2062	12	300	235,957		
	UNIVERSITY OF SOUTHERN CALIFORNIA	82976179-CYC3	12	300	109,002		
	UNIVERSITY OF SOUTHERN CALIFORNIA	85470620:1	12	300	310,596		
	UNIVERSITY OF TENNESSEE	A19-0099-S004	12	300	125,940		
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0011221B:3	12	300	118,106		
	UNIVERSITY OF VIRGINIA	GG11764 146901-CYC5	12	300	-6		
	UNIVERSITY OF WASHINGTON	UWSC9067	12	300	235,277		
	UNIVERSITY OF WASHINGTON	UWSC9069	12	300	237,144		
	SYSTEMS & TECHNOLOGY RESEARCH LLC	2017-0044-CYC1	12	300	92,934		
	DYNACORP SYSTEM AND SOLUTIONS	59568	12	300	65		
	HAL TECHNOLOGY, LLC	210619-CYC1	12	300	58,749		
					6,358,215		
	Passthrough/Partial Passthrough	LEIDOS, INC.	SUB 10163495 (N62645-14-C-4030	12	301	58,923	
					58,923		
	Passthrough/Partial Passthrough	OREGON HEALTH & SCIENCE UNIVERSITY	1010447_UCSF	12	340	407,981	
		SOAR TECHNOLOGY, INC.	SC17008	12	340	154,293	
		UNIVERSITY OF PITTSBURGH	0043845-1	12	340	326,861	
		VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88552	12	340	-341	
		VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88715	12	340	-6,379	
		VYSNOVA PARTNERS, INC.	SC-2017-SABER-013-002	12	340	116,358	3,121
					998,773	3,121	
	Passthrough/Partial Passthrough	METABIOTA, INC	201405DTRA	12	351	43,872	23,716
		METABIOTA, INC	201406DTRA	12	351	56,517	41,053
		OHIO STATE UNIVERSITY	60059839	12	351	146,960	
		SOUTHERN METHODIST UNIVERSITY	GA00176-7506	12	351	36,258	
		TEMPLE UNIVERSITY	258954-UCLA:1	12	351	-1,973	
		UNIVERSITY OF NEVADA, LAS VEGAS/UNLV RESEARCH FOUNDATION	17-22FW-00	12	351	87,686	
		UNIVERSITY OF NEW MEXICO	HDTRA11810022	12	351	75,366	
		UNIVERSITY OF TENNESSEE	A18-0780-S001	12	351	216,477	
	VANDERBILT UNIVERSITY	UNIV59843	12	351	168,031		
	VANDERBILT UNIVERSITY	88827	12	351	-16		
				829,178	64,768		
Passthrough/Partial Passthrough	UNIVERSITY OF NOTRE DAME (INCL GEM)	203396UCSF	12	355	30,044		
				30,044			

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DEPARTMENT OF DEFENSE	Passthrough/Partial Passthrough					
	AMERICAN BURN ASSOCIATION	W81XWH-16-2-0048	12	420	202,124	
	AMERICAN BURN ASSOCIATION	W81XWH-16-2-0055	12	420	115,298	
	BINGHAMTON UNIVERSITY	W81XWH_16_1-0557	12	420	72,518	
	BOSTON UNIVERSITY	58771	12	420	-23	
	CEDARS-SINAI MEDICAL CENTER	0001319676	12	420	-5,002	
	CHARLES RIVER ANALYTICS	SC1708701-CYC1	12	420	130,523	
	DUKE UNIVERSITY	SUB 3130729(W81XWH-17-1-0372)	12	420	2,594	
	GENEVA FOUNDATION	201400882	12	420	2,029	
	HENRY FORD HEALTH SYSTEM	B70089UCSF	12	420	51,375	
	HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	3582 PO 887817	12	420	103,589	
	HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	823738/WX81XWH112017	12	420	166,061	
	HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	4096	12	420	791,105	
	JOHNS HOPKINS UNIVERSITY	2002015246/METRC2	12	420	617	
	JOHNS HOPKINS UNIVERSITY	2002458529	12	420	159	
	JOHNS HOPKINS UNIVERSITY	SUB 2003728025 (W81XWH-14-1-03	12	420	144,764	
	JOHNS HOPKINS UNIVERSITY	2000851841	12	420	-63,045	
	JOHNS HOPKINS UNIVERSITY	2002397378:3	12	420	109,899	
	JOHNS HOPKINS UNIVERSITY	2003611970	12	420	41,998	
	MASSACHUSETTS EYE AND EAR INFIRMARY	38033	12	420	67,169	
	MASSACHUSETTS EYE AND EAR INFIRMARY	SUB 38039 (W81XWH-15-2-0044)	12	420	1,606	
	MASSACHUSETTS GENERAL HOSPITAL	W81XWH-17-1-0492	12	420	-1,708	
	MEDICAL COLLEGE OF WISCONSIN	80004	12	420	-6,485	
	MEDICAL COLLEGE OF WISCONSIN	A132730	12	420	22,996	
	MEDICAL COLLEGE OF WISCONSIN	B5569	12	420	2,421	
	MEMORIAL SLOAN-KETTERING CANCER CENTER	BD523951	12	420	81,766	
	NATIONAL JEWISH HEALTH	20108701	12	420	55,981	
	NATIONAL TRAUMA INSTITUTE	NTI-JWMP-201501	12	420	100,655	
	NATIONAL TRAUMA INSTITUTE	NTI-CLOTT17-12	12	420	307,835	
	NATIONAL TRAUMA INSTITUTE	SUB NTI-CLOTT17-11 (W81XWH-17-	12	420	131,846	
	NATIONAL TRAUMA INSTITUTE	70A05	12	420	-8,583	
	NATIONAL TRAUMA INSTITUTE	872B3	12	420	-144	-100
	NATIONAL TRAUMA INSTITUTE	SUB NTRAP-18-07(W81XWH18C0179)	12	420	8,209	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1812	12	420	11,204	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI1872-02	12	420	125,949	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI187205094728	12	420	16,843	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1814	12	420	8,606	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1810	12	420	7,949	
	OREGON HEALTH & SCIENCE UNIVERSITY	1008335_UCSF	12	420	382,079	
	PACIFIC HEALTH RESEARCH AND EDUCATION INSTITUTE	SUB PHREI-21501-01(W81XWH-15-1	12	420	4,899	
	PARTNERS HEALTHCARE SYSTEM, INC	79398	12	420	-272	
	PARTNERS HEALTHCARE SYSTEM, INC	20190730	12	420	41,492	
	PURDUE UNIVERSITY	4104-64057	12	420	-71	
	RAND CORP	9920170033-CYC1	12	420	6,281	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8222	12	420	-71	
	SPR THERAPEUTICS LLC	SUB 20161887 (W81XWH-12-2-0132	12	420	5,614	
	STANFORD UNIVERSITY	61357202-122325	12	420	80,308	
	STANFORD UNIVERSITY	61414227-117996	12	420	33,172	
	STANFORD UNIVERSITY	61763383-121561	12	420	18,675	
	STATE UNIVERSITY SYSTEM OF FLORIDA	22206065-03	12	420	26,775	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000507860-014	12	420	6,958	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000507860-022	12	420	9,918	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000516840-021	12	420	4,129	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000518323-005-CYC1	12	420	90,705	
	TUFTS UNIVERSITY	ARM026	12	420	2,431	
	UNIVERSITY OF CHICAGO	SUB FP067927 (W81XWH1810501)	12	420	3,209	
	UNIVERSITY OF CINCINNATI	010376-002	12	420	144,994	
	UNIVERSITY OF COLORADO DENVER	FY16.794.007/1000616	12	420	12,348	
	UNIVERSITY OF COLORADO DENVER	FY18.576.005	12	420	22,073	
	UNIVERSITY OF COLORADO DENVER	SUB FY17.794.016 (W81XWH-15-1-	12	420	8,051	
	UNIVERSITY OF MARYLAND	1802254	12	420	14,979	
	UNIVERSITY OF MICHIGAN	3003219081:5	12	420	164,194	
	UNIVERSITY OF SOUTHERN CALIFORNIA	69094653-CYC4	12	420	6,882	
	UNIVERSITY OF SOUTHERN CALIFORNIA	69986229-CYC3	12	420	4,000	
	UNIVERSITY OF SOUTHERN CALIFORNIA	70043783-CYC3	12	420	15,027	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0013377B	12	420	23,246	
	UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON	15-017	12	420	56,018	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV LANG (W81XWH-15-1-0330	12	420	24,217	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LANG 298028 (W81XWH-10-1-0	12	420	13,079	

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DEPARTMENT OF DEFENSE	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA NORMAN (W81XWH-15-1-0030)	12	420	17,910		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	8724A	12	420	59,292		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	8741G	12	420	7,752		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	879D4	12	420	12,245		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	87B6D	12	420	3,714		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA AFARI 112579741 (W81XWH-18	12	420	12,117		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LANG (W81WH-17-1-0041)	12	420	14,204		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LANG 0072FED (W81WH-17-1-0	12	420	5,615		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA NORMAN (W81XWH-15-1-0330)	12	420	23,960		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RISBROUGH (W81XWH-181-0761	12	420	6,587		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RISBROUGH 097050000(W81XW	12	420	21,657		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RISBROUGH(W81XWH1810761)	12	420	27,044		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SCHIEHSER 110788676(W81XWH	12	420	24,570		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA TUSZYNSKI (W81XWH1810470)	12	420	36,876		
	WAKE FOREST UNIVERSITY	WFOUHS 441005B GU-05	12	420	45,887		
	YESHIVA UNIVERSITY	321170	12	420	55,024		
	LOGY BIOSERVICES, INC.	W15QKN-16-9-1002	12	420	4,276		
	HENNEPIN HEALTHCARE RESEARCH INSTITUTE	SUB 15059-01 (W81XWH-17-2-0059	12	420	37,872		
	INHIBRX, LLC	SUB 20180328 (W81XWH1810131)	12	420	17,006		
	TRANSLATIONAL GENOMICS RESEARCH INSTITUTE	SUB NARAYANAN-17-01 (W81XWH-17	12	420	65,019		
	UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE	1802297	12	420	110,596		
					4,635,259	-100	
		Passthrough/Partial Passthrough					
		CALIFORNIA INSTITUTE OF TECHNOLOGY	43B-1097280	12	431	804,541	
		CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 43B-1097279 (W911NF-16-1-0	12	431	273,699	
		CALIFORNIA STATE UNIVERSITY, NORTHRIDGE	A19-0006-S001	12	431	49,479	
		CORNELL UNIVERSITY	76091-10531	12	431	559,975	
		CORNELL UNIVERSITY	78845-10693	12	431	143,042	
		DCS CORPORATION	NONE (W911NF-10-2-0022)	12	431	329,143	
		DUKE UNIVERSITY	313-0590-CYC6	12	431	232,258	
		GALOIS INC	2015-001-CYC10	12	431	342,628	
		GEORGIA INSTITUTE OF TECHNOLOGY	RF228-G1	12	431	30,165	
		HARVARD UNIVERSITY	89283	12	431	-21,473	
		JOHNS HOPKINS UNIVERSITY	010195	12	431	36,279	
		JOHNS HOPKINS UNIVERSITY	2003550747:04	12	431	174,775	
	LEHIGH UNIVERSITY	543152-78001:5	12	431	56,433		
	MASSACHUSETTS GENERAL HOSPITAL	W911NF-16-C-0079	12	431	352,343		
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	S4660 - PO 217710:1	12	431	231,792		
	OHIO STATE UNIVERSITY	60043375:11	12	431	38,651		
	UNIVERSITY OF ILLINOIS	SUB 2015-05174-03 (W911NF-15-1	12	431	48,448		
	UNIVERSITY OF MARYLAND	37919-28424101	12	431	194,084		
	UNIVERSITY OF MASSACHUSETTS AMHERST	SUB 16-008956 B(W911NF-15-1-05	12	431	-297,181		
	UNIVERSITY OF MICHIGAN	SUBK0008376	12	431	121,336		
	UNIVERSITY OF MISSOURI	C00045065-2	12	431	188,694		
	UNIVERSITY OF MISSOURI	C00045065-3	12	431	133,993		
	UNIVERSITY OF PENNSYLVANIA	571714	12	431	79,563		
	UNIVERSITY OF SOUTHERN CALIFORNIA	80483423	12	431	117,672		
	UNIVERSITY OF UTAH	10034220-S5-CYC1	12	431	3,086		
	UNIVERSITY OF WASHINGTON	SUB UWSC10378(W911NF-17-1-0595	12	431	64,359		
	WORCESTER POLYTECHNIC INSTITUTE	18-TMP-01-215468-CYC1	12	431	298,422		
	WORCESTER POLYTECHNIC INSTITUTE	10520-GR-CYC1	12	431	1,026		
	MEDICAL TECHNOLOGY ENTERPRISE CONSORTIUM	2018-674	12	431	1,359,313	718,768	
					5,946,546	718,768	
	Passthrough/Partial Passthrough						
	QUESTEK INNOVATIONS LLC	009524	12	450	5,072		
					5,072		
	Passthrough/Partial Passthrough						
	INSTITUTE OF INTERNATIONAL EDUCATION	0054-UCLA-10:2	12	550	268,944		
					268,944		
	Passthrough/Partial Passthrough						
	UNIVERSITY OF FLORIDA	UFDSP00012373-CYC1	12	599	26,588		
					26,588		
	Passthrough/Partial Passthrough						
	PENNSYLVANIA STATE UNIVERSITY	006576	12	630	177,308		
	PENNSYLVANIA STATE UNIVERSITY	4957UCDARMY0045	12	630	370,205		

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DEPARTMENT OF DEFENSE	PENNSYLVANIA STATE UNIVERSITY	87271	12	630	219,305		
	RAYTHEON BBN TECHNOLOGIES CORP.	W911NF-09-2-0053	12	630	515,244		
	UNIVERSITY OF ILLINOIS	088831-16649	12	630	399,309		
	UNIVERSITY OF PENNSYLVANIA	SUB 572622(W911NF-17-2-0181)	12	630	615,419		
	UNIVERSITY OF SOUTHERN CALIFORNIA	92312369-CYC1	12	630	168,119		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LEUNG (W81XWH-16-1-0754)	12	630	69,471		
	NATIONAL SCIENCE TEACHERS ASSOCIATION	19-871-005-CYC1	12	630	10,231		
	NATIONAL SCIENCE TEACHERS ASSOCIATION	19-871-006-CYC1	12	630	16,771		
						2,561,383	
	Passthrough/Partial Passthrough						
		HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2942	12	750	10,116,363	
		HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	SUB 2880/837344 (HU0001-15-2-0	12	750	420,828	
		HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	3689-CYC3	12	750	303,953	
		HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	4571	12	750	211,647	
		HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	4689	12	750	5,080,899	
						16,133,690	
	Passthrough/Partial Passthrough						
		AECOM TECHNICAL SERVICES	63933	12	800	2,143	
		APOGEE RESEARCH LLC	201802-CYC10	12	800	216,673	
		BAE SYSTEMS (GREAT BRITAIN)	94316	12	800	-446	
		BROWN UNIVERSITY	85500	12	800	555	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	68-1098510	12	800	131,180		
	CARBON TECHNOLOGY, INC.	CTI-205420-CYC1	12	800	8,849		
	CHARLES RIVER ANALYTICS	SC1607602-CYC1	12	800	10,605		
	FLEXTECH ALLIANCE	SUB MCA 00009475 (042299)	12	800	1,002		
	GEORGE MASON UNIVERSITY	E203722-1-CYC3	12	800	25,212		
	GEORGE WASHINGTON UNIVERSITY	86861	12	800	122,031		
	GEORGE WASHINGTON UNIVERSITY	SUB 18-S12 (FA9550-18-1-0288)	12	800	40,185		
	GEORGIA TECH RESEARCH CORPORATION	SUB RJ321-G1 (FA9550-17-1-0274	12	800	56,878		
	JOHNS HOPKINS UNIVERSITY	2001622119	12	800	-5,569		
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003664	12	800	256,112		
	MAXENTRIC TECHNOLOGIES LLC	SUB UCSD-3928-1 (FA8650-18-P-1	12	800	53,938		
	MICROXACT INCORPORATED	59469	12	800	165		
	MORTON PHOTONICS	MP-UCSB-03	12	800	222,330		
	NORTHWESTERN UNIVERSITY	8732E	12	800	-5,235		
	PURDUE UNIVERSITY	010490	12	800	15,473		
	SRI INTERNATIONAL	SUB PO15349 (FA8750-17-C-0115)	12	800	199,826		
	STANFORD UNIVERSITY	008542	12	800	103,808		
	STANFORD UNIVERSITY	60796566-114411:8	12	800	136,033		
	STANFORD UNIVERSITY	61964931-136167	12	800	5,286		
	STATE UNIVERSITY OF NEW YORK	SB160126-0003C	12	800	481,602		
	STATE UNIVERSITY OF NEW YORK	SB160126-0004C	12	800	231,639		
	STATE UNIVERSITY OF NEW YORK	SB160126-0005C	12	800	148,972		
	STATE UNIVERSITY OF NEW YORK	SB160126-0007C	12	800	88,679		
	STATE UNIVERSITY OF NEW YORK	SB160126-0008C	12	800	61,695		
	STATE UNIVERSITY OF NEW YORK	SB160126-ACADEMY3C	12	800	39,818		
	STATE UNIVERSITY OF NEW YORK	SB160126-GDP02	12	800	417,635	133,517	
	STATE UNIVERSITY OF NEW YORK	59400	12	800	8,267		
	STATE UNIVERSITY OF NEW YORK	59402	12	800	300,205		
	STATE UNIVERSITY OF NEW YORK	59404	12	800	45,975		
	STATE UNIVERSITY OF NEW YORK	59405	12	800	32,282		
	STATE UNIVERSITY OF NEW YORK	59692	12	800	-755		
	STATE UNIVERSITY OF NEW YORK	59696	12	800	126		
	STATE UNIVERSITY OF NEW YORK	59705	12	800	-16		
	STATE UNIVERSITY OF NEW YORK	SB160126-ADMIN 03	12	800	330,847		
	STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	77020-1137156-2-CYC2	12	800	200,487		
	UNIVERSITY OF CENTRAL FLORIDA	24086151-01	12	800	306,762		
	UNIVERSITY OF CINCINNATI	010844-002	12	800	49,696	12,905	
	UNIVERSITY OF COLORADO BOULDER	009155	12	800	38,766		
	UNIVERSITY OF COLORADO BOULDER	SUB 1557013(FA9550 -16-1-0400)	12	800	119,092		
	UNIVERSITY OF CONNECTICUT	SUB 141414 (FA9550-14-1-0351)	12	800	178,214		
	UNIVERSITY OF FLORIDA	A19-0638-001	12	800	4,159		
	UNIVERSITY OF FLORIDA	SUB00001676	12	800	56,202		
	UNIVERSITY OF MARYLAND	36954Z8165003	12	800	222,440		
	UNIVERSITY OF MARYLAND	7479-Z8142001:F	12	800	216,656		
	UNIVERSITY OF MICHIGAN	3003832475:3	12	800	230,505		
	UNIVERSITY OF MINNESOTA	A004376801	12	800	-50		
	UNIVERSITY OF SOUTHERN CALIFORNIA	55231182-CYC4	12	800	-8,851		

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DEPARTMENT OF DEFENSE	UNIVERSITY OF TEXAS SYSTEM	UTA14-001123	12	800	116,823		
	UNIVERSITY OF TEXAS-DALLAS	A19-0807-001	12	800	31,064		
	UNIVERSITY OF TEXAS-PAN AMERICAN FOUNDATION	12602015166:005	12	800	157,253		
	UNIVERSITY OF UTAH	10038423-S2	12	800	111,306		
	UNIVERSITY OF WASHINGTON	SUB UWSC8748 (BPO10328)	12	800	100,950		
	UNIVERSITY OF WASHINGTON	A16-0323-003	12	800	14,416		
	UNIVERSITY OF WASHINGTON	SUB UWSC10456 (FA9550-16-1-014	12	800	145,290		
	UNIVERSITY OF WISCONSIN-MADISON	580K742	12	800	495		
	VIBRANT	784	12	800	17,137		
	VOXTEL, INC	AFRL-16-7638-UCI-ML-CYC2	12	800	22,025		
	YALE UNIVERSITY	SUB C13L11586 (FA9550-13-1-002	12	800	212,939		
	JUJI, INC.	204997-CYC3	12	800	46,998		
	UNIVERSITY OF DAYTON	SUB RSC17069 (FA8651-16-D-0311	12	800	30,583		
	ASSURED INFORMATION SECURITY, INC.	1086-SB-CYC1	12	800	208,321		
	UNIVERSAL TECHNOLOGY CORPORATION	A18-0724-001	12	800	55,638		
					6,669,322	146,422	
		Passthrough/Partial Passthrough FLORIDA TURBINE TECHNOLOGIES, INC.	FTT160403	12	801	79,143	
					79,143		
		Passthrough/Partial Passthrough HYPRES, INC.	86888	12	810	2,711	
		QUANTUM DESIGN INTERNATIONAL, INC.	009473	12	810	8,566	
					11,277		
		Passthrough/Partial Passthrough KOREAN AMERICAN CENTER	KAC-210712-CYC1	12	900	7,029	
					7,029		
		Passthrough/Partial Passthrough PURDUE UNIVERSITY	H98230-17-1-0417	12	905	74,983	
					74,983		
		Passthrough/Partial Passthrough ABBOTT LABORATORIES (INCL PERCLOSE)	874C8	12	910	2	
		ARIZONA STATE UNIVERSITY/TEMPE	17055	12	910	4,362	
		BOEING COMPANY, THE	1250821	12	910	29,516	
		BOEING COMPANY, THE	1351956	12	910	289,484	
	BROAD INSTITUTE INC.	SUB 5000361-5500001046 (N66001	12	910	536,949		
	BROWN UNIVERSITY	A16-0282-005	12	910	37,311		
	ERC, INCORPORATED	PO NO. PS160001	12	910	62,533		
	HARVARD UNIVERSITY	SUB 152220.5094542.0003	12	910	4,767		
	HARVARD UNIVERSITY	152236.5099921.0005-CYC3	12	910	64,485		
	HP INC.	59269	12	910	42,137		
	HRL LABORATORIES, LLC	17038-182022-QS-CYC1	12	910	95,707		
	INTERNATIONAL BUSINESS MACHINES CORPORATION	SUB 4915012801 (W911NF-15-C-02	12	910	24,107		
	JOHNS HOPKINS UNIVERSITY	2003366140	12	910	203,880		
	JOHNS HOPKINS UNIVERSITY	2003367845	12	910	371,813		
	JOHNS HOPKINS UNIVERSITY	2003625731:1	12	910	107		
	MICROELECTRONICS ADVANCED RESEARCH CORPORATION	85550	12	910	-9,984		
	NORTHEASTERN UNIVERSITY	505068-78050	12	910	242,115		
	PENNSYLVANIA STATE UNIVERSITY	SUB 6047-UCSD-DARPA-0011(D19AC	12	910	7,687		
	PROFUSA, INC.	W911NF-16-1-0341	12	910	161,908		
	RAYTHEON BBN TECHNOLOGIES CORP.	008658	12	910	182,360		
	SRI INTERNATIONAL	27-001455	12	910	110,645		
	SRI INTERNATIONAL	A19-0650-001	12	910	10,000		
	TELEDYNE TECHNOLOGIES, INC.	PO00099849	12	910	11,875		
	THE TEXAS A&M UNIVERSITY SYSTEM	M1901612	12	910	16,335		
	UNIVERSITY OF COLORADO BOULDER	1550663	12	910	-610		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	58768	12	910	-336		
	UNIVERSITY OF MARYLAND	61397-Z9112201-CYC1	12	910	193,891		
	UNIVERSITY OF MELBOURNE	DARPA-CROZIER-1	12	910	217,773		
	UNIVERSITY OF MICHIGAN	3004849812	12	910	148,781		
	UNIVERSITY OF MINNESOTA	008590	12	910	70,478		
	UNIVERSITY OF NOTRE DAME (INCL GEM)	208107UCI-CYC3	12	910	499,529		
	UNIVERSITY OF TEXAS-DALLAS	1705120:1	12	910	627,996		
	UNIVERSITY OF UTAH	10036982-UCI-CYC10	12	910	173,684		
	VANDERBILT UNIVERSITY	UNIV58702	12	910	230,524		
	BOYCE THOMPSON INSTITUTE FOR PLANT RESEARCH, INC.	1705	12	910	881,852		

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DEPARTMENT OF DEFENSE	JOHN B. PIERCE LABORATORY, INC., THE	285-E	12	910	380,356	
	SUN MICROSYSTEMS LABORATORIES, INC.	82846	12	910	3,306	
	DONALD DANFORTH PLANT SCIENCE CENTER	010121	12	910	366,838	
	GUIDESTAR OPTICAL SYSTEMS, INC.	PO729-20180915	12	910	25,481	
	PERCEPTRONICS	PSI-210724-CYC1	12	910	52,371	
					6,372,015	
	Direct					
	DEFENSE ADVANCED RESEARCH PROJECTS AGENCY	VARIOUS	12	RD	56,518,806	15,411,653
	SEPARATE AGENCIES	VARIOUS	12	RD	13,178,583	1,315,433
	DEPARTMENT OF ARMY	VARIOUS	12	RD	87,939,984	17,699,379
	DEPARTMENT OF AIR FORCE	VARIOUS	12	RD	27,876,655	4,221,696
	DEPARTMENT OF NAVY	VARIOUS	12	RD	103,752,255	11,228,136
	Passthrough/Partial Passthrough					
	ANALOG PHOTONICS LLC	89601	12	RD	12	
	ARGONNE NATIONAL LABORATORY (DOE GOCO LAB OPERATED BY UNIV OF CHICAGO)	6F30603	12	RD	171,637	
	ARGONNE NATIONAL LABORATORY (DOE GOCO LAB OPERATED BY UNIV OF CHICAGO)	8F-30225	12	RD	41,085	
	BAE SYSTEMS (GREAT BRITAIN)	846660	12	RD	10,028	
	BATTELLE MEMORIAL INSTITUTE	70719	12	RD	487,963	
	BORON SPECIALTIES, LLC	009563	12	RD	105,873	
	BROAD INSTITUTE INC.	5000361-5500001045-CYC1	12	RD	261,464	
	BROWN UNIVERSITY	60446	12	RD	15,764	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	102-1098625	12	RD	189,963	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	68-1098508	12	RD	157,425	
	CARNEGIE MELLON UNIVERSITY	1042288-403752	12	RD	43,632	
	CARNEGIE MELLON UNIVERSITY	1130233-409603	12	RD	6,914	
	COLORADO STATE UNIVERSITY	G-09573-01	12	RD	59,438	
	CORNELL UNIVERSITY	84713-11113	12	RD	158,235	
	DUKE UNIVERSITY	313-0794	12	RD	224,213	
	DUKE UNIVERSITY	313-0838	12	RD	27,409	
	FLEXTECH ALLIANCE	042299	12	RD	279,491	
	GEORGIA STATE UNIVERSITY	SP00012914-03	12	RD	277,563	
	INFOSCITEX CORPORATION	FPH02-5024	12	RD	135,593	
	JOHNS HOPKINS UNIVERSITY	134841	12	RD	35,436	
	JOHNS HOPKINS UNIVERSITY	89158	12	RD	5,918	
	JOHNS HOPKINS UNIVERSITY	2003506204	12	RD	194,790	
	KITWARE, INC.	K001892-00-S02	12	RD	437,230	
	LOGISTIC GLIDERS INC	201602876	12	RD	142,698	
	LOS ALAMOS NATIONAL SECURITY, LLC	346271	12	RD	123,220	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	S4579 PO 199511	12	RD	83,687	
	MAYACHITRA, INC.	007843	12	RD	119,232	
	MAYACHITRA, INC.	008228	12	RD	1,348	
	MAYACHITRA, INC.	57959	12	RD	26,889	
	MCCONNELL FOUNDATION (THE)	TMGSUBK0112016	12	RD	105,389	
	METRO LASER	77832	12	RD	1,945	
	METRON, INCORPORATED	008423	12	RD	110,488	
	MONTANA STATE UNIVERSITY	G176-19-W7329	12	RD	31,280	
	NEVADA SYSTEM OF HIGHER EDUCATION	UNR-19-23	12	RD	66,300	
	NEW JERSEY INSTITUTE OF TECHNOLOGY	SUB (NP) 996402(W911NF-15-C-02	12	RD	156,753	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1679	12	RD	23,000	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	88130	12	RD	-102,566	
	NORTHROP GRUMMAN CORPORATION	75B41	12	RD	-2,530	
	OLEANDR SCIENTIFIC LLC	OS-208291-CYC1	12	RD	213,275	
	PENNSYLVANIA STATE UNIVERSITY	5576UCDACC0003	12	RD	79,967	
	RAYTHEON BBN TECHNOLOGIES CORP.	007176	12	RD	97,921	
	RAYTHEON BBN TECHNOLOGIES CORP.	W911INF0920053	12	RD	208,005	
	RAYTHEON BBN TECHNOLOGIES CORP.	14754	12	RD	75,295	
	SIEMENS CORPORATION	160-1-CYC1	12	RD	39,966	
	SOAR TECHNOLOGY, INC.	SC-17-019	12	RD	29,808	
	SOAR TECHNOLOGY, INC.	SC-18-028	12	RD	10,855	
	STATE UNIVERSITY OF NEW YORK POLYTECHNIC INSTITUTE	MCE_EPDAA005	12	RD	24,295	
	STATE UNIVERSITY OF NEW YORK POLYTECHNIC INSTITUTE	89505	12	RD	1	
	UNIVERSITY OF ALASKA	UAF 17-0094	12	RD	317,917	
	UNIVERSITY OF CENTRAL FLORIDA	24086133-02	12	RD	20,005	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	W81XWH-15-1-0584	12	RD	41,134	
	UNIVERSITY OF ILLINOIS	070798-14455	12	RD	-4,397	
	UNIVERSITY OF ILLINOIS	SUB 077083-16369(2015-ST-061-C	12	RD	-3,622	
	UNIVERSITY OF ILLINOIS	076187-16892	12	RD	135,264	
	UNIVERSITY OF ILLINOIS	088831-16646	12	RD	100,187	
	UNIVERSITY OF MICHIGAN	3004628715	12	RD	152,203	

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DEPARTMENT OF DEFENSE	UNIVERSITY OF PENNSYLVANIA	572622	12	RD	241,207	
	UNIVERSITY OF PENNSYLVANIA	574723	12	RD	174,750	
	UNIVERSITY OF SOUTHERN CALIFORNIA	110332909	12	RD	68,923	
	UNIVERSITY OF SOUTHERN CALIFORNIA	110247221	12	RD	162,767	
	UNIVERSITY OF VIRGINIA	GG12149.160225	12	RD	75,224	
	UNIVERSITY OF WASHINGTON	UWSC9478	12	RD	115,461	
	VACUUM PROCESS ENGINEERING, INC	A17-0434	12	RD	206,629	
	ZYMERGEN, INC.	4209	12	RD	38,111	
	DALHOUSIE UNIVERSITY	044343	12	RD	217,462	
	MILITARY HEALTH RESEARCH FOUNDATION	0050	12	RD	19,067	
	MODULATED IMAGING, INC.	77306	12	RD	-70	
	NATIONAL UNIVERSITY OF SINGAPORE	RL2016-157	12	RD	106,526	
	SEMICONDUCTOR RESEARCH CORPORATION	2018-JU-2778	12	RD	47,026	
	THE MCCONNELL GROUP, INC.	30870	12	RD	106,509	
	X-THERMA INC.	043891	12	RD	22,128	
	JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY LLC	151299	12	RD	94,000	
	MANUFACTURING TECHNIQUES, INC.	38551	12	RD	15,544	
	NUVOTRONICS, INC.	NUVO-UCD-1807-1153	12	RD	32,500	
	NVIDIA CORPORATION	A18-1587	12	RD	84,963	
	UES, INC.	S-977-055-002-CYC1	12	RD	6,276	
					296,853,575	49,876,297
	DEPARTMENT OF DEFENSE Total				349,050,295	50,809,277
	CENTRAL INTELLIGENCE AGENCY	Passthrough/Partial Passthrough				
		UNIVERSITY OF UTAH	006950	13	431	152,833
					152,833	
	Passthrough/Partial Passthrough					
	DUKE UNIVERSITY	283-1047	13	RD	13	
					13	
CENTRAL INTELLIGENCE AGENCY Total					152,846	
DEPARTMENT OF INTERIOR	Passthrough/Partial Passthrough					
	INTERTRIBAL COURT OF SOUTHERN CALIFORNIA	20183015	15	029	72,500	
					72,500	
	Passthrough/Partial Passthrough					
	UNIVERSITY OF NEVADA, LAS VEGAS/UNLV RESEARCH FOUNDATION	007919	15	231	35,099	
					35,099	
	Passthrough/Partial Passthrough					
	UNIVERSITY OF WISCONSIN-MADISON	714K335	15	232	16,886	
					16,886	
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000474	15	423	255,284	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000513	15	423	90,849	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000544	15	423	64,990	
					411,123	
	Passthrough/Partial Passthrough					
	METROPOLITAN WATER DIST OF SO CALIFORNIA	009980	15	530	48,316	
	METROPOLITAN WATER DIST OF SO CALIFORNIA	010196	15	530	4,886	
	METROPOLITAN WATER DIST OF SO CALIFORNIA	179074	15	530	142	
	METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	008263	15	530	962	
					54,306	
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE COASTAL CONSERVANCY	16-044	15	614	18,706	
	CALIFORNIA STATE COASTAL CONSERVANCY	18257	15	614	216,962	
					235,668	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1620105	15	615	70,363	
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1740401	15	615	72,144	5,456
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1880109	15	615	76,972	
					219,479	5,456
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1780004	15	634	59,552	

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DEPARTMENT OF INTERIOR	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1791002-00	15	634	6,735	
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1880100	15	634	78,515	
					144,801	
	Passthrough/Partial Passthrough SOUTHWEST WETLANDS INTERPRETIVE ASSOCIATION	79703	15	650	40,521	40,521
	Passthrough/Partial Passthrough NATIONAL FISH AND WILDLIFE FOUNDATION TROUT UNLIMITED	0302.16.053589 20162013	15 15	663 663	77,344 54,545	131,889
	Passthrough/Partial Passthrough UNIVERSITY OF SOUTHERN CALIFORNIA	009931	15	807	1,716	
	UNIVERSITY OF SOUTHERN CALIFORNIA	104713903	15	807	44,671	
	UNIVERSITY OF SOUTHERN CALIFORNIA	104713976	15	807	28,429	
	UNIVERSITY OF SOUTHERN CALIFORNIA	104714023-E	15	807	12,091	
	UNIVERSITY OF SOUTHERN CALIFORNIA	18032	15	807	18,098	
	UNIVERSITY OF SOUTHERN CALIFORNIA	59911	15	807	1,078	
	UNIVERSITY OF SOUTHERN CALIFORNIA	59918	15	807	12,601	
	UNIVERSITY OF SOUTHERN CALIFORNIA	85B54	15	807	14,947	
	UNIVERSITY OF SOUTHERN CALIFORNIA	91272728-CYC3	15	807	4,999	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 104714134 (TASK 18107) (G1	15	807	36,864	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 104714134 (TASK 18211) (G1	15	807	19,954	
	SOUTHERN CALIFORNIA EARTHQUAKE CENTER	877DC	15	807	4,421	
					199,868	
	Passthrough/Partial Passthrough UNIVERSITY OF ARIZONA	447880	15	808	16,428	16,428
	Passthrough/Partial Passthrough NATURE CONSERVANCY	OCS-NCEAS-02012016	15	820	2,504	
	UNIVERSITY OF ARIZONA	221641	15	820	26,980	7,590
	UNIVERSITY OF ARIZONA	223659	15	820	2,146	
	UNIVERSITY OF ARIZONA	Y561946	15	820	20,741	
	UNIVERSITY OF ARIZONA	419572	15	820	62,365	43,398
	UNIVERSITY OF ARIZONA	478582	15	820	31,484	
	UNIVERSITY OF ARIZONA	G18AC00320	15	820	65,267	
	UNIVERSITY OF ARIZONA	Y561461	15	820	-84	
	OCEANS INITIATIVE	63663	15	820	26,945	
					238,347	50,987
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS	C8961515	15	904	1,000	1,000
	Passthrough/Partial Passthrough COLORADO STATE UNIVERSITY	G-09814-02	15	945	13,641	
	UNIVERSITY OF GEORGIA	P17AC01606	15	945	2,272	
					15,913	
	Passthrough/Partial Passthrough NATIONAL WRITING PROJECT	92-CA03-NPS2018	15	954	3,500	3,500
	Direct DEPARTMENT OF INTERIOR	VARIOUS	15	RD	16,971,542	557,637
	Passthrough/Partial Passthrough CALIFORNIA DIVISION OF BOATING AND WATERWAYS	C1370030	15	RD	155,772	
	COOPERATIVE ECOSYSTEM STUDIES UNITS	P13AC00676	15	RD	33,312	
	METRO LASER	UCI26DI02-CYC1	15	RD	53,598	
	UNIVERSITY OF WYOMING	1003666	15	RD	4,990	
					17,219,214	557,637
DEPARTMENT OF INTERIOR Total				19,056,544	614,081	
DEPARTMENT OF JUSTICE	Passthrough/Partial Passthrough RESEARCH FOUNDATION CUNY, CITY UNIVERSITY OF NEW YORK	49274-D	16	123	229,773	229,773

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DEPARTMENT OF JUSTICE	Passthrough/Partial Passthrough						
	BATTELLE MEMORIAL INSTITUTE	US001-0000716297	16	560	43,103		
	COLORADO STATE UNIVERSITY	SUB G-75544-01 (2016-DN-BX-419	16	560	145,435		
	PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION	SUB 0874(2016-CK-BX-0008)	16	560	14,214		
	UNIVERSITY OF COLORADO BOULDER	1553430 (2015-DN-BX-K016	16	560	37,807		
	UNIVERSITY OF WASHINGTON	UWSC8970-CYC3	16	560	19,690		
	AMERICAN INSTITUTES FOR RESEARCH IN THE BEHAVIORAL SCIENCES	0395200003-CYC1	16	560	13,058		
					273,307		
	Passthrough/Partial Passthrough						
	CONTRA COSTA COUNTY	20-084-0	16	590	297,006		
					297,006		
	Passthrough/Partial Passthrough						
	NATIONAL 4-H COUNCIL	71A77	16	726	1,025		
	NATIONAL 4-H COUNCIL	75B94	16	726	43,474		12,333
	NATIONAL 4-H COUNCIL	32C03	16	726	14,955		
					59,454		12,333
	Direct						
	DEPARTMENT OF JUSTICE	VARIOUS	16	RD	3,521,196		373,758
					3,521,196		373,758
DEPARTMENT OF JUSTICE Total					4,380,737		386,091
DEPARTMENT OF LABOR	Passthrough/Partial Passthrough						
	AVAR CONSULTING, INC.	2018-001-CYC1	17	268	34,173		
					34,173		
	Direct						
	DEPARTMENT OF LABOR	VARIOUS	17	RD	440,576		
	Passthrough/Partial Passthrough						
	AVAR CONSULTING, INC.	DOL-OPS-15-C-0060	17	RD	49,880		
					490,456		
DEPARTMENT OF LABOR Total					524,629		
DEPARTMENT OF STATE	Passthrough/Partial Passthrough						
	AFRICAN MEDICAL AND RESEARCH FOUNDATION	00009510	19	029	5		
					5		
	Passthrough/Partial Passthrough						
	CRDF GLOBAL	009904	19	700	50,000		
					50,000		
	Direct						
	DEPARTMENT OF STATE	VARIOUS	19	RD	45,709,983		28,391,463
	DEPARTMENT OF STATE (ARRA)	VARIOUS	19	RD	-18,306		
	Passthrough/Partial Passthrough						
	ASPEN INSTITUTE, THE	043925	19	RD	111,512		
	UNIVERSITY OF NOTRE DAME (INCL GEM)	202809UCB	19	RD	45,290		
					45,848,479		28,391,463
DEPARTMENT OF STATE Total					45,898,484		28,391,463
DEPARTMENT OF TRANSPORTATION	Passthrough/Partial Passthrough						
	VIRGINIA TRANSPORTATION RESEARCH COUNCIL	111463	20	200	111,936		
					111,936		
	Passthrough/Partial Passthrough						
	OREGON DEPARTMENT OF TRANSPORTATION	30286	20	215	20,860		16,579
					20,860		16,579
	Passthrough/Partial Passthrough						
	CALIFORNIA HIGH-SPEED RAIL AUTHORITY (ARRA)	HSR15-97	20	319	24,919		52,530
					24,919		52,530
	Passthrough/Partial Passthrough						
	CORNELL UNIVERSITY	79841-10829	20	701	340,463		
	TEXAS A&M UNIVERSITY - COLLEGE STATION	008768	20	701	88,762		
	UNIVERSITY OF NORTH CAROLINA SYSTEM	5106575	20	701	364,853		
	UNIVERSITY OF SOUTHERN CALIFORNIA	009537	20	701	93,689		

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DEPARTMENT OF TRANSPORTATION	UNIVERSITY OF SOUTHERN CALIFORNIA UNIVERSITY OF SOUTHERN CALIFORNIA	84377997-1	20	701	296,084	
		84381457-CYC2	20	701	219,796	
					1,403,647	
	Passthrough/Partial Passthrough BOOZ ALLEN HAMILTON INC.	108679SB1M	20	762	71,143	
					71,143	
	Direct					
	DEPARTMENT OF TRANSPORT	VARIOUS	20	RD	4,270,977	1,135,642
	Passthrough/Partial Passthrough					
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	AL18029	20	RD	497,326	465,359
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	MC18004	20	RD	39,951	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS18034	20	RD	677,865	419,458
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS19024	20	RD	766,968	244,315
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS19025	20	RD	159,205	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR18009	20	RD	50,090	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR18010	20	RD	12,944	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR18012	20	RD	20,030	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR18013	20	RD	20,076	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR18014	20	RD	80,564	65,766
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR19005	20	RD	77,692	9,833
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR19006	20	RD	63,957	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR19007	20	RD	121,514	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR19008	20	RD	41,089	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR19009	20	RD	651,031	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR19010	20	RD	105,710	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR19011	20	RD	71,527	
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR19012	20	RD	142,891	
	LEIDOS, INC.	009139	20	RD	83,407	
	UNIVERSITY OF SOUTHERN CALIFORNIA	84380215	20	RD	269,533	
	UNIVERSITY OF SOUTHERN CALIFORNIA	114483100	20	RD	3,974	
	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION	GCB1359	20	RD	-595	
	CALTRANS CALIFORNIA DEPARTMENT OF TRANSPORTATION	182AE	20	RD	10,815	
	CALTRANS DIVISION OF RESEARCH, INNOVATION AND SYSTEM INFORMATION	65A0562	20	RD	315,759	
	CALTRANS DIVISION OF RESEARCH, INNOVATION AND SYSTEM INFORMATION	1829C	20	RD	80,913	
	CALIFORNIA HIGHWAY PATROL	18C061149	20	RD	8	
	AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.	A19-2103	20	RD	2,346	
	SACRAMENTO AREA COUNCIL OF GOVERNMENTS	SACOG MASTER	20	RD	11,503	
					8,649,070	2,340,373
DEPARTMENT OF TRANSPORTATION Total					10,281,576	2,409,482
DEPARTMENT OF THE TREASURY						
	Passthrough/Partial Passthrough UNIVERSITY OF NEW ORLEANS	324	21	RD	16,303	
					16,303	
DEPARTMENT OF THE TREASURY Total					16,303	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION						
	Passthrough/Partial Passthrough					
	AEROSPACE CORPORATION	4600006620	43	001	10,716	
	ARIZONA STATE UNIVERSITY/TEMPE	17-176	43	001	89,158	
	ARIZONA STATE UNIVERSITY/TEMPE	A17-0383-001	43	001	21,996	
	ARIZONA STATE UNIVERSITY/TEMPE	009968	43	001	57,522	
	ARIZONA STATE UNIVERSITY/TEMPE	ASUB00000023	43	001	8,155	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0353-001	43	001	3,143	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0354-001	43	001	9,840	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0355-001	43	001	4,217	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0361-001	43	001	4,976	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0419-001	43	001	5,107	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0511-001	43	001	9,257	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0419-001	43	001	91,306	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0420-001	43	001	105,017	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0530-001	43	001	48,078	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0531-001	43	001	5,840	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0545-001	43	001	19,043	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12914.04-A-CYC3	43	001	13,767	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14178.001-A	43	001	565	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14191.008-A	43	001	5,843	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14254.001-A	43	001	48,916	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14458.001-A	43	001	960	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14498.001-A	43	001	9,397	

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NATIONAL AERONAUTICS & SPACE ADMINISTRATION	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14528.003-A	43	001	5,435	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51379.001-A-CYC1	43	001	49,549	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB NONE (HST-GO-14241.005-A	43	001	1,574	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB NONE (HSG-GO-14130.001-A)	43	001	1,973	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58305	43	001	14,592	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58357	43	001	28,358	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58365	43	001	16,415	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0029-006	43	001	34,594	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0198-001	43	001	33,812	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0358-001	43	001	16,497	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0359-001	43	001	1,595	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0360-001	43	001	2,632	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0510-001	43	001	3,648	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0568-001	43	001	7,005	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0570-001	43	001	6,434	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0494-001	43	001	22,472	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0495-001	43	001	8,850	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0533-001	43	001	1,159	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0538-001	43	001	27,855	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0547-001	43	001	22,925	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0548-001	43	001	8,687	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0563-001	43	001	24,142	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0564-001	43	001	6,289	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0565-001	43	001	10,388	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0818-001	43	001	12,796	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0595-001	43	001	9,047	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0610-001	43	001	119,854	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0623-001	43	001	66,270	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0628-001	43	001	31,593	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0630-001	43	001	42,673	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14295.001-A	43	001	17,963	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14554.001-A-CYC1	43	001	51,086	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13768.024-A	43	001	10,345	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14610.015-A	43	001	13,450	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14630.002-A	43	001	37,056	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14668.001-A	43	001	40,289	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14701.002-A	43	001	13,862	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14725.003-A	43	001	164	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14744.002-A-CYC1	43	001	31,661	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14839.001-A	43	001	35,172	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14864.002-A	43	001	7,533	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14884.002-A	43	001	20,588	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14920.001-A-CYC1	43	001	7,826	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14939.001-A	43	001	1,848	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15115.002-A	43	001	75,659	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15124.001-A-CYC1	43	001	15,926	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15177.008-A	43	001	24,546	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15199.001-A	43	001	57,650	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15287.001-A	43	001	81,372	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15320.001-A	43	001	93,343	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15057.001	43	001	53,964	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15077.001-A	43	001	43,598	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58383	43	001	1,365	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58384	43	001	12,938	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58386	43	001	7,932	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58387	43	001	28,165	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58388	43	001	8,786	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58389	43	001	26,009	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58393	43	001	19,672	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58889	43	001	36,882	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	79791	43	001	15,653	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0578-001	43	001	5,000	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0606-001	43	001	14,243	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0613-001	43	001	4,411	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0622-001	43	001	27,830	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0624-001	43	001	6,095	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0626-001	43	001	57,614	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0627-001	43	001	42,605	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0796-001	43	001	4,492	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A19-0746-001	43	001	25,480	

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			Prefix	Extension	Federal Expenditures	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15006.002-A-CYC1	43	001	39,481	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15026.002-A	43	001	33,724	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13453.004-A:2	43	001	42,324	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13459.017-A:2	43	001	47,654	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13767.009-A:2	43	001	53,029	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14044.001-A	43	001	13,353	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14219.002-A	43	001	5,379	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14621.002-A	43	001	2,823	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14670.001-A	43	001	3,826	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14790.002-A	43	001	36,272	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14872.011-A	43	001	4,045	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15096.003-A:1	43	001	36,714	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15117.005-A	43	001	14,271	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15123.001-A-CYC1	43	001	69,826	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15212.007-A	43	001	62,416	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15213.002-A	43	001	1	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15215.004-A	43	001	18,469	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15226.002-A-CYC1	43	001	9,788	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15242.017-A-CYC1	43	001	34,352	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15328.002-A	43	001	19,388	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15342.001-A	43	001	1,003	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15343.001-A	43	001	12,647	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15471.001-A	43	001	16,328	
	ATAC	10-1616-UCB	43	001	164,761	
	BAYLOR COLLEGE OF MEDICINE	010481	43	001	83,625	
	BERMUDA INSTITUTE OF OCEAN SCIENCES	15444UCSB	43	001	49,746	
	BIGELOW LABORATORY FOR OCEAN SCIENCES	BLOS 17-001	43	001	49,964	
	BOSTON UNIVERSITY	4500001963	43	001	9,535	
	BOSTON UNIVERSITY	79673	43	001	29,058	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	65L-1097809:01	43	001	31,896	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	S382664-CYC3	43	001	62,190	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	A19-0724-001	43	001	7,571	
	CALIFORNIA STATE UNIVERSITY, SAN JOSE STATE UNIVERSITY FOUNDATION	008690	43	001	48,118	
	CATHOLIC UNIVERSITY OF AMERICA, THE	361207 - SUB 1	43	001	50,892	
	CENTRAL WASHINGTON UNIVERSITY	14274	43	001	19,999	
	CONSORTIUM FOR OCEAN LEADERSHIP	SA 16-33	43	001	117,555	
	CORNELL UNIVERSITY	73739-10510	43	001	24,623	
	DESERT RESEARCH INSTITUTE	656.7206	43	001	22,144	
	EARTH AND SPACE RESEARCH	ESR-2016-224-UCSD	43	001	20,269	
	GEORGIA INSTITUTE OF TECHNOLOGY	RG176-G1-CYC1	43	001	30,094	
	GEORGIA INSTITUTE OF TECHNOLOGY	RJ249-G2	43	001	172,919	
	GEORGIA INSTITUTE OF TECHNOLOGY	RK617-G4	43	001	2,770	
	GSI ENVIRONMENTAL, INC	13-009	43	001	141,332	
	HARVARD UNIVERSITY	130812-5096205	43	001	51,627	
	JET PROPULSION LABORATORY	1512986:002	43	001	306,775	
	JET PROPULSION LABORATORY	1526530	43	001	13,720	
	JET PROPULSION LABORATORY	1536981	43	001	67,118	
	JET PROPULSION LABORATORY	1555910	43	001	73,682	
	JET PROPULSION LABORATORY	1557709	43	001	92,825	
	JET PROPULSION LABORATORY	1564598	43	001	26,712	
	JET PROPULSION LABORATORY	1570861	43	001	15,846	
	JET PROPULSION LABORATORY	009800	43	001	5,971	
	JET PROPULSION LABORATORY	1532733:006	43	001	42,140	
	JET PROPULSION LABORATORY	1537426:006	43	001	692,338	
	JET PROPULSION LABORATORY	1565346	43	001	59,336	
	JET PROPULSION LABORATORY	1568910	43	001	26,022	
	JET PROPULSION LABORATORY	1572667	43	001	65,937	
	JET PROPULSION LABORATORY	1583032-CYC1	43	001	19,442	
	JET PROPULSION LABORATORY	1586488-CYC2	43	001	35,032	
	JET PROPULSION LABORATORY	1588498	43	001	89,303	
	JET PROPULSION LABORATORY	1589110	43	001	11,443	
	JET PROPULSION LABORATORY	1592619-CYC1	43	001	24,125	
	JET PROPULSION LABORATORY	1595805-CYC1	43	001	11,742	
	JET PROPULSION LABORATORY	1596784	43	001	28,727	
	JET PROPULSION LABORATORY	SUB 1583135 (NONE)	43	001	229	
	JET PROPULSION LABORATORY	SUB 1597973 (NONE)	43	001	-731	
	JET PROPULSION LABORATORY	010080	43	001	17,008	
	JET PROPULSION LABORATORY	010410	43	001	32,741	
	JET PROPULSION LABORATORY	010648	43	001	14,039	
	JET PROPULSION LABORATORY	010711	43	001	3,226	

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NATIONAL AERONAUTICS & SPACE ADMINISTRATION	JET PROPULSION LABORATORY	010800	43	001	28,427	
	JET PROPULSION LABORATORY	1409806:034	43	001	72,577	
	JET PROPULSION LABORATORY	1409809:041	43	001	264,902	
	JET PROPULSION LABORATORY	1490248:009	43	001	79,091	
	JET PROPULSION LABORATORY	1522155:004	43	001	73,025	
	JET PROPULSION LABORATORY	1523995:004	43	001	4,806	
	JET PROPULSION LABORATORY	1524322-CYC6	43	001	3,083	
	JET PROPULSION LABORATORY	1533870:007	43	001	24,232	
	JET PROPULSION LABORATORY	1542315:007	43	001	66,110	
	JET PROPULSION LABORATORY	1552843:002	43	001	4,702	
	JET PROPULSION LABORATORY	1556185:001	43	001	18,687	
	JET PROPULSION LABORATORY	1559252:004	43	001	-454	
	JET PROPULSION LABORATORY	1565523:002	43	001	9,771	
	JET PROPULSION LABORATORY	1567551:001	43	001	128,045	
	JET PROPULSION LABORATORY	1570200:006	43	001	36,288	
	JET PROPULSION LABORATORY	1572480-CYC2	43	001	59,727	
	JET PROPULSION LABORATORY	1586488-CYC1	43	001	-11,883	
	JET PROPULSION LABORATORY	1587634	43	001	35,000	
	JET PROPULSION LABORATORY	1588177-CYC3	43	001	31,299	
	JET PROPULSION LABORATORY	1605372-CYC1	43	001	17,791	
	JET PROPULSION LABORATORY	1612013	43	001	25,885	
	JET PROPULSION LABORATORY	1612014	43	001	18,400	
	JET PROPULSION LABORATORY	1612525	43	001	31,526	
	JET PROPULSION LABORATORY	1613317-CYC1	43	001	55,717	
	JET PROPULSION LABORATORY	1613461-CYC1	43	001	44,856	
	JET PROPULSION LABORATORY	1616972	43	001	18,377	
	JET PROPULSION LABORATORY	1618801	43	001	224,055	
	JET PROPULSION LABORATORY	1619275	43	001	34,432	
	JET PROPULSION LABORATORY	1619578-CYC1	43	001	14,850	
	JET PROPULSION LABORATORY	1620723-CYC1	43	001	20,777	
	JET PROPULSION LABORATORY	77649	43	001	913	
	JET PROPULSION LABORATORY	79039	43	001	-2,004	2,671
	JET PROPULSION LABORATORY	86355	43	001	7,471	
	JET PROPULSION LABORATORY	877CG	43	001	-1,829	
	JET PROPULSION LABORATORY	A19-0431-001	43	001	17,997	
	JET PROPULSION LABORATORY	SUB 1621635(NONE)	43	001	67,839	
	JET PROPULSION LABORATORY	SUB 1626317(NONE)	43	001	6,061	
	JET PROPULSION LABORATORY	1401886:013	43	001	59,293	
	JET PROPULSION LABORATORY	1570407:2	43	001	146,788	
	JOHNS HOPKINS UNIVERSITY	131186:4	43	001	15,196	
	JOHNS HOPKINS UNIVERSITY	132224:11	43	001	78,861	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003374	43	001	110,401	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003371:8	43	001	82,641	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	73623:1	43	001	48,455	
	METRON AVIATION, INC.	UCB-0001-96C-N132	43	001	47,291	
	MONTANA STATE UNIVERSITY	63550	43	001	23,710	
	MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	A17-0665-001	43	001	94,928	
	OHIO STATE UNIVERSITY	SUB 60050483 (NNX16AF48G)	43	001	53,112	
	OHIO STATE UNIVERSITY	60066885	43	001	19,423	
	OHIO STATE UNIVERSITY	60057395:2	43	001	37,070	
	OLD DOMINION UNIVERSITY RESEARCH FOUNDATION	18-193-100687-010:1	43	001	47,024	
	OREGON STATE UNIVERSITY	NS278A-B:4	43	001	61,795	
	PLANETARY SCIENCE INSTITUTE	A17-0402-001	43	001	68,970	
	PLANETARY SCIENCE INSTITUTE	1492:1	43	001	45,625	
	PLANETARY SCIENCE INSTITUTE	1566 UCLA	43	001	30,031	
	RICE UNIVERSITY	80NSSC18K0828	43	001	80,546	
	ROCHESTER INSTITUTE OF TECHNOLOGY	31967-02-CYC1	43	001	33,324	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	SUB 0643 (80NSSC18M0093)	43	001	56,682	
	SOUTHWEST RESEARCH INSTITUTE	699046X17	43	001	85,763	
	SOUTHWEST RESEARCH INSTITUTE	K99050JRG	43	001	21,285	
	SOUTHWEST RESEARCH INSTITUTE	L99039MJM	43	001	22,261	
	STANFORD UNIVERSITY	63621	43	001	629	
	UNIVERSITIES SPACE RESEARCH ASSOCIATION	02274-01	43	001	24,414	
	UNIVERSITIES SPACE RESEARCH ASSOCIATION	SOF 05-00COORAY-CYC2	43	001	29,334	
	UNIVERSITY CORPORATION AT MONTEREY BAY	28C69	43	001	7,920	
	UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	SUBAWD000668	43	001	8,202	
	UNIVERSITY OF ARIZONA	374492:1	43	001	11,635	
	UNIVERSITY OF ARIZONA	87328	43	001	1,060	
	UNIVERSITY OF ARIZONA	A16-0345-003	43	001	-247	
	UNIVERSITY OF CHICAGO	SUB FP061308-A(NNX16AJ34G)	43	001	1,276	

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NATIONAL AERONAUTICS & SPACE ADMINISTRATION	UNIVERSITY OF COLORADO BOULDER	1554485-1000818335	43	001	15,136		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1554053:1	43	001	26,517		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1556287	43	001	40,548		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1552631:4	43	001	60,615		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1556906	43	001	39,544		
	UNIVERSITY OF DELAWARE	42385	43	001	37,597		
	UNIVERSITY OF DELAWARE	45335:1	43	001	16,168		
	UNIVERSITY OF DELAWARE	63468	43	001	31,147		
	UNIVERSITY OF DELAWARE	A19-0541-001	43	001	443		
	UNIVERSITY OF FLORIDA	UFDSP00011825	43	001	18,799		
	UNIVERSITY OF IOWA	1001515160	43	001	166,708		
	UNIVERSITY OF IOWA	1001652308:03	43	001	28,643		
	UNIVERSITY OF MAINE SYSTEM	UM-S966	43	001	5,510		
	UNIVERSITY OF MAINE SYSTEM	UMS1200	43	001	309		
	UNIVERSITY OF MARYLAND	54296-Z6059207	43	001	280,613		
	UNIVERSITY OF MARYLAND	A16-0050-003	43	001	46,737		
	UNIVERSITY OF MASSACHUSETTS AMHERST	B000558518:1	43	001	1,168		
	UNIVERSITY OF MICHIGAN	3004683323:1	43	001	45,828		
	UNIVERSITY OF MICHIGAN	81535	43	001	24,007		
	UNIVERSITY OF MINNESOTA	A005276801	43	001	198,807		
	UNIVERSITY OF MINNESOTA	A005821701	43	001	1,308,153		
	UNIVERSITY OF NEW HAMPSHIRE	17-001	43	001	48,900		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5100754:4	43	001	-1		
	UNIVERSITY OF TEXAS-AUSTIN	A16-0314-001	43	001	20,751		
	UNIVERSITY OF TEXAS-AUSTIN	UTA16-000861	43	001	42,542		
	UNIVERSITY OF TEXAS-AUSTIN	A17-0561-005	43	001	38,750		
	UNIVERSITY OF TEXAS-AUSTIN	UTA15-000804:2	43	001	-187		
	UNIVERSITY OF TEXAS-DALLAS	1705881	43	001	29,446		
	UNIVERSITY OF WASHINGTON	UWSC9226_BPO16911	43	001	8,476		
	UNIVERSITY OF WASHINGTON	UWSC9264	43	001	8,021		
	UNIVERSITY OF WASHINGTON	UWSC9241-CYC3	43	001	3,922		
	UNIVERSITY OF WISCONSIN-MADISON	545K204:4	43	001	-176		
	UNIVERSITY OF WISCONSIN-MADISON	SUB 790K101(SOF-06-0191-TREMON	43	001	52,358		
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	426670-19B03	43	001	23,053		
	WEST VIRGINIA UNIVERSITY	15-920-UCB	43	001	46,913		
	WOODS HOLE OCEANOGRAPHIC INSTITUTION	A101349	43	001	76,634		
	WYLE LABORATORIES	T72556	43	001	342,163		
	HAMPTON UNIVERSITY	HU-170003	43	001	-33		
	SYSTEM SCIENCE APPLICATIONS INC.	SSA-001	43	001	72,681		
	UNIVERSITY OF HASSELT	80NSSC17K0056	43	001	41,202		
	UNIVERSITY OF HAWAII SYSTEM	MA1306	43	001	74,794		
	UNIVERSITY OF MASSACHUSETTS LOWELL	S52000000027333	43	001	228,588		
	NORTHWEST INDIAN COLLEGE	A17-0857-001	43	001	31,730		
	SETI INSTITUTE	80NSSC18K0854	43	001	226		
	SETI INSTITUTE	A18-0744-001	43	001	14,742		
	ANALYTICAL MECHANICS ASSOCIATES, INC.	010037	43	001	130,236		
	AUBURN UNIVERSITY	17-PHYS-209378-UCLA:1	43	001	41,427		
	BLUE MARBLE SPACE	009672	43	001	55,871		
	CALIFORNIA STATE UNIVERSITY	117801	43	001	62,048		
	RILEE SYSTEMS TECHNOLOGIES LLC	80NSSC18M0118-1	43	001	23,021		
	SPACE SCIENCE INSTITUTE	79784	43	001	5,076		
					12,735,969	2,671	
	Passthrough/Partial Passthrough						
		ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14199.006-A	43	002	-16	
		ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14083.002-A-CYC2	43	002	10,082	
		CALIFORNIA INSTITUTE OF TECHNOLOGY	44A-1085101	43	002	880,016	
		CALIFORNIA STATE UNIVERSITY, SAN JOSE STATE UNIVERSITY FOUNDATION	21-1614-5736-UCD2018	43	002	50,799	
		GEORGIA TECH RESEARCH CORPORATION	SUB RG183-G1 (NNX15AU22A)	43	002	80,178	
		JET PROPULSION LABORATORY	1528152-CYC1	43	002	302,700	108,602
		UNIVERSITIES SPACE RESEARCH ASSOCIATION	SUB 05-0047 (NAS2-97001)	43	002	-9,117	
					1,314,641	108,602	
	Passthrough/Partial Passthrough						
		BAYLOR COLLEGE OF MEDICINE	7000000516	43	003	422,137	
		BAYLOR COLLEGE OF MEDICINE	NNX16A069A	43	003	275,976	
		BAYLOR COLLEGE OF MEDICINE	INN0001	43	003	305,632	
		SOUTHWEST RESEARCH INSTITUTE	J99018CP	43	003	46,454	
		UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1555630:1	43	003	25,013	
					1,075,212		

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NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Passthrough/Partial Passthrough					
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13677.001-A	43	007	66,096	
	PRINCETON PLASMA PHYSICS LABORATORY	86093	43	007	9,936	
	AMERICAN COLLEGE OF SPORTS MEDICINE	20173116	43	007	213	
					76,245	
	Passthrough/Partial Passthrough					
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14289.001-A-CYC1	43	008	38,749	
	CAL STATE L.A. UNIVERSITY AUXILIARY SERVICES, INC. (UAS)	UC1231210-CYC4	43	008	225,985	
	CSU, SONOMA STATE UNIVERSITY	SUB 115642 (NNX16A181A)	43	008	6,456	
					271,190	
	Passthrough/Partial Passthrough					
	METRO LASER	UCI27NM09-CYC1	43	012	19,269	
					19,269	
	Direct					
	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	VARIOUS	43	RD	89,918,246	14,493,853
	Passthrough/Partial Passthrough					
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	005647	43	RD	17,157	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007253	43	RD	12,515	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007999	43	RD	49,423	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008000	43	RD	28,224	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008174	43	RD	14,130	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008659	43	RD	42,670	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008660	43	RD	174	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14280.001-A	43	RD	87	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO13661002A	43	RD	2,778	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13700.001-A	43	RD	1,525	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13776.001-A	43	RD	9,908	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13937.003-A	43	RD	96,679	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14096.007-A	43	RD	4,419	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14492.001-A	43	RD	13,210	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14661.001-A	43	RD	60,048	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14754.001-A	43	RD	18,829	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51363.001-A	43	RD	236	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB HST-GO-14606.001-A (NASS-2	43	RD	31,208	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007210	43	RD	19,932	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007278	43	RD	25,033	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007575	43	RD	30,362	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008405	43	RD	29,099	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008818	43	RD	5,630	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008959	43	RD	44,347	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	009043	43	RD	48,247	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15024.001-A	43	RD	50,875	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13666.001-A	43	RD	32,702	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14118-002	43	RD	110,864	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14734.016-A	43	RD	92,159	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15170.001-A	43	RD	87,913	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51395.001-A	43	RD	98,574	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB HST-GO-15275.008-A (NASS-2	43	RD	28,184	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	009468	43	RD	10,762	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	009542	43	RD	97,967	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	88654	43	RD	33,211	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0539-002	43	RD	17,335	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13886.001-A-CYC3	43	RD	20,622	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO- 15169.001-A	43	RD	26,599	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13725.001-A	43	RD	7,567	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13726.001-A	43	RD	3,815	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14104.002-A	43	RD	4,283	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14717.001-A	43	RD	18,378	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15320.005	43	RD	14,181	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51409.001-A	43	RD	92,173	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO-14252.002-A	43	RD	242	
	ATA ENGINEERING, INC.	66316-100-CYC1	43	RD	218,816	
	CATHOLIC UNIVERSITY OF AMERICA, THE	88606	43	RD	96,197	
	JET PROPULSION LABORATORY	008974	43	RD	42,445	
	JET PROPULSION LABORATORY	1492976	43	RD	1,145	
	JET PROPULSION LABORATORY	1533766	43	RD	103,442	

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NATIONAL AERONAUTICS & SPACE ADMINISTRATION	JET PROPULSION LABORATORY	1557798	43	RD	23,392	
	JET PROPULSION LABORATORY	1562208	43	RD	275,058	
	JET PROPULSION LABORATORY	1521597	43	RD	136,144	
	JET PROPULSION LABORATORY	1587062-CYC1	43	RD	80,070	
	JET PROPULSION LABORATORY	59358	43	RD	6	
	JET PROPULSION LABORATORY	1616446	43	RD	45,000	
	JET PROPULSION LABORATORY	1616917	43	RD	58,762	
	JET PROPULSION LABORATORY	872G0	43	RD	1,506	
	JET PROPULSION LABORATORY	94485	43	RD	29,625	
	JET PROPULSION LABORATORY	1584157	43	RD	-169	
	JET PROPULSION LABORATORY	1584427	43	RD	20,930	
	JET PROPULSION LABORATORY	1602827	43	RD	28,055	
	JET PROPULSION LABORATORY	1612859	43	RD	24,235	
	JET PROPULSION LABORATORY	1616712	43	RD	2,452	
	JOHNS HOPKINS UNIVERSITY	975268	43	RD	3,654,008	1,609,182
	MCLEAN HOSPITAL OEAWAVES	401498-CYC1	43	RD	30,272	
	ROCHESTER INSTITUTE OF TECHNOLOGY	NNX17CC66P	43	RD	2,565	
	ROCHESTER INSTITUTE OF TECHNOLOGY	79758	43	RD	-440	
	ROCHESTER INSTITUTE OF TECHNOLOGY	31967-01	43	RD	6,878	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	009036	43	RD	357	
	STANFORD UNIVERSITY	A00-1350-022	43	RD	146,823	
	THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	A00-513-S001	43	RD	36,155	
	UNIVERSITIES SPACE RESEARCH ASSOCIATION	89166	43	RD	178	
	UNIVERSITIES SPACE RESEARCH ASSOCIATION	SOF-06-0207	43	RD	8,834	
	UNIVERSITY OF ALASKA	UAF19-0015	43	RD	10,378	
	UNIVERSITY OF ARIZONA	A16-0505-002	43	RD	23,686	
	UNIVERSITY OF COLORADO BOULDER	1000013136	43	RD	2,902,678	
	UNIVERSITY OF COLORADO BOULDER	1000023229	43	RD	84,672	
	UNIVERSITY OF COLORADO BOULDER	1000144280	43	RD	68,842	
	UNIVERSITY OF COLORADO BOULDER	1557204	43	RD	44,183	
	UNIVERSITY OF DELAWARE	48247	43	RD	2,443	
	UNIVERSITY OF MICHIGAN	SUBK00008080	43	RD	16,019	
	UNIVERSITY OF NEW HAMPSHIRE	14-081	43	RD	17,200	
	UNIVERSITY OF WISCONSIN-MADISON	SUB 769K985 (NAS2-97001)	43	RD	7,724	
	UNIVERSITY OF WISCONSIN-MADISON	796K655	43	RD	7,913	
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	426699-19910	43	RD	45,018	
	WAKE FOREST UNIVERSITY	WFUHS 113809	43	RD	4,296	
	WYLE LABORATORIES	SUB PO T72614 (NNX14AN75G)	43	RD	4,998	
	MOSAIC MATERIALS	044959	43	RD	14,451	
	SETI INSTITUTE	SC 3354	43	RD	5,691	
	SOUTHWEST SCIENCES, INC.,	045456	43	RD	31,778	
	CASCADE TECHNOLOGIES, INC.	SUB 20191757 (80NSSC18P1882)	43	RD	30,759	
	CHARLES STARK DRAPER LABORATORY, INC.	SC001-0000001246	43	RD	35,711	
	MALIN SPACE SCIENCE SYSTEMS, INC.	12-0256	43	RD	108,207	
	SPECTRAL ENERGIES, LLC	SB1812-001-1-CYC1	43	RD	9,367	
					99,921,275	16,103,036
	NATIONAL AERONAUTICS & SPACE ADMINISTRATION Total				115,413,801	16,214,309
	NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES	Passthrough/Partial Passthrough				
	CALIFORNIA HUMANITIES	COS15-470	45	129	6,418	
	CALIFORNIA HUMANITIES	HFAQ12-13	45	129	7	
CALIFORNIA HUMANITIES	A18-0591-001	45	129	7,591		
CALIFORNIA HUMANITIES	CDP17-11	45	129	10,196		
CALIFORNIA HUMANITIES	SUB HFAP18-33(NONE)	45	129	2,050		
				26,262		
	Passthrough/Partial Passthrough					
CALIFORNIA STATE LIBRARY	009238	45	310	115,459		
				115,459		
	Direct					
INSTITUTE OF MUSEUM AND LIBRARY SERVICES	VARIOUS	45	RD	1,106,529	101,790	
NATIONAL FOUNDATION ARTS & HUMANITIES	VARIOUS	45	RD	1,844,342	28,773	
	Passthrough/Partial Passthrough					
CARNEGIE MELLON UNIVERSITY	1080400-395143	45	RD	67,933		
INDIANA UNIVERSITY BLOOMINGTON	BL-4348803-UCB	45	RD	1,873		
				3,020,677	130,562	
NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES Total				3,162,398	130,562	
NATIONAL SCIENCE FOUNDATION	Passthrough/Partial Passthrough					

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NATIONAL SCIENCE FOUNDATION	ARIZONA STATE UNIVERSITY/TEMPE	15742	47	041	826,825	90,024		
	ARIZONA STATE UNIVERSITY/TEMPE	17-026-02	47	041	27,185			
	CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S19-0001	47	041	20,633			
	CARDIAC MOTION, LLC	201403401	47	041	89,291			
	CITY UNIVERSITY OF NEW YORK	40E48-A	47	041	117,634			
	COLORADO STATE UNIVERSITY	007837	47	041	90,394			
	COLORADO STATE UNIVERSITY	G-00973-2	47	041	54,657			
	CORNELL UNIVERSITY	75855-10557	47	041	16,501			
	CORNELL UNIVERSITY	70369-10329:3	47	041	23,812			
	GEORGIA INSTITUTE OF TECHNOLOGY	RG382-G1	47	041	116,049			
	INSTON, INC	59242	47	041	281			
	IOWA STATE UNIVERSITY	420-72-25-CYC15	47	041	86,772			
	JOHNS HOPKINS UNIVERSITY	88769	47	041	-77,027			
	KNOX MEDICAL DIAGNOSTICS INC	A130875	47	041	145,321			
	KNOX MEDICAL DIAGNOSTICS INC	B8534	47	041	-3,325			
	NANOELECTRONICS RESEARCH CORPORATION	SUB 2016-NE-2701 (ECCS-1640173)	47	041	62,514		7,473	
	NORTHWESTERN UNIVERSITY	SPO032077-PROJ0008536	47	041	96,904			
	PURDUE UNIVERSITY	85490	47	041	70,418			
	STANFORD UNIVERSITY	28139880-50542-C	47	041	813,629			
	STANFORD UNIVERSITY	SUB 61174008-120872 (CBET-1508)	47	041	6,616			
	STANFORD UNIVERSITY	61613955-124096	47	041	121,893			
	STANFORD UNIVERSITY	85726	47	041	4,500			
	TEXAS A&M UNIVERSITY - COLLEGE STATION	M1801370	47	041	1,133,942			
	TEXAS A&M UNIVERSITY - COLLEGE STATION	SUB 28-M1803463 (EEC-1648016)	47	041	61,001			
	TRITON ALGAE INNOVATIONS, LLC	874C3	47	041	-6,182			
	UNIVERSITY OF ARIZONA	SUB Y502629 (EEC-0812072)	47	041	151,230			
	UNIVERSITY OF ARIZONA	SUB 413309 (CMMI-1662816)	47	041	130,872			
	UNIVERSITY OF ARIZONA	SUB 454513(EFMA-1640860)	47	041	102,243			
	UNIVERSITY OF IDAHO	FEK232-SB-001:001	47	041	64,657			
	UNIVERSITY OF ILLINOIS	88710	47	041	27,299			
	UNIVERSITY OF NOTRE DAME (INCL GEM)	203435UCB	47	041	33,698			
	UNIVERSITY OF PENNSYLVANIA	SUB 567084 (EFMA-1542879)	47	041	112,278			
	UNIVERSITY OF SOUTHERN CALIFORNIA	96586107	47	041	220,761			
	UNIVERSITY OF SOUTHERN CALIFORNIA	58669052-4	47	041	4,516			
	UNIVERSITY OF TEXAS-AUSTIN	SUB UTA15-000855 (1520817)	47	041	33,166			
	UNIVERSITY OF TEXAS-AUSTIN	UTA12-000944	47	041	314,345			
	UNIVERSITY OF TEXAS-AUSTIN	UTA15-000860	47	041	38,204			
	UNIVERSITY OF TEXAS-AUSTIN	UTA18-000266-CYC1	47	041	1,894			
	UNIVERSITY OF TEXAS-EL PASO	226100998G	47	041	20,754			
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	480090-19B03	47	041	732			
	SOUTH 8 TECHNOLOGIES, INC.	SUB 20172104 (1721646)	47	041	14,230			
	SOUTH 8 TECHNOLOGIES, INC.	SUIB 20183017(1831087)	47	041	44,910			
	HARVEY MUDD COLLEGE	1745970	47	041	41,971			
	BRAINLEAP TECHNOLOGIES, INC.	SUB 20181955 (IIP-1819842)	47	041	67,439			
					5,325,437		97,497	
		Passthrough/Partial Passthrough						
		9 DOTS COMMUNITY LEARNING CENTER	002	47	046		30,008	
							30,008	
		Passthrough/Partial Passthrough						
		ASSOCIATED UNIVERSITIES, INC	SUB SOSPA4-006 (AST-1519126)	47	049		17,707	
		ASSOCIATED UNIVERSITIES, INC	353517	47	049		702	
		ASSOCIATED UNIVERSITIES, INC	SUB TBD (1519126)	47	049		15,997	
		ASSOCIATED UNIVERSITIES, INC	SOSPA6-003-CYC1	47	049		1,489	
		ASSOCIATED UNIVERSITIES, INC	SUB VLA/17A-073 (AST-1519126)	47	049		7,657	
		ASSOCIATED UNIVERSITIES, INC	360180	47	049		24,546	
		ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	N56981C	47	049		376,330	
		ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0909-002	47	049		57,133	
		BARNARD COLLEGE	A19-0334-001	47	049		17,969	
		BAYLOR UNIVERSITY	SUB 30240114-1 (1740203)	47	049		20,390	
		CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	A18-0926-001	47	049		241,522	
		CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	13401:3	47	049		83,927	
	CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	A19-0370-001	47	049	8,038			
	CALIFORNIA INSTITUTE OF TECHNOLOGY	44Q-1092164	47	049	120,999			
	CALIFORNIA INSTITUTE OF TECHNOLOGY	68D1094593	47	049	97,422			
	CALIFORNIA INSTITUTE OF TECHNOLOGY	A17-0921-001	47	049	50,720			
	CITY UNIVERSITY OF NEW YORK	CM00001662-00-CYC1	47	049	18,112			
	COLUMBIA UNIVERSITY	77976	47	049	-2			
	CORNELL UNIVERSITY	009069	47	049	4,823			

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NATIONAL SCIENCE FOUNDATION	CORNELL UNIVERSITY	75548-10820:1	47	049	261,782		
	CORNELL UNIVERSITY	78877-10862:1	47	049	69,650		
	CORNELL UNIVERSITY	78877-10879	47	049	5,860		
	EMORY UNIVERSITY	79741	47	049	-7,514		
	EMORY UNIVERSITY	A025589:1	47	049	154,898		
	JACKSON STATE UNIVERSITY	633215-UCSB	47	049	25,434		
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003959	47	049	207,546		
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003976	47	049	67,881		
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710004001:2	47	049	60,037		
	NEVADA SYSTEM OF HIGHER EDUCATION	UNR 18-25	47	049	65,742		
	NORTHWESTERN UNIVERSITY	SUB SP0044956-PROJ0013413(DMR-	47	049	46,178		
	OHIO STATE UNIVERSITY	60046614:04	47	049	27,894		
	OREGON STATE UNIVERSITY	S1891A-D	47	049	60,783		
	OREGON STATE UNIVERSITY	S1891AE	47	049	43,388		
	OREGON STATE UNIVERSITY	009533	47	049	24,724		
	PENNSYLVANIA STATE UNIVERSITY	5148-UCB-NSF-0620	47	049	37,145		
	PENNSYLVANIA STATE UNIVERSITY	5182-UC-NSF-0620-CYC3	47	049	145,277		
	PRINCETON UNIVERSITY	SUB 0000182(PHY-1624356)	47	049	1,478,999		
	PRINCETON UNIVERSITY	87983	47	049	7,162		
	STANFORD UNIVERSITY	61941275-134448	47	049	312		
	STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	76749/1136652/2-CYC3	47	049	74,755		
	TEXAS A&M UNIVERSITY - COLLEGE STATION	285172803	47	049	12,263		
	TEXAS A&M UNIVERSITY - COLLEGE STATION	025170204	47	049	59,310		
	UNIVERSITY OF COLORADO BOULDER	1554565	47	049	1,253,855		
	UNIVERSITY OF COLORADO BOULDER	1554568-CYC3	47	049	205,085		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1554564:2	47	049	1,544,003		
	UNIVERSITY OF FLORIDA	UFDSPO0011774	47	049	39,350		
	UNIVERSITY OF FLORIDA	SUB00001607	47	049	31,710		
	UNIVERSITY OF MARYLAND	A00-1404-007	47	049	-701		
	UNIVERSITY OF MICHIGAN	3003700329	47	049	51,073		
	UNIVERSITY OF MICHIGAN	3003700330-CYC1	47	049	23,423		
	UNIVERSITY OF MINNESOTA	30919	47	049	26,139		
	UNIVERSITY OF MINNESOTA	A007231601	47	049	22,525		
	UNIVERSITY OF MISSOURI	C00047906-1	47	049	-21,669		
	UNIVERSITY OF NEBRASKA	009450	47	049	2,400		
	UNIVERSITY OF SOUTHERN CALIFORNIA	78356329:1	47	049	10,069		
	UNIVERSITY OF TEXAS-EL PASO	226100973B	47	049	97,368		
	UNIVERSITY OF TEXAS-EL PASO	226100993A	47	049	43,589		
	UNIVERSITY OF WASHINGTON	UWSC9674:2	47	049	111,249		
	UNIVERSITY OF WISCONSIN-MADISON	SUB 408K133 (PHY-1148698)	47	049	384,356		
	UNIVERSITY OF WISCONSIN-MADISON	010364	47	049	97,465		
	UNIVERSITY OF WISCONSIN-MADISON	726K305-CYC2	47	049	178,180		
	UNIVERSITY OF WISCONSIN-MADISON	838K073-CYC1	47	049	62,600		
	WEST VIRGINIA UNIVERSITY	63568	47	049	30,606		
	UNIVERSITY OF NEBRASKA-LINCOLN	UNL-209765-CYC1	47	049	1,042		
	MATHEMATICAL SCIENCE RESEARCH INSTITUTE, THE	81018	47	049	1,420		
						8,290,129	
		Passthrough/Partial Passthrough					
		ARIZONA STATE UNIVERSITY/TEMPE	006585	47	050	20,878	
		ARIZONA STATE UNIVERSITY/TEMPE	16-001	47	050	26,505	
		ARIZONA STATE UNIVERSITY/TEMPE	17-170	47	050	17,198	
		CALIFORNIA STATE UNIVERSITY, SAN JOSE STATE UNIVERSITY FOUNDATION	A18-0010-001	47	050	8,120	
		COLORADO STATE UNIVERSITY	G-96783-2	47	050	8,428	
		COLORADO STATE UNIVERSITY	G-96783-1	47	050	3,776	
		COLUMBIA UNIVERSITY	2(GG009393-01)	47	050	115,544	
		COLUMBIA UNIVERSITY	3 (GG008992)	47	050	187,050	
		COLUMBIA UNIVERSITY	3(GG008855)	47	050	89,523	
		COLUMBIA UNIVERSITY	1(GG013222) PO G12700	47	050	628,739	
		COLUMBIA UNIVERSITY	A15-0275-001	47	050	113,588	
		COLUMBIA UNIVERSITY	A18-0526-001	47	050	3,452	2,485
		COLUMBIA UNIVERSITY	1(GG013237) PO G12813	47	050	440,229	
		COLUMBIA UNIVERSITY	46(GG009393):2	47	050	-51	
		COLUMBIA UNIVERSITY	63548	47	050	3,880	
	COLUMBIA UNIVERSITY	86952	47	050	14,091		
	COLUMBIA UNIVERSITY	A17-0484-004	47	050	25,605		
	COLUMBIA UNIVERSITY	A17-0707-004	47	050	5,473		
	CONSORTIUM FOR OCEAN LEADERSHIP	88875	47	050	5		
	CONSORTIUM FOR OCEAN LEADERSHIP	87165	47	050	-2		
	CONSORTIUM FOR OCEAN LEADERSHIP	87183	47	050	1		

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			Prefix	Extension	Federal Expenditures	
NATIONAL SCIENCE FOUNDATION	CORNELL UNIVERSITY	78328-10838	47	050	103,122	
	CORNELL UNIVERSITY	A17-0542-001	47	050	49,612	
	DUKE UNIVERSITY	SUB 333-2419 (1721611)	47	050	23,940	
	INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	08-UCSD-SAGE	47	050	1,851,275	
	INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	09-UCSD (MD)-SAGE	47	050	568,758	
	INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	IRIS 56-OMO	47	050	877,035	
	INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	SU-19-1001-08-UCSD, TASK ORDER	47	050	2,129,241	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003955	47	050	88,387	
	NEW YORK UNIVERSITY	F0691-04-CYC1	47	050	40,420	
	NORTHERN ARIZONA UNIVERSITY	A16-0498-003	47	050	51,161	
	PENNSYLVANIA STATE UNIVERSITY	5038-UC-NSF-0507	47	050	80,279	
	PORTLAND STATE UNIVERSITY	207LO1582:1	47	050	11,823	
	PRINCETON UNIVERSITY	SUB0000008	47	050	747,583	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0696	47	050	25,981	
	STANFORD UNIVERSITY	61573650-125839	47	050	6,250	
	TUFTS UNIVERSITY	NS3819	47	050	32,124	
	UNAVCO, INC.	UNAVCO S13-EAR1261833-S3	47	050	63,410	
	UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R983146	47	050	165,272	
	UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	SUBAWD000572-CYC1	47	050	58,957	
	UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z16-21927-CYC3	47	050	7,329	
	UNIVERSITY OF ALASKA	A18-0011-001	47	050	2,266	
	UNIVERSITY OF CHICAGO	FP052668	47	050	51,591	
	UNIVERSITY OF CHICAGO	FP052668-D	47	050	221,440	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1553802	47	050	796	
	UNIVERSITY OF HAWAII AT HILO	MA1129	47	050	21,883	
	UNIVERSITY OF HAWAII AT MANOA	MA 1392	47	050	54,984	
	UNIVERSITY OF ILLINOIS	2014-04289-03-00	47	050	123	
	UNIVERSITY OF MARYLAND	009242	47	050	27,309	
	UNIVERSITY OF MIAMI	S15-49	47	050	101,899	
	UNIVERSITY OF MIAMI	S15-50	47	050	200,082	
	UNIVERSITY OF NEW HAMPSHIRE	14-063	47	050	72,479	
	UNIVERSITY OF NEW HAMPSHIRE	16-001	47	050	42,089	
	UNIVERSITY OF NEW HAMPSHIRE	17-014	47	050	57,514	
	UNIVERSITY OF NEW MEXICO	133660-8730	47	050	15,949	
	UNIVERSITY OF NEW MEXICO	A17-0628-002	47	050	232,779	
	UNIVERSITY OF SOUTHERN CALIFORNIA	63134	47	050	-23	
	UNIVERSITY OF SOUTHERN CALIFORNIA	009417	47	050	18,439	
	UNIVERSITY OF SOUTHERN CALIFORNIA	91272867	47	050	4,308	
	UNIVERSITY OF SOUTHERN CALIFORNIA	LIU-90703282:1	47	050	12,133	
	UNIVERSITY OF SOUTHERN CALIFORNIA	100670135	47	050	93,036	
	UNIVERSITY OF SOUTHERN CALIFORNIA	009416	47	050	13,461	
	UNIVERSITY OF SOUTHERN CALIFORNIA	010008	47	050	849	
	UNIVERSITY OF SOUTHERN CALIFORNIA	010060	47	050	16,116	
	UNIVERSITY OF SOUTHERN CALIFORNIA	81854	47	050	2,948	
	UNIVERSITY OF SOUTHERN CALIFORNIA	90703282:2	47	050	27,000	
	UNIVERSITY OF SOUTHERN CALIFORNIA	A00-0936-016	47	050	6,802	
	UNIVERSITY OF SOUTHERN CALIFORNIA	A00-0936-017	47	050	33,011	
	UNIVERSITY OF SOUTHERN CALIFORNIA	A17-0917-003	47	050	76,221	
	UNIVERSITY OF SOUTHERN CALIFORNIA	90703282:3	47	050	21,999	
	UNIVERSITY OF TEXAS-AUSTIN	96412	47	050	769	
UNIVERSITY OF UTAH	10043668	47	050	99,201		
UNIVERSITY OF WASHINGTON	UWSC10548	47	050	49,963		
WOODS HOLE OCEANOGRAPHIC INSTITUTION	A101360	47	050	294,019		
WOODS HOLE OCEANOGRAPHIC INSTITUTION	A101369	47	050	118,260		
WOODS HOLE OCEANOGRAPHIC INSTITUTION	A101436	47	050	270,150		
YALE UNIVERSITY	009738	47	050	9,762		
SOUTHERN CALIFORNIA EARTHQUAKE CENTER	91269673	47	050	71,628		
INTEGRATED OCEAN DRILLING PROGRAM	82745	47	050	-704		
UNIVERSITY OF HAWAII - WEST OAHU	MA 1389	47	050	28,991		
UNIVERSITY OF NORTH CAROLINA AT WILMINGTON	579090-19-01	47	050	22,288		
UNIVERSITY OF RHODE ISLAND	A18-0921-001	47	050	40,113		
					11,127,914	2,485
Passthrough/Partial Passthrough						
BINGHAMTON UNIVERSITY	007239	47	070	13,454		
CORNELL UNIVERSITY	76221-10547	47	070	101,711		
HDF GROUP	59266	47	070	85,260		
INDIANA UNIVERSITY	UA4812506UCD	47	070	39,061		
INDIANA UNIVERSITY	SUB BL4812537UCSD (OAC-1840034	47	070	61,250		
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	SUB 72401 (CNS1413905)	47	070	18,241		

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NATIONAL SCIENCE FOUNDATION	MICHIGAN STATE UNIVERSITY	SUB RC108911UCSD (OAC-1835144)	47	070		17,864	
	NORTHWESTERN UNIVERSITY	SPO029341 PROJ0007719 (ACI-145	47	070		244,055	
	NORTHWESTERN UNIVERSITY	010367	47	070		9,718	
	NORTHWESTERN UNIVERSITY	010715	47	070		28,082	
	OLD DOMINION UNIVERSITY RESEARCH FOUNDATION	SUB 17-123-100613-010(1608140)	47	070		2,882	
	PRINCETON UNIVERSITY	A19-0420-001	47	070		185,542	
	PRINCETON UNIVERSITY	SUB 0000269(OCA-1836650)	47	070		206,785	
	PURDUE UNIVERSITY	SUB 4101-38049 (CCF-0939370)	47	070		208,020	
	PURDUE UNIVERSITY	10000686-018	47	070		350,138	
	RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK, THE	A18-2647	47	070		132,508	
	RICE UNIVERSITY	80013	47	070		495,479	
	RICE UNIVERSITY	R3F773	47	070		69,143	
	UNIVERSITY OF CONNECTICUT	96324	47	070		75,752	
	UNIVERSITY OF ILLINOIS	078343-15668	47	070		175,061	
	UNIVERSITY OF ILLINOIS	SUB 083842-16110(ACI-1548562)	47	070		2,809,997	
	UNIVERSITY OF ILLINOIS	SUB 094096-17249 (1764055)	47	070		47,296	
	UNIVERSITY OF ILLINOIS AT CHICAGO	SUB 20151074 (CNS-1456638)	47	070		67,082	
	UNIVERSITY OF IOWA	1001745125:1	47	070		143,930	
	UNIVERSITY OF MASSACHUSETTS AMHERST	13-007361 A 00-CYC7	47	070		24,433	
	UNIVERSITY OF MEMPHIS	20163902	47	070		55,145	
	UNIVERSITY OF MEMPHIS	A126878	47	070		73,041	
	UNIVERSITY OF MICHIGAN	3004636405-CYC1	47	070		32,259	
	UNIVERSITY OF MISSOURI	SUB C00058703-1 (730655)	47	070		25,344	
	UNIVERSITY OF MISSOURI	87342	47	070		52,935	
	UNIVERSITY OF NEW MEXICO	007941	47	070		45,416	
	UNIVERSITY OF NEW MEXICO	063045-873R	47	070		651,358	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105700	47	070		102,875	
	UNIVERSITY OF NOTRE DAME (INCL GEM)	202917UCI-CYC1	47	070		132,670	
	UNIVERSITY OF SOUTH FLORIDA	2106-1251-00-A:1	47	070		29,169	
	UNIVERSITY OF SOUTHERN CALIFORNIA	20154552	47	070		1,399	
	UNIVERSITY OF TEXAS-AUSTIN	UTA16-000755:1	47	070		-1,293	
	UNIVERSITY OF TEXAS-AUSTIN	UTA18-001252-CYC1	47	070		12,265	
	UNIVERSITY OF UTAH	10037670-UCI-CYC1	47	070		1,184	
	UNIVERSITY OF UTAH	10038993-UCI-CYC1	47	070		359	
	UNIVERSITY OF WASHINGTON	UWSC9467	47	070		112,203	
	UNIVERSITY OF WASHINGTON	UWSC9942	47	070		10,734	
	UNIVERSITY OF WISCONSIN-MADISON	SUB 855K724(1506657)	47	070		75,122	
	VANDERBILT UNIVERSITY	UNIV59076	47	070		40,419	
	VANDERBILT UNIVERSITY	3833-019899:1	47	070		75,081	
	VIRGINIA COMMONWEALTH UNIVERSITY	SUB FP00008963_SA001 (1902395)	47	070		22,968	
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	479589-19910	47	070		126,630	
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	479589-19905-CYC1	47	070		54,386	
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	SUB 478589-19A28 (ACI-1547580)	47	070		57,006	
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	479590-19905A-CYC2	47	070		50,719	
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	009994	47	070		25,625	
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	85801	47	070		26,070	
	ASSOCIATION OF AMERICAN GEOGRAPHERS	010352	47	070		5,114	
	INTERNET2	SUB 1042-E (1904444)	47	070		18,831	
							7,527,780
		Passthrough/Partial Passthrough					
		UNIVERSITY OF ARIZONA	Y503161	47	071		82,658
							82,658
		Passthrough/Partial Passthrough					
		AMERICAN SOCIETY FOR CELL BIOLOGY	201400396	47	074		26,918
		ARIZONA STATE UNIVERSITY/TEMPE	17184	47	074		97
		ARIZONA STATE UNIVERSITY/TEMPE	DEB1414374	47	074		51,670
		BARNARD COLLEGE	UCD1455957	47	074		39,650
		BROWN UNIVERSITY	B6058	47	074		-437
		BROWN UNIVERSITY	SUB 00001351 (DBI-1707352)	47	074		105,740
		CARY INSTITUTE OF ECOSYSTEM STUDIES	1637661	47	074		2,219
		CHAPMAN UNIVERSITY	81734	47	074		46
		CLEMSON UNIVERSITY	2008-206-2012311	47	074		29,834
		COLORADO STATE UNIVERSITY	G-4023-2	47	074		590
		CORNELL UNIVERSITY	6718310110	47	074		493,256
		CORNELL UNIVERSITY	1822330	47	074		1,345
		FLORIDA INTERNATIONAL UNIVERSITY	800001404-05UG	47	074		16,923
		FLORIDA STATE UNIVERSITY	008063	47	074		68,426
	FLORIDA STATE UNIVERSITY	86634	47	074		81,120	

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NATIONAL SCIENCE FOUNDATION	HARVARD UNIVERSITY	111269-5110907	47	074	68,805		
	IOWA STATE UNIVERSITY	420-40-45D	47	074	263,665		
	IOWA STATE UNIVERSITY	009496	47	074	171,365		
	J. CRAIG VENTER INSTITUTE	JCVI-19-005	47	074	37,349		
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003122	47	074	24,035		
	NORTHERN ARIZONA UNIVERSITY	63394	47	074	7,864		
	OHIO STATE UNIVERSITY	60061209	47	074	37,814		
	OKLAHOMA STATE UNIVERSITY	AA-5-54654	47	074	69,630		
	PURDUE UNIVERSITY	4101-81438	47	074	23,747		
	RICE UNIVERSITY	SUB R3G401 (MCB-1616755)	47	074	88,175		
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0913	47	074	1,533		
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	SUB 0912 (DBI-1832184)	47	074	656,594		
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	SUB 5283 (DBI-1338415)	47	074	918,383		
	STANFORD UNIVERSITY	61091724-118374:2	47	074	17,524		
	THE NATIONAL MARINE MAMMAL FOUNDATION	NSF-1656077-1	47	074	1,186		
	TUFTS UNIVERSITY	A19-0780-001	47	074	1,113		
	UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R877841	47	074	25,401		
	UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R1092333	47	074	150,359		
	UNIVERSITY OF ARIZONA	152976	47	074	16,347		
	UNIVERSITY OF ARIZONA	357961	47	074	130,753		
	UNIVERSITY OF COLORADO BOULDER	1556974	47	074	114,778		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1556857	47	074	116,460		
	UNIVERSITY OF FLORIDA	B7640	47	074	53		
	UNIVERSITY OF FLORIDA	A18-0936-001	47	074	74,660		
	UNIVERSITY OF GEORGIA	007057	47	074	78,370		
	UNIVERSITY OF GEORGIA	39A78	47	074	17,690		
	UNIVERSITY OF ILLINOIS	SUB 092605-17118 (1818344)	47	074	40,134		
	UNIVERSITY OF MAINE SYSTEM	UMS-1046	47	074	85,978		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5-37293 (IOS-1343020)	47	074	-1		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5108645	47	074	150,982		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5111338	47	074	10,086		
	UNIVERSITY OF NOTRE DAME (INCL GEM)	202236	47	074	9,256		
	UNIVERSITY OF PUERTO RICO	2016-002	47	074	70,353		
	UNIVERSITY OF SOUTHERN CALIFORNIA	64141351	47	074	-272		
	UNIVERSITY OF TENNESSEE	A150127S001	47	074	27,080		
	UNIVERSITY OF WASHINGTON	1748843	47	074	9,199		
	UNIVERSITY OF WISCONSIN-MADISON	692K182	47	074	106,141		
	UNIVERSITY OF WYOMING	1002790A	47	074	43,997		
	UNIVERSITY OF WYOMING	1547796	47	074	61,536		
	WASHINGTON STATE UNIVERSITY	127507-G003626	47	074	77,547		
	WASHINGTON UNIVERSITY IN ST. LOUIS	008615	47	074	9,129		
	WASHINGTON UNIVERSITY IN ST. LOUIS	009658	47	074	57,593		
	CALIFORNIA STATE UNIVERSITY FULLERTON/CSU FULLERTON AUXILIARY SERVICES	S-6824-UCD	47	074	28,808		
						4,818,595	
		Passthrough/Partial Passthrough					
		ARIZONA STATE UNIVERSITY/TEMPE	16-823-02	47	075	11,752	
		BOSTON UNIVERSITY	007901	47	075	9,401	
		BOSTON UNIVERSITY	SUB 4500001956 (SMA-1540920)	47	075	11,360	
		CARNEGIE MELLON UNIVERSITY	1123278-399794-CYC1	47	075	29,908	
		CORNELL UNIVERSITY	1823489	47	075	54,711	
		HARVARD UNIVERSITY	133873-5090398	47	075	-6,961	
		HARVARD UNIVERSITY	108151-5108138-CYC1	47	075	35,090	
		HASKINS LABORATORIES, INC	1-A215	47	075	25,782	
		JOHNS HOPKINS UNIVERSITY	2003169999	47	075	13,296	
		RICE UNIVERSITY	R3F755	47	075	104,408	
		RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0080	47	075	32,427	
		STANFORD UNIVERSITY	61343100-122890-CYC1	47	075	187,397	
		STATE UNIVERSITY OF NEW YORK	550-1142143-79134	47	075	73,714	68,205
		UNIVERSITY OF ARIZONA	1922439	47	075	37,223	
		UNIVERSITY OF FLORIDA	009493	47	075	13,129	
	UNIVERSITY OF HOUSTON	57587	47	075	343		
	UNIVERSITY OF MINNESOTA	A005858801	47	075	73,879		
	UNIVERSITY OF TEXAS-AUSTIN	1719654	47	075	13,167		
	UNIVERSITY OF VIRGINIA	SUB GA11260.157003(SMA-1735786)	47	075	25,575		
	UNIVERSITY OF WASHINGTON	A17-0315-002	47	075	11,749		
	UNIVERSITY OF WISCONSIN-MADISON	57562	47	075	20,272		
	VANDERBILT UNIVERSITY	SUB 58534 (1640681)	47	075	36,594		
	UNIVERSITY OF COLORADO COLORADO SPRINGS	18-089-001	47	075	15,262		
	CLARK UNIVERSITY	2A325-7533	47	075	34,742		

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			Prefix	Extension	Federal Expenditures	
NATIONAL SCIENCE FOUNDATION					864,219	68,205
	Passthrough/Partial Passthrough					
	AMERICAN MUSEUM OF NATURAL HISTORY	3-2014	47	076	81,972	
	CITY COLLEGE OF THE CITY UNIVERSITY OF NEW YORK, THE	SUB 40F51-A (DUE-1524779)	47	076	1,153	
	COLORADO STATE UNIVERSITY	G-96702-4	47	076	33,447	
	CONCORD CONSORTIUM, THE	282-02	47	076	81,688	
	EDUCATION DEVELOPMENT CENTER, INC.	11826	47	076	161,400	
	HARVARD UNIVERSITY	123930-5097974-CYC2	47	076	2,936	
	MICHIGAN STATE UNIVERSITY	RC104101UCB	47	076	93,346	
	MICHIGAN STATE UNIVERSITY	96008	47	076	12,431	
	NATIONAL UNIVERSITY	2022-01-02-03-2019-2021	47	076	354	
	PENNSYLVANIA STATE UNIVERSITY	5510-UCI-NSF-4355-CYC1	47	076	88,447	
	PENNSYLVANIA STATE UNIVERSITY	5864-UCI-NSF-1012-CYC1	47	076	39,908	
	RAND CORP	9920160031:03	47	076	40,477	
	SRI INTERNATIONAL	PO20589	47	076	110,265	
	UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2016056	47	076	23,221	
	UNIVERSITY OF MARYLAND	49427-Z3016202	47	076	21,280	
	UNIVERSITY OF MICHIGAN	3003593049	47	076	34,898	
	UNIVERSITY OF MICHIGAN	SUB 3004501602(DRL-1743150)	47	076	34,812	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105374	47	076	-175	
	UNIVERSITY OF SAN DIEGO	F12078-U2013-005	47	076	25,794	
	UNIVERSITY OF SAN DIEGO	MARSS1172-U2014-003	47	076	33,746	
	UNIVERSITY OF SAN DIEGO	A19-0783-001	47	076	817	
	UNIVERSITY OF SAN DIEGO	MATHS1230	47	076	998	
	UNIVERSITY OF WASHINGTON	UWSC10468-CYC1	47	076	56,021	
	WESTED	S-00014572-CYC2	47	076	62,281	
	WGBH EDUCATIONAL FOUNDATION	K201700254	47	076	59,978	
	WGBH EDUCATIONAL FOUNDATION	K201803096	47	076	44,156	
	FOUNDATION FOR CALIFORNIA COMMUNITY COLLEGES	SUB NS-017-17 (DUE-1645083)	47	076	52,284	
	RIVERSIDE COMMUNITY COLLEGE DISTRICT	87324	47	076	895	
					1,198,831	
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000200:11	47	079	331,279	
	CRDF GLOBAL	OISE-16-62791-0	47	079	19,402	
	KANSAS STATE UNIVERSITY	1743701	47	079	112,663	
	UNIVERSITY OF DELAWARE	SUB 51656(1844463)	47	079	93,103	
	UNIVERSITY OF PITTSBURGH	0055445	47	079	166,982	
					723,429	
	Passthrough/Partial Passthrough					
	BOISE STATE UNIVERSITY	6800-PO124352	47	083	58,160	
	PENNSYLVANIA STATE UNIVERSITY	008449	47	083	139,857	
	PENNSYLVANIA STATE UNIVERSITY	86702	47	083	40,355	
	TEXAS A&M UNIVERSITY - COLLEGE STATION	009285	47	083	155,591	
	UNIVERSITY OF ILLINOIS	077340-15579	47	083	97,634	
	UNIVERSITY OF SOUTHERN CALIFORNIA	72781708	47	083	2,774	
	UNIVERSITY OF SOUTHERN CALIFORNIA	A16-0468-006	47	083	214,045	
					708,418	
	Direct					
	NATIONAL SCIENCE FOUNDATION	VARIOUS	47	RD	461,295,685	31,389,562
	NATIONAL SCIENCE FOUNDATION	VARIOUS	47	RD	654,694	
	Passthrough/Partial Passthrough					
	AMERICAN PHYSICAL SOCIETY	1622510	47	RD	10,198	
	ASSOCIATED UNIVERSITIES, INC	358709	47	RD	18,984	
	ASTRONOMICAL SOCIETY OF THE PACIFIC, THE	63302	47	RD	23,884	
	BIOINSPIRA, INC.	042894	47	RD	244,884	
	BOSTON UNIVERSITY	4500002865	47	RD	188,143	
	CARLETON COLLEGE	28-1773	47	RD	2,163	
	CORNELL UNIVERSITY	71423-11142	47	RD	16,970	
	DUKE UNIVERSITY	333-2455	47	RD	79,967	
	EMORY UNIVERSITY	A025454	47	RD	66,950	
	HARVARD UNIVERSITY	130783-5097125	47	RD	25,956	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	89244	47	RD	2,602	
	KANSAS STATE UNIVERSITY	S19023	47	RD	1,861	
	MENTOR ON THE GO, LLC	SUB 20183028 (1831257)	47	RD	9,627	
	NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	36296.00.01.00-7700	47	RD	1,185	
	OREGON STATE UNIVERSITY	S1826A-A	47	RD	27,933	

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NATIONAL SCIENCE FOUNDATION	PRINCETON UNIVERSITY	SUB0000229	47	RD	39,907		
	PRINCETON UNIVERSITY	SUB0000268	47	RD	93,427		
	PURDUE UNIVERSITY	10001257-015	47	RD	106,977		
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0695	47	RD	200,000		
	STANFORD UNIVERSITY	61621756-121587	47	RD	32,734		
	UNIVERSITY OF CONNECTICUT	331024	47	RD	15,084		
	UNIVERSITY OF ILLINOIS	087442-16581	47	RD	164,445		
	UNIVERSITY OF MINNESOTA	A004088504	47	RD	124,783		
	UNIVERSITY OF MINNESOTA	60124	47	RD	38,918		
	UNIVERSITY OF SOUTHERN CALIFORNIA	108502103	47	RD	77,479		
	UNIVERSITY OF SOUTHERN CALIFORNIA	91261301	47	RD	14,754		
	UNIVERSITY OF TEXAS-AUSTIN	UTA17-000640	47	RD	26,079		
	UNIVERSITY OF WISCONSIN-MADISON	776K193	47	RD	71,057		
	UNIVERSITY OF WISCONSIN-MADISON	787K161	47	RD	16,077		
	UNIVERSITY SYSTEM OF MARYLAND	8450-Z4808006	47	RD	42,177		
	VANDERBILT UNIVERSITY	UNIV57932	47	RD	115,085		
	VISOLIS, INC.	042800	47	RD	5,066		
	WESTED	S00030264.0	47	RD	121,306		
	YALE UNIVERSITY	GR101038 (CON-80001114)	47	RD	75,112		
	DONALD DANFORTH PLANT SCIENCE CENTER	23704-C	47	RD	53,798		
	MICROGRID LABS INC.	044145	47	RD	49,530		
	CENTRAL MICHIGAN UNIVERSITY	F63362	47	RD	4,531		
	JOHN JAY COLLEGE OF CRIMINAL JUSTICE	CM00000846-00	47	RD	214,669		
					464,374,678	31,389,562	
	NATIONAL SCIENCE FOUNDATION Total				505,072,094	31,557,749	
	SECURITIES AND EXCHANGE COMMISSION	Passthrough/Partial Passthrough					
		BIOLING, INC.	SUB 20182120 (AA024643)	58	906	61,070	
					61,070		
	SECURITIES AND EXCHANGE COMMISSION Total				61,070		
	SMALL BUSINESS ADMINISTRATION	Passthrough/Partial Passthrough					
		CALIFORNIA STATE UNIVERSITY FULLERTON/CSU FULLERTON AUXILIARY SERVICES	S-7056-UCI-CYC1	59	037	70,826	
					70,826		
		Direct					
		SMALL BUSINESS ADMINISTRATION (SBA)	VARIOUS	59	RD	22,608	
					22,608		
	SMALL BUSINESS ADMINISTRATION Total				93,434		
	DEPARTMENT OF VETERANS AFFAIRS	Direct					
	U. S. DEPARTMENT OF VETERANS AFFAIRS	VARIOUS	64	RD	7,385,153		
	U. S. DEPARTMENT OF VETERANS AFFAIRS (ARRA)	VARIOUS	64	RD	3,930,112		
				11,315,266			
DEPARTMENT OF VETERANS AFFAIRS Total				11,315,266			
ENVIRONMENTAL PROTECTION AGENCY	Passthrough/Partial Passthrough						
	STATE WATER RESOURCES CONTROL BOARD	D1615002	66	454	18,757		
				18,757			
	Passthrough/Partial Passthrough						
	CALIFORNIA STATE COASTAL CONSERVANCY	15-051	66	461	4,705		
				4,705			
	Passthrough/Partial Passthrough						
	OREGON STATE UNIVERSITY	E0196B-B	66	509	40,017		
	PARADIGM ENVIRONMENTAL, INC.	86374	66	509	15,750		
	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	172031	66	509	4,902		
	UNIVERSITY OF ILLINOIS	070066-14318-CYC5	66	509	21,952		
	UNIVERSITY OF NORTH CAROLINA SYSTEM	29A99	66	509	-64		
	UNIVERSITY OF WASHINGTON	UWSC10117	66	509	59,199		
				141,756			
	Passthrough/Partial Passthrough						
	COLORADO SCHOOL OF MINES	401090-5801	66	511	131,792	20,221	
	HEALTH EFFECTS INSTITUTE	20151048	66	511	28,052		
	HEALTH EFFECTS INSTITUTE	4964-RFA17-3/18-6-CYC1	66	511	52,393		
	PUBLIC POLICY INSTITUTE OF CALIFORNIA	201500318	66	511	99,950		
				312,187	20,221		

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ENVIRONMENTAL PROTECTION AGENCY	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	15C0091	66	605	-520 -520	
	Passthrough/Partial Passthrough NORTH AMERICAN DEVELOPMENT BANK	TAA17-023	66	931	51,487 51,487	
	Direct ENVIRONMENTAL PROTECTION AGENCY	VARIOUS	66	RD	3,329,162	184,682
	Passthrough/Partial Passthrough BIGELOW LABORATORY FOR OCEAN SCIENCES	2000008903	66	RD	61,570	
	CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	18-C0042	66	RD	83,044	
	RTI INTERNATIONAL	5-312-0215574-52958L	66	RD	60,463	
	ASSOCIATION OF BAY AREA GOVERNMENTS	11853-2018	66	RD	32,208	
ENVIRONMENTAL PROTECTION AGENCY Total					3,566,447	184,682
NUCLEAR REGULATORY COMMISSION	Direct NUCLEAR REGULATORY COMMISSION	VARIOUS	77	RD	422,231 422,231	
NUCLEAR REGULATORY COMMISSION Total					422,231	
DEPARTMENT OF ENERGY	Passthrough/Partial Passthrough BATTELLE MEMORIAL INSTITUTE	170434	81	036	14,712	
	GENERAL ATOMICS	4500059737-CYC1	81	036	169,809	25,200
	GENERAL ATOMICS	4500063485-CYC2	81	036	3,031	
	OAK RIDGE NATIONAL LABORATORY	4000159454-CYC1	81	036	391,138	
	OAK RIDGE NATIONAL LABORATORY	4000136272-CYC7	81	036	-737	-737
					577,953	24,463
	Passthrough/Partial Passthrough AEROSOL DYNAMICS, INC.	86095	81	049	155,570	
	BINGHAMTON UNIVERSITY	039699	81	049	34,977	
	BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	198731-11	81	049	71,298	
	BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	233044-5	81	049	136,899	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 65Q-1097562 (DE-SC0016469)	81	049	153,616	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 68JCAP-1090300 (DE-SC00049)	81	049	66,061	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	68J-1090279-CYC11	81	049	143,927	
	COLORADO STATE UNIVERSITY	G000272	81	049	13,965	
	COLUMBIA UNIVERSITY	1(GG008772)	81	049	108,947	
	COLUMBIA UNIVERSITY	SUB 1(GG008714) (DE-SC0018218)	81	049	321,765	
	CORNELL UNIVERSITY	86832-11130	81	049	24,683	
	DIRAC SOLUTIONS INC.	A18-0322-001	81	049	114,684	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	PO 613885	81	049	156,030	110,272
	GENERAL ENGINEERING & RESEARCH, LLC	SUB 20173615 (DE-SC0015932)	81	049	124,895	
	GLOBAL ALGAE INNOVATIONS	GAI 180512	81	049	68,264	
	HARVARD UNIVERSITY	130298-5106298	81	049	130,877	
	HJ SCIENCE AND TECHNOLOGY, INC.	20161999	81	049	58,283	
	IOWA STATE UNIVERSITY	81165	81	049	109,239	
	J. CRAIG VENTER INSTITUTE	SUB JCVI-17-014 (DE-SC0018344)	81	049	413,681	
	JOHNS HOPKINS UNIVERSITY	SUB 2004033307 (DE-SC0019388)	81	049	83,501	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A18-0907-001	81	049	22,761	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B613194:2	81	049	40,264	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B628729	81	049	209,925	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	89766	81	049	-3,859	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A19-0694-001	81	049	38,741	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A19-0852-001	81	049	12,942	
	LOS ALAMOS NATIONAL SECURITY, LLC	59434	81	049	87,953	
	LOS ANGELES DEPARTMENT OF WATER AND POWER	20616	81	049	271	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	S4686 - PO-CYC1	81	049	137,632	
	NORTHWESTERN UNIVERSITY	79152	81	049	-1,706	
	OAK RIDGE NATIONAL LABORATORY	4000158959	81	049	10,206	
	OAK RIDGE NATIONAL LABORATORY	4000154999:6	81	049	127,396	
	PACIFIC NORTHWEST NATIONAL LABORATORIES	261296:3	81	049	76	
	PENNSYLVANIA STATE UNIVERSITY	4916-USB-DOE-0620	81	049	14,835	
	PENNSYLVANIA STATE UNIVERSITY	SUB 5065-UCSD-DOE-2375 (DE-SCO)	81	049	126,725	
	PENNSYLVANIA STATE UNIVERSITY	5024-UCLA-DOE-2377:3	81	049	-4,876	
	PURDUE UNIVERSITY	4105-77312	81	049	-1,390	
	PURDUE UNIVERSITY	SUB 14000380-009(DESC0018952)	81	049	31,797	

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DEPARTMENT OF ENERGY	RADIABEAM TECHNOLOGIES, LLC	79381	81	049	62,088		
	SANDIA NATIONAL LABORATORIES	SUB 1856102 (NONE)	81	049	94,153		
	SMART MANUFACTURING LEADERSHIP COALITION	CESMII-2017-S-01:02	81	049	-487,112		
	SPEC, INC.	SPEC 17-0329	81	049	48,012		
	STANFORD UNIVERSITY	A19-0496-001	81	049	47,058		
	STATE UNIVERSITY OF NEW YORK	68799	81	049	137,810		
	STATE UNIVERSITY OF NEW YORK	68856-11194936-3	81	049	8,701		
	STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	80431	81	049	-1,022		
	THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000517656-SC002	81	049	57,599		
	ULTRAMET	PO NO. 13403	81	049	11,854		
	ULTRAMET	SUB SO#16788 (DE-SC0017846)	81	049	62,963		
	UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	603654-14	81	049	620,314		
	UNIVERSITY OF CENTRAL FLORIDA	004518	81	049	100,481		
	UNIVERSITY OF CINCINNATI	009725-002	81	049	-10,770		
	UNIVERSITY OF COLORADO BOULDER	1553192-CYC3	81	049	42,912		
	UNIVERSITY OF DELAWARE	51428	81	049	70,737		
	UNIVERSITY OF IOWA	S00456-01	81	049	81,896		
	UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	007775	81	049	20,497		
	UNIVERSITY OF MARYLAND	18028-Z7181002:C	81	049	144,057		
	UNIVERSITY OF MARYLAND	Z7181005-CYC6	81	049	41,204		
	UNIVERSITY OF MIAMI	SPC-000615	81	049	32,921		
	UNIVERSITY OF MICHIGAN	3003694279	81	049	243,437		
	UNIVERSITY OF MICHIGAN	3004764256	81	049	384,266		
	UNIVERSITY OF MICHIGAN	59780	81	049	-72,149		
	UNIVERSITY OF MICHIGAN	SUBK00009231-CYC1	81	049	22,477		
	UNIVERSITY OF MINNESOTA	A004527503	81	049	155,907		
	UNIVERSITY OF MINNESOTA	A007230203	81	049	75,116		
	UNIVERSITY OF NOTRE DAME (INCL GEM)	82124	81	049	52,051		
	UNIVERSITY OF SOUTHERN CALIFORNIA	66913872:2	81	049	88,131		
	UNIVERSITY OF TEXAS-AUSTIN	SUB UTA18-001255(DE-SC0019100)	81	049	14,806		
	UNIVERSITY OF TEXAS-AUSTIN	UTA18-001379	81	049	506,971		
	UNIVERSITY OF UTAH	DE-SC0019285	81	049	66,731		
	UNIVERSITY OF WASHINGTON	SUB UWSC10739(DE-SC0019288)	81	049	71,649		
	UNIVERSITY OF WASHINGTON	UWSC7946-CYC1	81	049	21		
	UNIVERSITY OF WISCONSIN SYSTEM	005878	81	049	1,580		
	UNIVERSITY OF WISCONSIN-MADISON	609K674:4	81	049	-305		
	UNIVERSITY OF WISCONSIN-MADISON	614K924:4	81	049	140,862		
	WASHINGTON UNIVERSITY IN ST. LOUIS	004368	81	049	18,170		
	WASHINGTON UNIVERSITY IN ST. LOUIS	006723	81	049	183,938		
	WAYNE STATE UNIVERSITY	WSU14139-A5:5	81	049	191,088	76,637	
	OPERANT SOLAR CORPORATION	DE-SC0018863	81	049	48,960		
	BRIDGE12 TECHNOLOGIES INC.	A19-1070	81	049	44,999		
	LIFE-E, LLC	A19-1171	81	049	34,770		
					6,800,685	186,909	
		Passthrough/Partial Passthrough					
		UNIVERSITY OF TEXAS-ARLINGTON	SUB 1260801390-61 (DE-FE002311	81	057	1,605	
					1,605		
		Passthrough/Partial Passthrough					
		UNIVERSITY OF ILLINOIS	88702	81	079	-6,798	
					-6,798		
		Passthrough/Partial Passthrough					
		SOUTHWEST RESEARCH INSTITUTE	L99081MJM-CYC1	81	086	482	
		UNIVERSITY OF TENNESSEE	58146	81	086	-5,923	
					-5,441		
		Passthrough/Partial Passthrough					
		ARIZONA STATE UNIVERSITY/TEMPE	SUB 17-209(DEEE0007751)	81	087	132,730	
		BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	325257-CYC10	81	087	1,212,107	
		CALIFORNIA MANUFACTURING TECHNOLOGY CONSULTING	89808	81	087	2,879	
		COLORADO STATE UNIVERSITY	G-12018-1-CYC1	81	087	42,076	
		CORNELL UNIVERSITY	SUB 81344-10987 (DE-EE0007978)	81	087	80,232	
	ELECTRIC POWER RESEARCH INSTITUTE	008250	81	087	79,488		
	ELECTRIC POWER RESEARCH INSTITUTE	10007378-CYC1	81	087	3,986		
	ELECTRIC POWER RESEARCH INSTITUTE	0010006993	81	087	-12,173		
	GLOBAL ALGAE INNOVATIONS	SUB 160849 (DE-EE0007689)	81	087	226,733		
	GLOBAL ALGAE INNOVATIONS	SUB 20183437(DE-SC0018781)	81	087	71,528		
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617108	81	087	3,591		

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DEPARTMENT OF ENERGY	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620105	81	087	9,575		
	LOS ALAMOS NATIONAL SECURITY, LLC	324390-CYC1	81	087	11,079		
	OAK RIDGE NATIONAL LABORATORY	4000132775	81	087	14,343		
	OHIO FUEL CELL COALITION	OFCC-205761-CYC1	81	087	6,443		
	OREGON STATE UNIVERSITY	G0154F-A	81	087	14,837		
	PACIFIC NORTHWEST NATIONAL LABORATORIES	422454-CYC1	81	087	106,053		
	STANFORD UNIVERSITY	85496	81	087	13		
	UNIVERSITY OF CENTRAL FLORIDA	SUB 16226104-06 (EE0007327)	81	087	3,167		
	VISOLIS, INC.	86419	81	087	1,159		
						2,009,845	
	Passthrough/Partial Passthrough						
	BATTELLE MEMORIAL INSTITUTE	009513	81	089	80,421		
	COLUMBIA UNIVERSITY	A17-0866-001	81	089	4,696		
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B625943	81	089	74,865		
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B629135	81	089	43,754		
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B632126	81	089	51,207		
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B634023	81	089	7,153		
	TDA RESEARCH, INC.	GA.2339.UCI.16.01-CYC1	81	089	211,696		
	TDA RESEARCH, INC.	GA.2074.UCI.16.01-CYC2	81	089	8,149		
	TDA RESEARCH, INC.	GA.2201.008.UCI.18.01-CYC2	81	089	25,075		
	TDA RESEARCH, INC.	GA.2942.UCI.14.04-CYC6	81	089	37,560		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	DE-FE0029168	81	089	60,544		
UNIVERSITY OF IOWA	S00700-01	81	089	1,211			
WAYNE STATE UNIVERSITY	79931	81	089	14,237			
OPTO-KNOWLEDGE SYSTEMS, INC.	18040601-02-CYC1	81	089	26,727			
PROTON ONSITE	EC-0008081-01-CYC1	81	089	29,887			
SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC	667	81	089	103,014			
SLAC NATIONAL ACCELERATOR LABORATORY	191924	81	089	24,124			
					804,320		
Passthrough/Partial Passthrough							
CORNELL UNIVERSITY	SUB 83228-10970 (DE-NA0003764)	81	112	220,063			
HARVARD UNIVERSITY	130805-5088706	81	112	116,312			
TEXAS A&M UNIVERSITY - COLLEGE STATION	M1803474	81	112	468,529			
UNIVERSITY OF MICHIGAN	SUB 3004892094 (DE-NA0002723)	81	112	35,195			
					840,099		
Passthrough/Partial Passthrough							
TRIAD NATIONAL SECURITY, LLC	SUB 507174(NONE)	81	113	79,099			
					79,099		
Passthrough/Partial Passthrough							
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	88767	81	121	38,076	-2,855		
UNIVERSITY OF TENNESSEE	DE-NE0008694	81	121	118,890			
UNIVERSITY OF TENNESSEE	010336	81	121	34,652			
UNIVERSITY OF WISCONSIN-MADISON	634K071	81	121	34,034			
				225,652	-2,855		
Passthrough/Partial Passthrough							
LOS ANGELES DEPARTMENT OF WATER AND POWER	20686	81	122	121,622			
LOS ANGELES DEPARTMENT OF WATER AND POWER	20699	81	122	367,469			
					489,091		
Passthrough/Partial Passthrough							
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0695-006	81	123	117,918			
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0696-004	81	123	-1,694			
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0697-006	81	123	1,540			
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0698-006	81	123	156,383			
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0699-006	81	123	571,912			
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0700-006	81	123	10,614			
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A18-0712-001	81	123	67,372			
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	SUB B627864(DE-AC52-07NA27344)	81	123	421,271			
LOS ALAMOS NATIONAL SECURITY, LLC	368641-CYC1	81	123	23,604			
LOS ALAMOS NATIONAL SECURITY, LLC	009390	81	123	33,060			
LOS ALAMOS NATIONAL SECURITY, LLC	009503	81	123	50,305			
					1,452,285		
Passthrough/Partial Passthrough							
UNIVERSITY OF UTAH	10029200-UCB	81	124	227,316			

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DEPARTMENT OF ENERGY					227,316	
	Passthrough/Partial Passthrough					
	COLUMBIA UNIVERSITY	4(GG008711)	81	135	448,930	
	GAS TECHNOLOGY INSTITUTE	5492	81	135	-19,427	
	LEHIGH UNIVERSITY	SUB 543891-78002(DE-AR0001073)	81	135	1,530	
	MAGNETO-INERTIAL FUSION TECHNOLOGIES, INC	SUB NONE (AR0000569)	81	135	126,767	
	METROPIA INC.	716001-004	81	135	-5,732	
	NANOSD, INC.	874GF	81	135	89,053	
	PRINCETON PLASMA PHYSICS LABORATORY	79487	81	135	-9,240	
	SRI INTERNATIONAL	77557	81	135	1,768	
	STANFORD UNIVERSITY	61275607-120983	81	135	13,646	
	STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	80173	81	135	-698	
	UNIVERSITY OF CINCINNATI	009725-002	81	135	67,634	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	SUB 1554800 (DE-AR0000770)	81	135	211,617	
	UNIVERSITY OF TENNESSEE	8500051702	81	135	9,803	
	UNIVERSITY OF WISCONSIN-MADISON	183405383	81	135	135,349	
	OROMIS, INC.	SUB 20192709(NONE)	81	135	2,500	
					1,073,499	
	Direct					
	DEPARTMENT OF ENERGY	VARIOUS	81	RD	136,914,614	14,846,476
	Passthrough/Partial Passthrough					
	ADVANCED RESEARCH CORPORATION	17335	81	RD	190,078	
	AERODYNE RESEARCH, INC.	ARI 11293-3	81	RD	26,004	
	ALLIANCE FOR SUSTAINABLE ENERGY, LLC	XAT-6-62531-01	81	RD	66,993	
	AMES LABORATORY	20C29	81	RD	198,295	
	ARGONNE NATIONAL LABORATORY	009274	81	RD	7,507	
	ARGONNE NATIONAL LABORATORY	010343	81	RD	40,437	
	ARGONNE NATIONAL LABORATORY	5F30561	81	RD	58,977	
	ARGONNE NATIONAL LABORATORY	86836	81	RD	58,193	
	ARGONNE NATIONAL LABORATORY (DOE GOCO LAB OPERATED BY UNIV OF CHICAGO)	9F-60022	81	RD	15,268	
	ARIZONA STATE UNIVERSITY/TEMPE	ASUB00000188	81	RD	974	
	BLUE RIVER TECHNOLOGY	38A17	81	RD	42,620	
	BLUE RIVER TECHNOLOGY	Y152594	81	RD	1,901	
	BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	39554	81	RD	318,436	
	BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	63913	81	RD	176,484	
	CALWAVE POWER TECHNOLOGIES, INC.	043841	81	RD	192,811	
	CARNEGIE INSTITUTION	85786	81	RD	-2,889	
	CENTER FOR ENERGY AND ENVIRONMENT	201602545	81	RD	88,531	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	553611	81	RD	44,235	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	617067	81	RD	10,584	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	633923	81	RD	42,897	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	642024	81	RD	30,224	
	GENERAL ATOMICS	SUB 4500060525(DE-FC02-04ER546)	81	RD	106,177	
	GEORGE WASHINGTON UNIVERSITY	18-S22	81	RD	2,050	
	IDAHO NATIONAL LABORATORY	193494	81	RD	91,157	
	INCOM, INC.	044056	81	RD	36,975	
	INCOM, INC.	045399	81	RD	30,283	
	KOOTENAI TRIBE OF IDAHO	A18-1948	81	RD	71,958	
	KOOTENAI TRIBE OF IDAHO	19-2256	81	RD	33,397	
	KOOTENAI TRIBE OF IDAHO	25B24	81	RD	-12,611	
	KOOTENAI TRIBE OF IDAHO	85646	81	RD	-172	
	KOOTENAI TRIBE OF IDAHO	A18-1888	81	RD	69,865	
	KOOTENAI TRIBE OF IDAHO	A19-3366	81	RD	17,493	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616616	81	RD	11,249	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617085	81	RD	52,527	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B619357	81	RD	3,605	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B621105	81	RD	3,383	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B621286	81	RD	44,389	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B623076	81	RD	7,878	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	SUB B622171 (DE-AC52-07NA27344)	81	RD	194,058	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A18-0425	81	RD	28,414	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B624727	81	RD	58,866	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B625903-CYC1	81	RD	122,554	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B626742-CYC1	81	RD	54,997	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B626804	81	RD	19,167	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B627187	81	RD	17,199	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B627271-CYC1	81	RD	109,186	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B628440-CYC1	81	RD	86,218	

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DEPARTMENT OF ENERGY	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	DE-AC52-07NA27344	81	RD	159,181	
		SUB B624769 (DE-AC52-07NA27344)	81	RD	33	
		B623353	81	RD	10,000	
		B628407-CYC1	81	RD	175,180	
		B628415	81	RD	45,586	
		B628511	81	RD	20,000	
		B629159	81	RD	30,000	
		B629922	81	RD	63,831	
		B630058	81	RD	19,683	
		B630207	81	RD	26,968	
		B632083	81	RD	61,179	
		B632242-CYC1	81	RD	71,453	
		B632305	81	RD	33,647	
		B632535	81	RD	47,425	
		B632718	81	RD	22,085	
		B632745	81	RD	14,216	
		B632788	81	RD	26,336	
		B633183	81	RD	85,712	
		SUB B629502 B623353(NONE)	81	RD	19,303	
		SUB B630728 (DE-AC52-07NA27344)	81	RD	11,945	
		SUB B630882 (DE-AC52-07NA2734)	81	RD	24,509	
		B628129	81	RD	55,065	
		B628449	81	RD	227,902	
		B632435	81	RD	12,696	
		SUB 351623 (DEAC52-06NA25396)	81	RD	1,515,106	
		SUB 370334 (DE-AC52-06NA25396)	81	RD	205,040	
		SUB 398502 (DE-AC52-06NA25396)	81	RD	25,787	
		520355	81	RD	14,094	
		DE-AC52-06NA25396	81	RD	92,881	
		520116	81	RD	33,517	
		XGJ-7-62614-01	81	RD	212,445	
		XGJ-8-70296-01	81	RD	58,905	
		92-CA06-SEED2018-C3WPPD-CYC1	81	RD	14,730	
		006982	81	RD	114,017	
		008531	81	RD	58,638	
		4000100283	81	RD	35,935	
		4000134953	81	RD	14,339	
		4000141233	81	RD	73,541	
		4000151688	81	RD	113,202	
		009441	81	RD	321,653	
		010137	81	RD	61,935	
		4000139641	81	RD	84,086	
		4000140266	81	RD	25,000	
		4000158037	81	RD	57,103	
		4000163301	81	RD	10,000	
		4000164804	81	RD	15,444	
		58252	81	RD	2,753	
		008894	81	RD	1,318	
		275882	81	RD	148,662	
		SUB 274570 (DE-AC05-76RL01830)	81	RD	10,153	
		387155	81	RD	25,979	
		SUB 375997 (DE-AC05-76RL01830)	81	RD	37,283	12,751
		010696	81	RD	5,324	
		1486765	81	RD	7,877	
		1752703	81	RD	-17,285	
		1786332	81	RD	80,456	
		1668054	81	RD	64,414	
		1732394	81	RD	20,246	
		1744159	81	RD	75,775	
		1758713	81	RD	13,053	
		1772593	81	RD	136,950	
		1850573	81	RD	66,090	
		PO 1917520	81	RD	54,432	
		SUB 1646732 (DE-AC04-94AL85000)	81	RD	279,651	
		1887840	81	RD	157,909	
		PO 1925990	81	RD	50,632	
		SUB 1909663(NONE)	81	RD	475,402	
		1742701	81	RD	133,413	
		1940383	81	RD	15,000	
		1988051	81	RD	2,309	

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DEPARTMENT OF ENERGY	SANDIA NATIONAL LABORATORIES	26C55	81	RD	40,652				
		29C87	81	RD	12,902				
		86384	81	RD	41				
		010461	81	RD	48,454				
		010467	81	RD	25,964				
		A17-0410-003	81	RD	35,457				
		SUB 2004104 (NONE)	81	RD	21,652				
		1985350	81	RD	34,356				
		1838273	81	RD	100,610				
		1976904	81	RD	44,796				
		26728	81	RD	2,881				
		61961563-136555	81	RD	275,296				
		28-M1800913	81	RD	202,063				
		604705	81	RD	9,181				
		090634-16915	81	RD	303,047				
		3200001517-18-075	81	RD	224,342				
		A003127005	81	RD	63,611				
		776K775	81	RD	18,355				
		60259	81	RD	-11,682				
		044715	81	RD	12,519				
		DP-208459-CYC1	81	RD	271,867				
		59581	81	RD	873				
		7F-30219-CYC1	81	RD	59,717				
		SUB 9F-60081	81	RD	52,218				
		045257	81	RD	49,959				
		045416	81	RD	47,949				
		046289	81	RD	16,418				
		187775	81	RD	63,771				
		520117-CYC1	81	RD	32,675				
		523272	81	RD	32,939				
					148,145,448		14,859,227		
		DEPARTMENT OF ENERGY Total			162,714,659		15,067,745		
		DEPARTMENT OF EDUCATION	Passthrough/Partial Passthrough GEORGIA STATE UNIVERSITY	008047	84	116	226,756		
							226,756		
		DEPARTMENT OF EDUCATION	Passthrough/Partial Passthrough REHABILITATION INSTITUTE OF CHICAGO	81760-CYC7	84	133	23,572		
							23,572		
		DEPARTMENT OF EDUCATION	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF EDUCATION	16-14349-3001-9A	84	287	909,570	666,746	
							909,570	666,746	
		DEPARTMENT OF EDUCATION	Passthrough/Partial Passthrough	COLUMBIA UNIVERSITY	1 (GG009670)	84	305	3,872	
				EDBOOST	59556	84	305	-2,717	
				FLORIDA STATE UNIVERSITY	78567	84	305	-56	
				HARVARD UNIVERSITY	108135-5099346	84	305	85,131	
				LITERACY DESIGN COLLABORATIVE, INC	20145515	84	305	317,728	
				MINDSET WORKS, INC.	201500250	84	305	238,160	
				NEW YORK UNIVERSITY	F0959-02-CYC1	84	305	6,169	
UNIVERSITY OF CHICAGO	FP064959-01-PR-CYC1			84	305	3,421			
UNIVERSITY OF SOUTH CAROLINA	15-2906			84	305	88,748			
EDUCATIONAL TESTING SERVICE	UCLA-ED-305A			84	305	173,885			
						914,342			
DEPARTMENT OF EDUCATION	Passthrough/Partial Passthrough			GEORGIA STATE UNIVERSITY	SP00010919-06-CYC2	84	324	12,000	
				LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620630:1	84	324	27,140	
		UNIVERSITY OF MICHIGAN	3003847265-CYC2	84	324	161,947			
		UNIVERSITY OF VIRGINIA	R324A180221	84	324	64,813			
				265,899					
DEPARTMENT OF EDUCATION	Passthrough/Partial Passthrough	ARIZONA STATE UNIVERSITY/TEMPE	T365Z170170	84	365	33,283			
		PENNSYLVANIA STATE UNIVERSITY	SUB 5590-UCSD-USDE-0311 (T365Z	84	365	82,988			
		SANTA CLARA UNIVERSITY	A18-0382-001	84	365	66,857			
				183,128					

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DEPARTMENT OF EDUCATION	Passthrough/Partial Passthrough						
	CALIFORNIA DEPARTMENT OF EDUCATION	84709	84	367	-9,237		
	CALIFORNIA DEPARTMENT OF EDUCATION	ESSA18-CRLP-UCB	84	367	12,157		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB14-CWP-UCSB	84	367	3,348		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB14-CMP-UCSB	84	367	283		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB14-CSP-UCSB	84	367	-490		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB14-CWP-UCI-CYC1	84	367	-396		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CHSSP-UCI-CYC1	84	367	40,500		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CMP-UCSB	84	367	12,102		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CSP-UCSB	84	367	34,796		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CWP-UCB	84	367	5,787		
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CWP-UCI-CYC1	84	367	25,104		
	NATIONAL WRITING PROJECT	92-CA06-SEED2017-CRWPAI-CYC1	84	367	1,873		
	NATIONAL WRITING PROJECT	92-CA07-SEED2017-CRWPPD	84	367	873		
	NATIONAL WRITING PROJECT	92-CA03-SEED2017-CRWPAI	84	367	5,558		
	NATIONAL WRITING PROJECT	17CSMP-CWP-UCSB	84	367	1,170		
					133,428		
	Passthrough/Partial Passthrough						
	NATIONAL MATH AND SCIENCE INITIATIVE, INC.	20160003	84	411	508,211		
	ONU TECHNOLOGY, INC.	201504131	84	411	91,226		
					599,436		
	Direct						
	DEPARTMENT OF EDUCATION	VARIOUS	84	RD	23,085,825		3,724,842
	Passthrough/Partial Passthrough						
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CWP-UCSB	84	RD	20,669		
	UNIVERSITY OF MICHIGAN	3004027875	84	RD	2,380		
					23,108,873		3,724,842
DEPARTMENT OF EDUCATION Total					26,365,004		4,391,588
SCHOLARSHIP FOUNDATIONS	Direct						
	SMITHSONIAN	VARIOUS	85	RD	1,211,274		28,611
					1,211,274		28,611
SCHOLARSHIP FOUNDATIONS Total					1,211,274		28,611
NATIONAL ARCHIVES & RECORDS ADMINISTRATION	Passthrough/Partial Passthrough						
	ANDREW W. MELLON FOUNDATION	A18-0534-001	89	003	53,779		27,384
					53,779		27,384
	Direct						
	NATIONAL ARCHIVES AND RECORDS ADMINISTRATION	VARIOUS	89	RD	26,996		
					26,996		
NATIONAL ARCHIVES & RECORDS ADMINISTRATION Total					80,775		27,384
UNITED STATES INSTITUTE OF PEACE	Passthrough/Partial Passthrough						
	ATOX BIO	201600397	91	RD	34,395		
					34,395		
UNITED STATES INSTITUTE OF PEACE Total					34,395		
NATIONAL COUNCIL ON DISABILITY	Passthrough/Partial Passthrough						
	THE SCRIPPS RESEARCH INSTITUTE	8717C	92	273	-2,568		
					-2,568		
	Passthrough/Partial Passthrough						
	UNIVERSITY OF VIRGINIA	SUB GB1025 150187 (HL127654)	92	837	173,626		
					173,626		
NATIONAL COUNCIL ON DISABILITY Total					171,057		
DEPARTMENT OF HEALTH AND HUMAN SERVICES	Passthrough/Partial Passthrough						
	UNIVERSITY OF MICHIGAN	3004796644	93	242	17,598		
					17,598		
	Passthrough/Partial Passthrough						
	AFRICAN MEDICAL AND RESEARCH FOUNDATION	37188-1052	93	001	-4,888		
	RIVERSIDE-SAN BERNARDINO COUNTY INDIAN HEALTH, INC	20163878	93	001	43,239		
					38,352		
	Passthrough/Partial Passthrough						

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	DXTERTITY DIAGNOSTICS	20150825	93	004	-19,524	
					-19,524	
	Passthrough/Partial Passthrough UNIVERSITY OF ARIZONA	278887-CYC2	93	061	3,651	
					3,651	
	Passthrough/Partial Passthrough MAKERERE UNIVERSITY	METS-A-01	93	067	306,158	
	UNIVERSITY OF WASHINGTON	UWSC10826	93	067	102,665	
					408,823	
	Passthrough/Partial Passthrough CEDARS-SINAI MEDICAL CENTER	81438	93	077	17,970	
	HEALTH RESEARCH, INC.	B6958	93	077	69	
	OREGON HEALTH & SCIENCE UNIVERSITY	R01HL144384	93	077	49,974	
	PORTLAND STATE UNIVERSITY	007815	93	077	19,843	
	UNIVERSITY OF ILLINOIS AT CHICAGO	2013-02549-04-00	93	077	47,957	
	UNIVERSITY OF MICHIGAN	SUBK00007976	93	077	3,130	
	UNIVERSITY OF MINNESOTA	C0280	93	077	-10,899	
	UNIVERSITY OF MINNESOTA	P006754502	93	077	408,521	
	UNIVERSITY OF WISCONSIN-MADISON	605K356	93	077	276,474	
					813,039	
	Passthrough/Partial Passthrough CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	SUB CIBDIX2015CDC-UCSD-1 (DD0	93	080	23,793	
					23,793	
	Passthrough/Partial Passthrough STRATATECH LLC	STRATA2016-CYC1	93	081	93,776	
					93,776	
	Passthrough/Partial Passthrough HARVARD PILGRIM HEALTH CARE	HPHC-203160-CYC2	93	084	906,954	
	HARVARD PILGRIM HEALTH CARE	HPHC-204704-CYC2	93	084	155,073	
	HARVARD PILGRIM HEALTH CARE	HPHC-204773-CYC3	93	084	25,510	
					1,087,537	
	Passthrough/Partial Passthrough SANFORD RESEARCH	SR-2018-14	93	085	75,267	
					75,267	
	Passthrough/Partial Passthrough HEALTH QUALITY PARTNERS	SUB WH-AST-17-001_UCSD_WALLACI	93	088	10,047	
					10,047	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0372	93	103	28,856	
	CEDARS-SINAI MEDICAL CENTER	0001494325	93	103	20,692	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	87525	93	103	4	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	SUB GENFD0001336281 (FD006003)	93	103	115,840	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	3200840819:1	93	103	88,908	
	DUKE UNIVERSITY	A039104	93	103	5,520	
	JOHN WAYNE INSTITUTE FOR CANCER TREATMENT AND RESEARCH	873C6	93	103	124	
	JOHNS HOPKINS UNIVERSITY	2002610941	93	103	24,659	
	NEW YORK MEDICAL COLLEGE	120005	93	103	12,163	
	STANFORD UNIVERSITY	HHSF223201610081C	93	103	6,054	
	STANFORD UNIVERSITY	61334664-122011:2	93	103	10,406	
	TRACE-ABILITY, INC	TA-UCSF-SUB1	93	103	35,460	
	REAL PREVENTION LLC	RP-205497-CYC2	93	103	24,105	
	INSTITUTE FOR ADVANCED CLINICAL TRIALS FOR CHILDREN	20191636	93	103	5,320	
					378,109	
	Passthrough/Partial Passthrough CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2012HRSA-UCSF	93	110	86,606	
	CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	SUB CIBDIX2012HRSA-UCSD-7(5 H3	93	110	44,785	
	CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	807958.UCSF.18.1	93	110	2,421	
	CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	U1AMC28548	93	110	2,420	
	MASSACHUSETTS GENERAL HOSPITAL	227146-CYC3	93	110	1,766	
	MASSACHUSETTS GENERAL HOSPITAL	MGH-205328-CYC3	93	110	144,545	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	PARTNERS HEALTHCARE SYSTEM, INC	226858-CYC3	93	110	28,095	
	PARTNERS HEALTHCARE SYSTEM, INC	226859-CYC3	93	110	253,223	70,832
	RAND CORP	9920150142	93	110	-910	
					562,951	70,832
	Passthrough/Partial Passthrough					
	BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE	52044.2001758.669302	93	113	19,347	
	CALIFORNIA STATE UNIVERSITY, NORTHRIDGE	F-14-3503UCLA:3	93	113	1,567	
	CANCER PREVENTION INSTITUTE OF CALIFORNIA	78747	93	113	-2,929	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	U01ES029234	93	113	224,513	
	COLORADO STATE UNIVERSITY	1-R01ES023688-01A1	93	113	11,707	
	COLUMBIA UNIVERSITY	SUB 3(GG010691) (ES025225)	93	113	301,157	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8271-4609	93	113	87,766	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	A17-0820-002	93	113	67,844	
	JOHNS HOPKINS UNIVERSITY	2003191417	93	113	21,012	
	JOHNS HOPKINS UNIVERSITY	2003218455	93	113	157,604	
	MICROVI BIOTECHNOLOGY	89634	93	113	-225	
	PRINCETON UNIVERSITY	SUB00000327	93	113	13,436	
	RESEARCH FOUNDATION FOR MENTAL HYGIENE	R01ES029281	93	113	97,281	
	SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB NONE (ES025585)	93	113	143,397	
	SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB P0170265 (ES025585)	93	113	72,624	
	SUNY UNIVERSITY AT ALBANY	B5898	93	113	-3	
	UNIVERSITY OF ARIZONA	84B45	93	113	95,704	
	UNIVERSITY OF COLORADO BOULDER	SUB 1557262 (ES027853)	93	113	22,537	
	UNIVERSITY OF COLORADO DENVER	SUB FY17.625.007(ES027698)	93	113	389,338	
	UNIVERSITY OF COLORADO DENVER	FY17.625.006-CYC2	93	113	608,035	
	UNIVERSITY OF MICHIGAN	008002	93	113	6,140	
	UNIVERSITY OF MISSOURI	005947	93	113	76,864	
	UNIVERSITY OF MISSOURI	010644	93	113	56,891	
	UNIVERSITY OF NEW MEXICO	80602	93	113	188,212	
	UNIVERSITY OF PITTSBURGH	U01AG012553	93	113	-69	
	UNIVERSITY OF SOUTHERN CALIFORNIA	61933158	93	113	107,307	
	UNIVERSITY OF SOUTHERN CALIFORNIA	102683343	93	113	8,394	
	UNIVERSITY OF SOUTHERN CALIFORNIA	A19-0531-001	93	113	19,096	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 109980714 (ES007048)	93	113	10,075	
	UNIVERSITY OF TEXAS-ARLINGTON	R21ES028131	93	113	14,830	
	UNIVERSITY OF TEXAS-AUSTIN	A16-0601-003	93	113	154,269	
	WASHINGTON STATE UNIVERSITY	104099-G003798	93	113	40,477	
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-159	93	113	15,055	
					3,029,250	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	A8156	93	116	-1,153	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	B1726	93	116	-12,777	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	17-10035	93	116	3,183,637	
					3,169,707	
	Passthrough/Partial Passthrough					
	BIOVINC LLC	2R44DE025524-02	93	121	235,047	
	BRIGHAM AND WOMEN'S HOSPITAL	110670	93	121	186,615	
	BRIGHAM AND WOMEN'S HOSPITAL	UM1-AI068636 HAVLIR	93	121	-36,930	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000601	93	121	33,408	
	COLUMBIA UNIVERSITY	1(GG013390-01)	93	121	200,953	
	DUKE UNIVERSITY	2036412	93	121	228,167	
	DUKE UNIVERSITY	5R01DE025444	93	121	714	
	HARVARD UNIVERSITY	114244-5097391	93	121	15,445	
	JOHNS HOPKINS UNIVERSITY	3P50DE019032-11S2	93	121	14,632	
	NEW YORK UNIVERSITY	F8605-02 S	93	121	658	
	PALO ALTO VETERANS INSTITUTE FOR RESEARCH, INC.	R01DE023113	93	121	14,179	
	SCARLESS LABORATORIES, INC	2SB1DE026972-04A1	93	121	49,968	
	STANFORD UNIVERSITY	1U01DE024430-01/61206320	93	121	325,570	
	STANFORD UNIVERSITY	61676501-123526	93	121	15,285	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000504965-001	93	121	16,712	
	UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R56DE025218	93	121	32,065	
	UNIVERSITY OF COLORADO DENVER	FY18.530.001-CYC1	93	121	219,979	
	UNIVERSITY OF COLORADO DENVER	FY19.655.001-CYC1	93	121	16,698	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.236.004	93	121	139,720	
	UNIVERSITY OF MICHIGAN	3004085830	93	121	367,922	
	UNIVERSITY OF MICHIGAN	3004119292	93	121	5,126	
	UNIVERSITY OF MICHIGAN	3004644384	93	121	86,272	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105898	93	121	952	
	UNIVERSITY OF NORTH CAROLINA SYSTEM	R01DE028146	93	121	240,245	
	UNIVERSITY OF PENNSYLVANIA	80435	93	121	-3,832	
	UNIVERSITY OF PENNSYLVANIA	573964:1	93	121	174,656	
	UNIVERSITY OF PUERTO RICO	SUB NONE (DE027235)	93	121	17,391	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0010816B	93	121	190,566	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0011414C	93	121	161,766	
	UNIVERSITY OF WASHINGTON	010348	93	121	13,469	
						2,963,416
	Passthrough/Partial Passthrough					
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3210000758-18-176	93	135	67,559	
	HELUNA HEALTH	NU50CK000410-04-04	93	135	29,710	
						97,269
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	17-10480	93	136	211,326	
	HELUNA HEALTH	0392.0101	93	136	5,995	
						217,321
	Passthrough/Partial Passthrough					
	BOSTON UNIVERSITY	4500002725-CYC1	93	143	43,096	
						43,096
	Passthrough/Partial Passthrough					
	CITY AND COUNTY OF SAN FRANCISCO	DPHC17000179	93	157	948,070	452,681
				948,070	452,681	
Passthrough/Partial Passthrough						
AMERICAN COLLEGE OF MEDICAL TOXICOLOGY INC.	41U61TS000238-R9-01	93	161	148,695		
				148,695		
Passthrough/Partial Passthrough						
BAYLOR COLLEGE OF MEDICINE	7000000779	93	172	37,618		
BROAD INSTITUTE INC.	A17-0095-002	93	172	88,331		
BROAD INSTITUTE INC.	A19-0066-001	93	172	736,854		
CALIFORNIA INSTITUTE OF TECHNOLOGY	18B-1098090-CYC3	93	172	1,808,694		
CALIFORNIA STATE UNIVERSITY, NORTHRIDGE	A18-0057-S001	93	172	23,376		
HARVARD UNIVERSITY	117112-5098551	93	172	34,466		
HARVARD UNIVERSITY	117112-5098555:3	93	172	144,404		
HARVARD UNIVERSITY	153056.5112935.0507	93	172	41,373		
INDIANA UNIVERSITY	88984	93	172	-295		
KAISER PERMANENTE DIVISION OF RESEARCH	OOS030229-UCSF	93	172	291,526		
LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 242201-05003A (HG008135)	93	172	47,642		
LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 242201-05003B (HG008135)	93	172	-1,421		
NEW YORK GENOME CENTER INC	UM1-UCSF-2	93	172	20,882		
OREGON HEALTH & SCIENCE UNIVERSITY	1013661_UCSF	93	172	208,825		
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0761	93	172	12,547		
SRI INTERNATIONAL	A17-0549-002	93	172	142,037		
STANFORD UNIVERSITY	61280478-121626	93	172	239,670		
STANFORD UNIVERSITY	61285160-123166	93	172	683,354		
STANFORD UNIVERSITY	59990	93	172	-150		
STANFORD UNIVERSITY	61965606-134738	93	172	41,908		
UNIVERSITY OF CONNECTICUT	SUB UCHC6-66263883 (HG007005)	93	172	1,573		
UNIVERSITY OF CONNECTICUT	SUB UCHC7-101026114 (HG009889	93	172	1,152,890		
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	OSP2017129	93	172	-74,562		
UNIVERSITY OF SOUTHERN CALIFORNIA	93063336	93	172	160,596		
UNIVERSITY OF SOUTHERN CALIFORNIA	97780851	93	172	15,821		
UNIVERSITY OF WASHINGTON	UWSC8775	93	172	6,593		
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-18-279	93	172	38,787		
EUROPEAN BIOINFORMATICS INSTITUTE	A17-0370-002	93	172	213,382		
ALBERT EINSTEIN COLLEGE OF MEDICINE	SUB 311106 (HG008153)	93	172	654,963		
SCRIBE BIOSCIENCES, INC.	A131308	93	172	26,644		
					6,798,327	
Passthrough/Partial Passthrough						
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000551 (DC015046)	93	173	287,655		
FATHER FLANAGANS BOYS HOME	96411-B	93	173	7,211		
OREGON HEALTH & SCIENCE UNIVERSITY	008310	93	173	166,042		
RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK, THE	1048815	93	173	73,220		

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	TEMPLE UNIVERSITY	263001-UCI-CYC1	93	173	77,331		
	UNIVERSITY OF ILLINOIS	89189	93	173	-138		
	UNIVERSITY OF PITTSBURGH	0062065 (131832-1)	93	173	167,250		
	UNIVERSITY OF SOUTH CAROLINA	18-3690-CYC1	93	173	172,894		
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0011468C-CYC3	93	173	18,414		
	UNIVERSITY OF TEXAS-AUSTIN	R03DC013403	93	173	2,286		
	UNIVERSITY OF TEXAS-AUSTIN	UTA17-000878	93	173	20,749		
	UNIVERSITY OF TEXAS-AUSTIN	UTA17-000879	93	173	274,258		
	UNIVERSITY OF UTAH	10041913-027	93	173	4,718		
	UNIVERSITY OF WISCONSIN-MADISON	SUB 830K966 (DC004336)	93	173	25,711		
	WEST VIRGINIA UNIVERSITY	SUB 05-159-UCSD (DC007695)	93	173	18,339		
	FLORIDA ATLANTIC UNIVERSITY	010442	93	173	38,793		
						1,354,731	
	Passthrough/Partial Passthrough						
		UNIVERSITY OF ROCHESTER	417201:1	93	185	42,286	
		UNIVERSITY OF ROCHESTER	80132	93	185	-3,440	
						38,846	
	Passthrough/Partial Passthrough						
		MICHIGAN STATE UNIVERSITY	RC107653-UCSF	93	197	72,085	
						72,085	
	Passthrough/Partial Passthrough						
		HEALTH RESEARCH, INC.	R01AT010216	93	213	9,761	
		NEW YORK UNIVERSITY	17-A0-00-008501	93	213	19,012	
		NEXTRAST, INC	A130673	93	213	170,188	
		RAND CORP	9920140048:07	93	213	26,921	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	A125156	93	213	-20,381		
	UNIVERSITY OF CONNECTICUT	87524	93	213	-49,043		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LANG (AT 007936)	93	213	-45		
	LAUREATE INSTITUTE FOR BRAIN RESEARCH	SUB 1R34AT009889(AT009889)	93	213	8,062		
					164,475		
Passthrough/Partial Passthrough							
	CEDARS-SINAI MEDICAL CENTER	0001296869:3	93	226	22,129		
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	80169	93	226	-798		
	CHILDREN'S HOSPITAL OF PHILADELPHIA	321060	93	226	-266		
	DARTMOUTH COLLEGE	R814	93	226	30,619		
	DARTMOUTH COLLEGE	R815	93	226	345,019		
	DUKE UNIVERSITY	203-7629	93	226	88,406		
	DUKE UNIVERSITY	2038054	93	226	15,535		
	DUKE UNIVERSITY	203-7623	93	226	35,485		
	DUKE UNIVERSITY	107465C	93	226	9,457		
	DUKE UNIVERSITY	5P50HS023418	93	226	15,750		
	JOHNS HOPKINS UNIVERSITY	2003396916	93	226	73,772		
	JOHNS HOPKINS UNIVERSITY	2002441400-CYC3	93	226	52,688		
	NEW YORK UNIVERSITY	D3952	93	226	139,477		
	RAND CORP	9920150014:04	93	226	13,689		
	RAND CORP	9920160022:04	93	226	83,384		
	RAND CORP	9920180026	93	226	82,331		
	RHODE ISLAND HOSPITAL	B4729	93	226	-768		
	STANFORD UNIVERSITY	6085-6377-114856	93	226	46,418		
	UNIVERSITY OF COLORADO DENVER	SUB FY19.817.001 (HS024597)	93	226	12,560		
	UNIVERSITY OF ROCHESTER	417278/URFAO GR51752	93	226	15,403		
	UNIVERSITY OF ROCHESTER	416933-CYC2	93	226	54,303		
	UNIVERSITY OF ROCHESTER	417256:3	93	226	12,235		
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0011289	93	226	21,187		
	UNIVERSITY OF UTAH	10042477-02:01	93	226	15,300		
	VANDERBILT UNIVERSITY	VUMC 57336	93	226	2,690		
	KAISER FOUNDATION RESEARCH INSTITUTION	HHS2902015000071	93	226	116,362		
	KAISER FOUNDATION RESEARCH INSTITUTION	TO 7 HHS2902015000071	93	226	46,260		
	AMERICAN COLLEGE OF SURGEONS	A129384	93	226	66,099		
					1,414,726		
Passthrough/Partial Passthrough							
	UNIVERSITY OF COLORADO DENVER	78568	93	237	77,094		
					77,094		
Passthrough/Partial Passthrough							

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	ADVANCED BRAIN MONITORING, INC.	79624	93	242	-46	
	ALLEN/LOEB ASSOCIATES	A127351	93	242	13,947	
	ALLEN/LOEB ASSOCIATES	R44MH099917	93	242	53,142	
	BAYLOR COLLEGE OF MEDICINE	7000000444	93	242	86,446	
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 112807 (MH091448)	93	242	139,989	
	BROWN UNIVERSITY	00001172-1	93	242	178,034	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000067 (MH100260)	93	242	15,585	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000475(MH103494)	93	242	7,356	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000478 (MH107802)	93	242	18,767	
	CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S16-0021	93	242	103,638	
	CEDARS-SINAI MEDICAL CENTER	SUB 0255-2131-4609(MH111499)	93	242	438,457	
	COLD SPRING HARBOR LABORATORY	SUB 64090112 (MH109113)	93	242	151,310	
	COLUMBIA UNIVERSITY MEDICAL CENTER	008292	93	242	16,560	
	DANA-FARBER CANCER INSTITUTE	B4251	93	242	155	
	DIGITAL ARTEFACTS, LLC	SUB 20162384 (MH099964)	93	242	156,608	
	DREXEL UNIVERSITY	R01MH115715	93	242	919,107	
	EMORY UNIVERSITY	SUB T674498(MH108826)	93	242	98,065	
	EMORY UNIVERSITY	SUB T860026 (MH110364)	93	242	91,978	
	EMORY UNIVERSITY	SUB A051335 (MH118092)	93	242	25,669	
	EPIGEN BIOSCIENCES, INC.	SUB 20173585 (MH115529)	93	242	64,623	
	GEORGE WASHINGTON UNIVERSITY	17-M95	93	242	361,038	
	GEORGE WASHINGTON UNIVERSITY	81192	93	242	110,678	
	GEORGE WASHINGTON UNIVERSITY	SUB 18-M60(MH104310)	93	242	2,977	
	GEORGETOWN UNIVERSITY	SUB 411069 GR411012-UCSD (MH10	93	242	105,163	
	GLADSTONE INSTITUTES	R2419-A	93	242	254,461	
	HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	834958	93	242	342	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025528514609	93	242	42,071	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	73B60	93	242	56,128	
	JOHNS HOPKINS UNIVERSITY	SUB 2003199958(MH111516)	93	242	154,790	
	JOHNS HOPKINS UNIVERSITY	SUB TASK LDR03 (A1068632)	93	242	21,792	
	JOHNS HOPKINS UNIVERSITY	88477	93	242	1,117	
	JOHNS HOPKINS UNIVERSITY	2002933836-CYC3	93	242	10,565	
	JOHNS HOPKINS UNIVERSITY	2003097374:2	93	242	135,513	
	JOHNS HOPKINS UNIVERSITY	88417	93	242	1,955	
	KENNEDY KRIEGER INSTITUTE	SUB 110268-0719 (MH085328)	93	242	6,547	
	MASSACHUSETTS GENERAL HOSPITAL	88682	93	242	-126	
	MCLEAN HOSPITAL	SUB 401185 (MH109334)	93	242	233,931	
	MCLEAN HOSPITAL	401366-CYC1	93	242	91,753	
	NEW YORK UNIVERSITY	B7131	93	242	-12	
	OREGON HEALTH & SCIENCE UNIVERSITY	58340	93	242	-213	
	PALO ALTO VETERANS INSTITUTE FOR RESEARCH, INC.	R21MH117634	93	242	11,077	
	PRINCETON UNIVERSITY	SUB0000130	93	242	108,875	
	RADY CHILDREN'S HOSPITAL-SAN DIEGO	SUB 1001923(MH111491)	93	242	15,805	
	RAND CORP	9920150088	93	242	89,384	
	RAND CORP	9920150037-06	93	242	160,788	
	RESEARCH FOUNDATION FOR MENTAL HYGIENE	122583:3	93	242	6,024	
	RESEARCH FOUNDATION FOR MENTAL HYGIENE	79405	93	242	-1,084	
	RUSH UNIVERSITY MEDICAL CENTER	13041702-SUB01-CYC1	93	242	80,666	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	009727	93	242	161,753	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0402	93	242	20,864	
	SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB 20162859(MH111534)	93	242	26,775	
	SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB P0244872(MH114831)	93	242	116,039	
	SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB0230285(MH1127630)	93	242	18,610	
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 59273-12708-UCSD (MH106865	93	242	192,557	
	STANFORD UNIVERSITY	60546456-108656:4	93	242	41,659	
	STANFORD UNIVERSITY	61494937-126516	93	242	14,016	
	STANFORD UNIVERSITY	61540206-121859	93	242	404,407	
	STANFORD UNIVERSITY	61593944-123692	93	242	310,643	
	STANFORD UNIVERSITY	61615363-49958:1	93	242	3,606	
	STANFORD UNIVERSITY	R01MH108319	93	242	180,034	
	STANFORD UNIVERSITY	SUB 60444056-108656 (MH100900)	93	242	16,015	
	STANFORD UNIVERSITY	61835882-132392	93	242	281,022	
	STANFORD UNIVERSITY	62101628-128139	93	242	30,754	
	STANFORD UNIVERSITY	B5167	93	242	-4,942	
	STANFORD UNIVERSITY	SUB 62031592-127992 (MH114856)	93	242	15,772	
	TEMPLE UNIVERSITY	259238	93	242	112,019	
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-50366 (MH100175)	93	242	250,780	
	THE SCRIPPS RESEARCH INSTITUTE	5-53359	93	242	185,084	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000506211-002	93	242	150,912	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000519413-001	93	242	78,830	

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	THINK-NOW INC.	20153040	93	242		-31
	UNIVERSITY OF CAPE TOWN	A125318	93	242		21,363
	UNIVERSITY OF CHICAGO	SUB FP060924 (MH087214)	93	242		122,404
	UNIVERSITY OF CHICAGO	FP067605-01-PR	93	242		316,943
	UNIVERSITY OF CHICAGO	FP056858-02-PR	93	242		94,278
	UNIVERSITY OF COLORADO DENVER	FY17.496.001	93	242		61,103
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1556802	93	242		37,324
	UNIVERSITY OF CONNECTICUT	136123	93	242		54,630
	UNIVERSITY OF FLORIDA	UFDSP00012225	93	242		163,987
	UNIVERSITY OF ILLINOIS	17128	93	242		70,412
	UNIVERSITY OF MARYLAND, BALTIMORE	R01MH065034	93	242		74,531
	UNIVERSITY OF MASSACHUSETTS AMHERST	SUB 18-010032 B00(MH114277)	93	242		89,876
	UNIVERSITY OF MIAMI	SUB 663805 (MH100942)	93	242		858,985
	UNIVERSITY OF MICHIGAN	3004476836	93	242		60,127
	UNIVERSITY OF MICHIGAN	3003844676-CYC4	93	242		24,267
	UNIVERSITY OF MICHIGAN	3004636437-CYC2	93	242		17,710
	UNIVERSITY OF MICHIGAN	35B30	93	242		797
	UNIVERSITY OF MICHIGAN	SUBK00008746	93	242		323,866
	UNIVERSITY OF MINNESOTA	N006175601	93	242		13,788
	UNIVERSITY OF MINNESOTA	N006909501	93	242		89,520
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5104172	93	242		104,171
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5104173	93	242		150,095
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5106481	93	242		4,027
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5107035	93	242		92,489
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	A7710	93	242		-20
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5101901	93	242		33,521
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5101902:3	93	242		37,476
	UNIVERSITY OF PENNSYLVANIA	SUB 569829(MH109382)	93	242		89,647
	UNIVERSITY OF PENNSYLVANIA	SUB 569975 (MH11389)	93	242		60,574
	UNIVERSITY OF PENNSYLVANIA	570052:1	93	242		35,988
	UNIVERSITY OF PITTSBURGH	0030253 (127587-3)	93	242		7,258
	UNIVERSITY OF PITTSBURGH	79655	93	242		-99,594
	UNIVERSITY OF PITTSBURGH	0057692 (130512-1)	93	242		5,425
	UNIVERSITY OF PITTSBURGH	0061652 (131408-1)	93	242		10,807
	UNIVERSITY OF PITTSBURGH	80968	93	242		667
	UNIVERSITY OF SOUTHERN CALIFORNIA	104020221-CYC1	93	242		23,834
	UNIVERSITY OF SOUTHERN CALIFORNIA	90342607	93	242		104,290
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 96417636 (MH114829)	93	242		593,554
	UNIVERSITY OF SOUTHERN CALIFORNIA	108530993	93	242		175,448
	UNIVERSITY OF SOUTHERN CALIFORNIA	44748603:04	93	242		24,030
	UNIVERSITY OF SOUTHERN CALIFORNIA	81570	93	242		78
	UNIVERSITY OF SOUTHERN CALIFORNIA	90341158:1	93	242		96,232
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 104478552 (MH115005)	93	242		153,280
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 111299562 (MH116990)	93	242		517,021
	UNIVERSITY OF SOUTHERN CALIFORNIA	104478552:1	93	242		86,718
	UNIVERSITY OF SOUTHERN CALIFORNIA	113864507	93	242		80,224
	UNIVERSITY OF TEXAS-DALLAS	SUB 1705329 (MH112620)	93	242		229,026
	UNIVERSITY OF VIRGINIA	GB10691.PO#2133383	93	242		290,545
	UNIVERSITY OF WASHINGTON	UWSC8566	93	242		1,738
	UNIVERSITY OF WASHINGTON	UWSC9388	93	242		46,713
	UNIVERSITY OF WASHINGTON	UWSC10127	93	242		111,092
	UNIVERSITY OF WASHINGTON	SUB UWSC11075 (MH111520)	93	242		140,377
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB 09581001-319873 (MH103421)	93	242		27,707
	VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	R01MH110504	93	242		178,786
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-17-128 (MH111520)	93	242		38,491
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-19-35 (MH118031)	93	242		14,356
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-18-454	93	242		750,021
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-19-16	93	242		136,691
	WAYNE STATE UNIVERSITY	WSU16124	93	242		11,129
	WEST VIRGINIA UNIVERSITY	14716	93	242		7,673
	YALE UNIVERSITY	1P50MH106934-01	93	242		61,917
	YALE UNIVERSITY	GR100246(CON-80000778):4	93	242		289,780
	YALE UNIVERSITY	GR100254(CON-80000783):2	93	242		317,315
	YALE UNIVERSITY	M15A12179 (A10304)	93	242		114,996
	YALE UNIVERSITY	80449	93	242		8,910
	YALE UNIVERSITY	B3771	93	242		-55
	YALE UNIVERSITY	GR100799(CON-80000866)	93	242		635,197
	YALE UNIVERSITY	GR100801 (CON-80000867)	93	242		41,515
	HELUNA HEALTH	R01MH109320	93	242		32,965
	KAISER PERMANENTE CENTER FOR HEALTH RESEARCH	R01MH106510	93	242		3,271

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			Prefix	Extension	Federal Expenditures			
DEPARTMENT OF HEALTH AND HUMAN SERVICES	KAISER PERMANENTE WASHINGTON HEALTH RESEARCH INSTITUTE KAISER PERMANENTE WASHINGTON HEALTH RESEARCH INSTITUTE UNIVERSITY OF MISSOURI - ST. LOUIS VIRTUALLY BETTER, INC. VIRTUALLY BETTER, INC. THE HEKTOEN INSTITUTE OF MEDICINE THE HEKTOEN INSTITUTE OF MEDICINE ALLEN INSTITUTE CHILD MIND INSTITUTE INC CHILD MIND INSTITUTE INC EASTERN VIRGINIA MEDICAL SCHOOL EMMA PENDELTON BRADLEY HOSPITAL ORYGEN YOUTH HEALTH RESEARCH CENTRE ORYGEN YOUTH HEALTH RESEARCH CENTRE SCICRUNCH TRANSLUCENCE BIOSYSTEMS LLC UNIVERSITY OF NAIROBI UNIVERSITY OF NEBRASKA MEDICAL CENTER	SUB 2017126572 (MH106510)	93	242	1,481			
		SUB MH92201-07-UCSD(MH092201)	93	242	6,879			
		00056433-2	93	242	177,885			
		20191615	93	242	60,515			
		77787	93	242	52,228			
		50081-R01-UCLA01	93	242	17,438			
		50081-R01-UCSF01	93	242	9,370			
		SUB 20170566 (MH114827)	93	242	475,856			
		1R01MH115363 SUBN3	93	242	20,552			
		7R01MH105506 SUBN3	93	242	14,790			
		5R01MH107333	93	242	571,659			
		712-7522	93	242	7,249			
		A132507	93	242	20,369			
		U01MH105258	93	242	130,611			
		SUB 20182150 (MH119094)	93	242	39,772			
		TB-5553950-CYC1	93	242	588			
		UON-UCSF 1U01MH115512-01	93	242	280,261			
		8719E	93	242	-52			
						17,509,331		
			Passthrough/Partial Passthrough					
			RAND CORP	9920170049-01	93	243	90,899	
			SANTA BARBARA, COUNTY OF	BC18-121	93	243	7,569	
			HUNTER COLLEGE	41973-00-02	93	243	61,165	
			AMERICAN PSYCHIATRIC ASSOCIATION	H79SM080818-01	93	243	181,891	
			PACIFIC BEHAVIORAL HEALTH COLLABORATING COUNCIL	2018-002	93	243	42,102	
			SKID ROW HOUSING TRUST	90-118	93	243	1,092	
							384,719	
			Passthrough/Partial Passthrough					
			CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	3001-613-01	93	262	221,614	
			CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	88664	93	262	-30	
			STANFORD UNIVERSITY	61405844-48844	93	262	80,946	
			UNIVERSITY OF WISCONSIN-MADISON	707K545	93	262	85,674	
							388,204	
	Passthrough/Partial Passthrough							
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	B1548	93	268	76,393			
					76,393			
	Passthrough/Partial Passthrough							
	BROWN UNIVERSITY	00001122	93	273	38,696			
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000659	93	273	11,130			
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000641(AA026994)	93	273	59,651			
	CASE WESTERN RESERVE UNIVERSITY	922-SUB-CYC1	93	273	8,806			
	CEDARS-SINAI MEDICAL CENTER	SUB 0001493560 (AA027036)	93	273	36,266			
	CHILDREN'S HOSPITAL LOS ANGELES	RGF010036-B1:1	93	273	42,197			
	CLEVELAND CLINIC FOUNDATION	SUB 733-SUB(NS100610)	93	273	29,084			
	DASCENA, INC.	A132427	93	273	1,662			
	FLORIDA STATE UNIVERSITY	SUB R01979 (AA022891)	93	273	28,688			
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209393-UCSF-03	93	273	89,869			
	OREGON HEALTH & SCIENCE UNIVERSITY	1007778_UCSF	93	273	44,570			
	PUBLIC HEALTH INSTITUTE	1020572	93	273	23,884			
	RAND CORP	9920170096	93	273	122,564			
	RAND CORP	9920130157-05	93	273	70,142			
	SRI INTERNATIONAL	SUB PO17058 (AA021697)	93	273	54,775			
	SUNY DOWNSTATE MEDICAL CENTER	SUB 1009189 (AA008401)	93	273	498,001			
	THE SCRIPPS RESEARCH INSTITUTE	5-53745	93	273	1,650			
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000512064-003 (AA020802)	93	273	134,427			
	UNIVERSITY OF CAPE TOWN	20145278	93	273	15,753			
	UNIVERSITY OF COLORADO DENVER	FY19.580.004	93	273	32,729			
	UNIVERSITY OF MINNESOTA	H004915501/R21AA0245	93	273	12,619			
	UNIVERSITY OF MISSOURI - KANSAS CITY	21C04	93	273	32,960			
	UNIVERSITY OF NEW MEXICO	80397	93	273	3,283			
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 48143238 (AA011999)	93	273	123,005			
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 93814100 (AA18663)	93	273	29,676			
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 98579671 (AA011999)	93	273	27,807			
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 98581287 (AA011999)	93	273	20,174			
	UNIVERSITY OF SOUTHERN CALIFORNIA	58445116-4	93	273	34,274			
	UNIVERSITY OF SOUTHERN CALIFORNIA	8735F	93	273	-1,345			

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	UNIVERSITY OF SOUTHERN CALIFORNIA	89102	93	273		970	
	UNIVERSITY OF TEXAS-AUSTIN	B0089	93	273		434	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HO 310664 (AA021908)	93	273		336	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MANDYAM (DA034140)	93	273		760	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	877A4	93	273		89,430	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MANDYAM (AA020098)	93	273		37,218	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SCHNABL (AA021908)	93	273		1,723	
	CHILDREN'S NATIONAL HEALTH SYSTEM	SUB 30004155-01 (AA026106)	93	273		43,770	
	SOUTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION	77381	93	273		43,684	
							1,845,321
	Passthrough/Partial Passthrough						
	AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	20165007:2	93	276			168,989
							168,989
	Passthrough/Partial Passthrough						
	AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	SUB 20163988 (DA000357)	93	279			189,486
	AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	20164307:2	93	279			119,369
	BAYLOR COLLEGE OF MEDICINE	872CC	93	279			-499
	BOSTON MEDICAL CENTER CORPORATION	SUB 617070535601(DA045547)	93	279			35,994
	BOSTON UNIVERSITY	4500001814	93	279			86,759
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	88679	93	279			-11,806
	CHILDREN'S HOSPITAL LOS ANGELES	RGF009209-A5:5	93	279			890,268
	CHILDREN'S HOSPITAL OF PHILADELPHIA	SUB 8902890618 (HD000850)	93	279			14,263
COLUMBIA UNIVERSITY	1 (GG011510)	93	279			158,736	
COLUMBIA UNIVERSITY	85A11	93	279			-4,010	
DARTMOUTH COLLEGE	R1049	93	279			116,484	
DARTMOUTH COLLEGE	R1057	93	279			80,339	
DUKE UNIVERSITY	SUB 2036646 (DA044571)	93	279			15,016	
DUKE UNIVERSITY	SUB A039115(HHSN2752010000031)	93	279			57,016	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000923080	93	279			257,670	
JOHNS HOPKINS UNIVERSITY	2003204584:6	93	279			52,187	
MEDICAL UNIVERSITY OF SOUTH CAROLINA	SUB MUSC18-041-8D268 (DA044438)	93	279			187,284	
MEDICAL UNIVERSITY OF SOUTH CAROLINA	SUB MUSC19-010-8D703 (DA045300)	93	279			32,288	
MENTOR ON THE GO, LLC	SUB 20172340 (DA044905)	93	279			2,953	
MICHIGAN STATE UNIVERSITY	RC100146UCSB	93	279			14,146	
NEW YORK UNIVERSITY	15-A0-S1-003671-01:4	93	279			16,218	
NEW YORK UNIVERSITY	58854	93	279			97,013	
NORTHWESTERN UNIVERSITY	60044679 UCLA:A01	93	279			26,515	
OREGON HEALTH & SCIENCE UNIVERSITY	1003544 UCI-CYC7	93	279			129,416	
OREGON HEALTH & SCIENCE UNIVERSITY	SUB 1012971_UCSD(DA046077)	93	279			68,093	
RAND CORP	SUB 9920170060 (R21DA044073)	93	279			26,491	
RTI INTERNATIONAL	1R01DA038632-01	93	279			51,982	
RTI INTERNATIONAL	2-312-0216573-65365L	93	279			18,445	
RTI INTERNATIONAL	5-312-0216621-65427L	93	279			12,532	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 59842-12858-UCSD (DA041731)	93	279			388,331	
STANFORD UNIVERSITY	62097886-26345	93	279			15,588	
STOCHASTECH CORPORATION	SUB 20170731 (R44DA041760)	93	279			50,511	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-52673 (DA041750)	93	279			58,895	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-52953 (DA043268)	93	279			58,478	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53163(DA043799)	93	279			110,640	
THE SCRIPPS RESEARCH INSTITUTE	8728G	93	279			-262	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53579 (DA04451)	93	279			135,236	
UNIVERSITY OF CHICAGO	FP066079-01-PR-CYC2	93	279			154,851	
UNIVERSITY OF CHICAGO	FP059270-05 A	93	279			35,435	
UNIVERSITY OF COLORADO DENVER	SUB NONE (DA035804)	93	279			291,966	
UNIVERSITY OF GEORGIA	RR376-428/4945336:5	93	279			14,984	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	1R01DA03579-01A1	93	279			9,047	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3210000183-17-138	93	279			14,254	
UNIVERSITY OF MICHIGAN	SUB 3004429839 (U01DA043098)	93	279			165,034	
UNIVERSITY OF MINNESOTA	B4233	93	279			-50	
UNIVERSITY OF NEBRASKA	SUB 24-0524-0054-005 (DA037117)	93	279			13,051	
UNIVERSITY OF NEVADA, RENO	SUB UNR-16-07(DA038185)	93	279			42,848	
UNIVERSITY OF NEW MEXICO	2R01DA016017-12	93	279			941,128	
UNIVERSITY OF PENNSYLVANIA	80780	93	279			-185	
UNIVERSITY OF PITTSBURGH	0046202-CYC3	93	279			57,553	
UNIVERSITY OF SOUTHERN CALIFORNIA	87935113	93	279			104,727	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	GMO160819:4	93	279			734,912	
UNIVERSITY OF UTAH	SUB 10045277-02(DA043775)	93	279			8,287	
UNIVERSITY OF WASHINGTON	UWSC8956	93	279			150	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	UNIVERSITY OF WASHINGTON	UWSC10591-CYC1	93	279	18,072		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MANDYAM (DA034140)	93	279	3,306		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-18-234-MOD-1	93	279	96,567		
	FORDHAM UNIVERSITY	FORD0035 (R25 DA031608)	93	279	9,212		
	FORDHAM UNIVERSITY	FORD0036 (R25 DA031608)	93	279	11,838		
	FORDHAM UNIVERSITY	FORD0037	93	279	17,545		
	FORDHAM UNIVERSITY	FORD0042 (DA031608)	93	279	8,183		
	HELUNA HEALTH	0391.0101	93	279	138,939		
	HELUNA HEALTH	A133064	93	279	5,961		
	HUNTER COLLEGE	41996-A	93	279	68,527		
	ANTEANA THERAPEUTICS, INC.	ATI-202776-CYC2	93	279	-21,948		
	NEW YORK UNIVERSITY SCHOOL OF MEDICINE	28C30	93	279	43,455		
	NEW YORK UNIVERSITY SCHOOL OF MEDICINE	R01DA039962	93	279	37,641		
	SAN FRANCISCO PUBLIC HEALTH FOUNDATION	A132156	93	279	41,368		
					6,624,723		
		Passthrough/Partial Passthrough					
		AMERICAN THROMBOSIS AND HEMOSTASIS NETWORK	SUB ATHN2015-ATHN1 EXTENSION	93	283	2,336	
		CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10942	93	283	8	
		HARVARD PILGRIM HEALTH CARE	HPHC-205795-CYC3	93	283	166,270	
						168,614	
		Passthrough/Partial Passthrough					
		COLUMBIA UNIVERSITY	1(GG010793-03):1	93	286	-4,207	
		CORNELL UNIVERSITY	170754	93	286	-1,571	
		EMORY UNIVERSITY	T494666	93	286	186,103	
		GE GLOBAL RESEARCH	401115242	93	286	78,154	
		INDIANA UNIVERSITY	SUB BL-4629710(EB023685)	93	286	49,712	
		LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620867	93	286	-13,383	
		MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	UNI-232985-01	93	286	604,248	
	NORTHEASTERN UNIVERSITY	79811	93	286	2,611		
	NORTHWESTERN UNIVERSITY	SUB SP0030422-PROJ0008084 (EBO	93	286	61,871		
	NORTHWESTERN UNIVERSITY	SP0039982-PROJ0011251	93	286	22,493		
	SOFIE BIOSCIENCES, INC	A132313	93	286	167,838		
	STANFORD UNIVERSITY	26590470-44290-A	93	286	-23		
	STANFORD UNIVERSITY	60664402-113972	93	286	271,440		
	STANFORD UNIVERSITY	SUB 61456675-125287 (EB018302)	93	286	98,551		
	UNIVERSITY OF ARIZONA	345325-CYC2	93	286	26,360		
	UNIVERSITY OF ARIZONA	482236-CYC1	93	286	19,251		
	UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	SUB OSP2016194 (EB0119936)	93	286	303,258		
	UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00433491/OSP2016197-CYC4	93	286	69,576		
	UNIVERSITY OF MEMPHIS	A124520	93	286	41,684		
	UNIVERSITY OF MEMPHIS	SUB NONE (EB020404)	93	286	18,539		
	UNIVERSITY OF MEMPHIS	20142031	93	286	143,556		
	UNIVERSITY OF MIAMI	80518	93	286	-15,202		
	UNIVERSITY OF MICHIGAN	3003598082-CYC5	93	286	111,384		
	YALE UNIVERSITY	GR100859 (CON-80000939)	93	286	4,602		
	APTITUDE MEDICAL	1R43EB025095-01	93	286	53,941		
	CELSENSE, INC.	SUB 20183800(EB023761)	93	286	101,801		
	TF INSTRUMENTS (SALINAS, CA)	A132300	93	286	31,182		
					2,433,770		
	Passthrough/Partial Passthrough						
	HEALTH RESEARCH, INC.	4925-04	93	300	196,540		
					196,540		
	Passthrough/Partial Passthrough						
	ALTAMED HEALTH SERVICES CORPORATION	5NU58DP005740-02-00	93	304	6,030		
	MANDELA MARKETPLACE INCORPORATED	82818	93	304	5,668		
					11,698		
	Passthrough/Partial Passthrough						
	CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	20155050	93	307	1,920		
	CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	20164501	93	307	19,323		
	MOREHOUSE COLLEGE	001UCLA16:1	93	307	66,208		
	NORTHWESTERN UNIVERSITY	79904	93	307	53,576		
	PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION	SUB 0784 (MDO10292)	93	307	17,585		
	PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION	SUB 20174985(MDO11648)	93	307	33,586		
	RAND CORP	9920160089:02	93	307	47,735		
	RAND CORP	79637	93	307	29,717		

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			Prefix	Extension	Federal Expenditures		
DEPARTMENT OF HEALTH AND HUMAN SERVICES	RAND CORP	9920180006-02	93	307	49,099		
	SAINT BARNABAS MEDICAL CENTER	58093	93	307	106,110		
	UNIVERSITY OF COLORADO DENVER	FY19.001.005-CYC1	93	307	83,872		
	UNIVERSITY OF PITTSBURGH	0047269 (126836-1):2	93	307	62,908		
	UNIVERSITY OF PITTSBURGH	0056157 (130212-2)	93	307	128,693		
	AMERICAN COLLEGE OF SURGEONS	24292GP001UCLA:1	93	307	82,637		
	MEHARRY MEDICAL COLLEGE	170406MFL060 03-CYC1	93	307	31,029		
	NEW YORK UNIVERSITY SCHOOL OF MEDICINE	17-AO-00-007341-01-CYC1	93	307	57,747		
	UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER	RF00115-2018-0131	93	307	7,316		
	ALBERT EINSTEIN COLLEGE OF MEDICINE	SUB:31106A(MD011389)	93	307	123,606		
						1,002,666	
		Passthrough/Partial Passthrough					
		BROAD INSTITUTE INC.	871CE	93	310	2	
		CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	1RL5MD009599-01	93	310	251,797	
		CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	9S16-0015	93	310	585,716	
		CARNEGIE MELLON UNIVERSITY	A19-0387-001	93	310	42,968	
		COLUMBIA UNIVERSITY	1(GG011868-02):1	93	310	38,582	
		DREXEL UNIVERSITY	800059	93	310	89,649	
		DREXEL UNIVERSITY	800060	93	310	171,230	
		DREXEL UNIVERSITY	80B03	93	310	-12,368	
		DREXEL UNIVERSITY	88B70	93	310	225,719	
		GLADSTONE INSTITUTES	R2500-A	93	310	108,440	
		HARVARD UNIVERSITY	152443.5109636.0417	93	310	126,294	
	INDIANA UNIVERSITY	BL-4624918-UCI-CYC1	93	310	29,213		
	LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 242301-05003A (DK107977)	93	310	395,181		
	LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 242301-05003B (DK107977)	93	310	114,228		
	MASSACHUSETTS GENERAL HOSPITAL	SUB 231406 (TR000931)	93	310	19,488		
	MEDICAL UNIVERSITY OF SOUTH CAROLINA	MUSC16-089-8C267-CYC2	93	310	110,408		
	MEMORIAL HOSPITAL OF RHODE ISLAND	5001311-MUELLER	93	310	175,334		
	NEW YORK UNIVERSITY	16-AO-00-006256-0 I	93	310	32,020		
	NEW YORK UNIVERSITY	F0018-05-CYC1	93	310	583,446		
	NEW YORK UNIVERSITY	16-AO-00-006256-01	93	310	173,567		
	RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK, THE	SUB R1112800(CA221244)	93	310	86,913		
	RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK, THE	U01CA221244	93	310	28,734		
	SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB NONE (EB021247)	93	310	224,053		
	STANFORD UNIVERSITY	60392112-109837-A:5	93	310	-20		
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53190 (OD023176)	93	310	85,525		
	UNIVERSITY OF CONNECTICUT	UCHC7-61884479-CYC2	93	310	28,899		
	UNIVERSITY OF ILLINOIS	084337-16048	93	310	271,875		
	UNIVERSITY OF ILLINOIS	093670-17188	93	310	1,262,054		
	UNIVERSITY OF ILLINOIS AT CHICAGO	D3123	93	310	40,696		
	UNIVERSITY OF IOWA	SUB W001049133 (AG055133)	93	310	18,661		
	UNIVERSITY OF IOWA	U01AG055133	93	310	30,865		
	UNIVERSITY OF MARYLAND	OD025459	93	310	74,315		
	UNIVERSITY OF MASSACHUSETTS AMHERST	WA00363865/OSP2016101	93	310	75,585		
	UNIVERSITY OF NEW MEXICO	3RBL1	93	310	213,511		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5108560	93	310	896,670		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5110779	93	310	55,000		
	UNIVERSITY OF NORTH CAROLINA SYSTEM	5110778	93	310	10,000		
	UNIVERSITY OF ROCHESTER	416985-G/UR FAO GR510571-CYC2	93	310	298,962		
	UNIVERSITY OF SOUTHERN CALIFORNIA	68588929	93	310	61,313		
	UNIVERSITY OF SOUTHERN CALIFORNIA	80597	93	310	82,214		
	UNIVERSITY OF SOUTHERN CALIFORNIA	8733F	93	310	23,453		
	UNIVERSITY OF SOUTHERN CALIFORNIA	89820331:1	93	310	69,535		
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 111515702 (CA229445)	93	310	32,108		
	UNIVERSITY OF WASHINGTON	UWSC10689	93	310	507,322		
	UNIVERSITY OF WISCONSIN-MADISON	708K396	93	310	457,487		
	YESHIVA UNIVERSITY	311117	93	310	1,980		
	YESHIVA UNIVERSITY	C0650	93	310	13,035		
	YESHIVA UNIVERSITY	311162	93	310	386,593		
	SAGE BIONETWORKS	SUB AOU2018UCSD (OD023176)	93	310	182,291		
	UNIVERSITY OF AUCKLAND	SUB 3714493 (OD025349)	93	310	283,809		
	WOMEN & INFANTS HOSPITAL OF RHODE ISLAND	UH3OD023313	93	310	197,392		
						9,261,744	
	Passthrough/Partial Passthrough						
	BRIGHAM AND WOMEN'S HOSPITAL	U19MH113201	93	313	60,522		
						60,522	

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	Passthrough/Partial Passthrough					
	HELUNA HEALTH	235.013.920	93	317	38,013	38,013
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1510403	93	323	214,121	
	HELUNA HEALTH	20B63	93	323	65,330	279,451
	Passthrough/Partial Passthrough					
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001351275	93	350	218,789	
	CHILDREN'S HOSPITAL LOS ANGELES	20170324	93	350	112	
	CHILDREN'S HOSPITAL LOS ANGELES	20170326	93	350	85	
	CHILDREN'S HOSPITAL LOS ANGELES	81475	93	350	154	
	DASCENA, INC.	A132457	93	350	1,521	
	DASCENA, INC.	A132460	93	350	1,304	
	GEORGIA TECH RESEARCH CORPORATION	SUB RK024-G1 (EB024322)	93	350	42,490	
	INSTITUTE FOR SYSTEMS BIOLOGY	SUB 2016.0004(1OT3TR002026-01)	93	350	80,457	
	J. CRAIG VENTER INSTITUTE	SUB JCVI-16-006(TR001801)	93	350	25,100	
	J. CRAIG VENTER INSTITUTE	JCVI-16-005-CYC2	93	350	131,050	
	J. CRAIG VENTER INSTITUTE	SUB JCVI-16-007 (TR001801)	93	350	82,390	
	J. CRAIG VENTER INSTITUTE	SUB JCVI-16-008(TR001801)	93	350	126,306	
	MEDICAL UNIVERSITY OF SOUTH CAROLINA	SUB MUSC18-116-8D533-04 (TR001	93	350	33,645	
	MICHIGAN STATE UNIVERSITY	RC108590UCSF	93	350	42,709	
	STANFORD UNIVERSITY	62103888-135580	93	350	88,456	
	STANFORD UNIVERSITY	C2139	93	350	-21	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000508606-015	93	350	50,512	
	UNIVERSITY OF CINCINNATI	009904-016-2	93	350	3,990	
	UNIVERSITY OF PITTSBURGH	0055353 (128885-18)	93	350	44,948	
	UNIVERSITY OF PITTSBURGH	0055353 (128885-20)	93	350	41,508	
	UNIVERSITY OF PITTSBURGH	SUB 0055353 (128885-16) (TR001	93	350	228,049	
	UNIVERSITY OF PITTSBURGH	0055353 (130910-22)-CYC1	93	350	38,680	
	UNIVERSITY OF PITTSBURGH	0055353 (130910-23)	93	350	37,798	
	UNIVERSITY OF ROCHESTER	SUB 417470 / URFAO: GR510870 (93	350	25,536	
	COLLABORATIONS PHARMACEUTICALS, INC.	SUB 20171862(TR002084)	93	350	235,318	
	SCRIPPS TRANSLATIONAL SCIENCE INSTITUTE	879B3	93	350	224	
	COLLABORATIVE DRUG DISCOVERY, INC	NIH-UCSF-2017-001	93	350	69,212	1,650,320
	Passthrough/Partial Passthrough					
	DUKE UNIVERSITY	K01OD024877	93	351	85,772	
	EMORY UNIVERSITY	T688100	93	351	63,284	
	JACKSON LABORATORY, THE	SUB NONE (OD020351)	93	351	16,566	
	JACKSON LABORATORY, THE	TBI	93	351	17,018	
	MASSACHUSETTS GENERAL HOSPITAL	28584	93	351	-22,202	
	UNIVERSITY OF FLORIDA	UFDSP00012005	93	351	29,011	
	UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2016-054-CYC4	93	351	158,864	
	NEOFLUIDICS, LLC	SUB 20163899 (OD024890)	93	351	44,641	
	SENSORIIS, INC.	211746-CYC1	93	351	70,639	463,593
	Passthrough/Partial Passthrough					
	DANA-FARBER CANCER INSTITUTE	1205401	93	353	274,629	
	DANA-FARBER CANCER INSTITUTE	1207101	93	353	218,347	
	FRED HUTCHINSON CANCER RESEARCH CENTER	0000931712	93	353	325	
	LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 20188-44-372 (DE028227)	93	353	208,031	
	SOFIE BIOSCIENCES, INC	2R44CA216539-02	93	353	208,698	910,031
	Passthrough/Partial Passthrough					
	INTEGRATED BIOTHERAPEUTICS, INC	CARB-X	93	360	235,260	
	MICROBEDX INC.	210618-CYC1	93	360	162,281	397,542
	Passthrough/Partial Passthrough					
	BROWN UNIVERSITY	SUB 00001219 (NR011295)	93	361	438,057	
	DUKE UNIVERSITY	2035445	93	361	-3,922	
	DUKE UNIVERSITY	SUB 2036478 (NR014637)	93	361	-323	
	INDIANA UNIVERSITY	IN4679354UCI-CYC2	93	361	16,195	
	KENT STATE UNIVERSITY	403016UCD	93	361	10,113	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	KENT STATE UNIVERSITY	63514	93	361	254		
	MASSACHUSETTS GENERAL HOSPITAL	233238	93	361	6,936		
	NEW YORK UNIVERSITY	16-A1-00-005413-01	93	361	189,113		
	NEW YORK UNIVERSITY	B6831	93	361	-4,188		
	RAND CORP	9920170074-01	93	361	10,397		
	UNIVERSITY OF COLORADO DENVER	FY17.782.004	93	361	222,183		
	UNIVERSITY OF COLORADO DENVER	FY18.105.015	93	361	204,813		
	UNIVERSITY OF COLORADO DENVER	FY19.782.004	93	361	46,786		
	UNIVERSITY OF COLORADO DENVER	FY19.961.002	93	361	11,243		
	UNIVERSITY OF FLORIDA	UFDSP00011715	93	361	18,502		
	UNIVERSITY OF MICHIGAN	3004518092	93	361	107,724		
	UNIVERSITY OF PITTSBURGH	0050074 (128868-2):1	93	361	90,778		
	UNIVERSITY OF TENNESSEE	19-1328-UCLA	93	361	30,907		
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0014114A	93	361	1,269		
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0014114B-CYC1	93	361	8,285		
						1,405,123	
	Passthrough/Partial Passthrough	THE SCRIPPS RESEARCH INSTITUTE	88923	93	371	-187	
						-187	
	Passthrough/Partial Passthrough	UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	29035	93	393	15,222	
						15,222	
	Passthrough/Partial Passthrough	BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE	51974.2001759.669305-CYC1	93	393	47,100	
		BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE	51974.2001759.669305	93	393	29,822	
		BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE	51974.2001759.669306	93	393	102,987	
		CANCER PREVENTION INSTITUTE OF CALIFORNIA	C1824	93	393	206	
		CASE WESTERN RESERVE UNIVERSITY	RES5511397:2	93	393	9,913	
		CEDARS-SINAI MEDICAL CENTER	1291278:1	93	393	17,465	
		CEDARS-SINAI MEDICAL CENTER	1454643	93	393	14,793	
		CEDARS-SINAI MEDICAL CENTER	1461559:1	93	393	65,736	
		CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	17-18-PW-G0075410-UCLA	93	393	27,200	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	321072	93	393	119,238		
	CHILDREN'S MERCY HOSPITAL, THE	SUB 16-0002 (CA194492)	93	393	42,752		
	CITY OF HOPE	SUB 51974.2001759.669301 (CA19	93	393	1,053,192	28,895	
	CITY OF HOPE	51089.2000553.669301	93	393	196,873		
	DANA-FARBER CANCER INSTITUTE	1286601	93	393	77,802		
	DANA-FARBER CANCER INSTITUTE	1201301	93	393	141,980		
	DUKE UNIVERSITY	2035765	93	393	48,613		
	DUKE UNIVERSITY	A030015	93	393	110,782		
	ECOG-ACRIN MEDICAL RESEARCH FOUNDATION INC.	ACRIN MASTER AGRMT	93	393	78,977		
	FRED HUTCHINSON CANCER RESEARCH CENTER	R01CA183570	93	393	-447		
	FRED HUTCHINSON CANCER RESEARCH CENTER	0000879563	93	393	79		
	GEORGE WASHINGTON UNIVERSITY	18-M65-CYC1	93	393	36,012		
	GEORGETOWN UNIVERSITY	R01CA207361	93	393	36,609		
	GEORGETOWN UNIVERSITY	GR411513	93	393	97,872		
	GEORGETOWN UNIVERSITY	411842_GR411064-UCLA:7	93	393	16,550		
	HARVARD PILGRIM HEALTH CARE	AH000632	93	393	26,443		
	HARVARD UNIVERSITY	114226-5108097	93	393	18,392		
	JOHNS HOPKINS UNIVERSITY	2002945254	93	393	23,797		
	KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	A9876	93	393	-139	-139	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209840-UCSF-01	93	393	47,898		
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	USF-225625	93	393	193,271		
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	A122238	93	393	32,341		
	NORTHEASTERN UNIVERSITY	500544-78050	93	393	58,062		
	NORTHWESTERN UNIVERSITY	60034672UCD	93	393	15,086		
	NORTHWESTERN UNIVERSITY	SUB 60037274 UCSD (CA186878)	93	393	9,878		
	NORTHWESTERN UNIVERSITY	-6004.72.62.U.C.SF	93	393	115,611		
	NORTHWESTERN UNIVERSITY	60037274 UCLA:A04	93	393	31,635		
	RADIABEAM TECHNOLOGIES, LLC	2LRR	93	393	37,829		
	RADIABEAM TECHNOLOGIES, LLC	DE-SC0017687	93	393	24,035		
	RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK, THE	1784	93	393	-6,285		
	ROCKEFELLER UNIVERSITY	R01CA204127	93	393	68,604		
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	59856-12856-UCSF	93	393	142,912		
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 60131-12957-UCSD (CA218254	93	393	111,153		
	STANFORD UNIVERSITY	61959228-130956	93	393	33,684		
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000519160-005	93	393	14,780		

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	THOMAS JEFFERSON UNIVERSITY	SUB 080-30000-S27901 (CA215520	93	393	129,304		
	UNIVERSITY OF ARIZONA	R01CA092596	93	393	178,441		
	UNIVERSITY OF ARIZONA	306440:3	93	393	294,393		
	UNIVERSITY OF COLORADO DENVER	FY18.900.001	93	393	10,412		
	UNIVERSITY OF HAWAII AT MANOA	KA1363	93	393	84,240		
	UNIVERSITY OF HAWAII AT MANOA	KA1374	93	393	11,685		
	UNIVERSITY OF HAWAII AT MANOA	C1959	93	393	-14		
	UNIVERSITY OF HAWAII AT MANOA	KA1488	93	393	13,270		
	UNIVERSITY OF IOWA	1001588781	93	393	121,260		
	UNIVERSITY OF MELBOURNE	D4180	93	393	5,982		
	UNIVERSITY OF MICHIGAN	3004171785:2	93	393	29,568		
	UNIVERSITY OF MICHIGAN	3004700012-CYC1	93	393	30,646		
	UNIVERSITY OF MINNESOTA	P006826901	93	393	8,384		
	UNIVERSITY OF NEW MEXICO	3RBS8:01	93	393	418		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	R01CA197205	93	393	10,739		
	UNIVERSITY OF PENNSYLVANIA	SUB 568559 (CA202699)	93	393	98,708		
	UNIVERSITY OF PITTSBURGH	57665	93	393	-12,868		
	UNIVERSITY OF SOUTHERN CALIFORNIA	100794433	93	393	75,978		
	UNIVERSITY OF SOUTHERN CALIFORNIA	107857258	93	393	195,133		
	UNIVERSITY OF SOUTHERN CALIFORNIA	59470	93	393	-17,976		
	UNIVERSITY OF SOUTHERN CALIFORNIA	D2945	93	393	511		
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	3001264911	93	393	2,294		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003027	93	393	23,781		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	3001235049	93	393	2,181		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	871D1	93	393	-3,594		
	UNIVERSITY OF UTAH	10035205	93	393	88,332		
	UNIVERSITY OF VIRGINIA	88437	93	393	-741		
	UNIVERSITY OF WASHINGTON	UWSC10729	93	393	16,956		
	UNIVERSITY OF WASHINGTON	UWSC9237:2	93	393	9,998		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUPTA 321181 (CA222866)	93	393	79,768		
	WAKE FOREST UNIVERSITY	WFUHS 114040:2	93	393	66,694		
	WAKE FOREST UNIVERSITY HEALTH SCIENCES	114040	93	393	45,321		
	WASHINGTON STATE UNIVERSITY	123700-G003622-CYC3	93	393	34,667		
	QALIBREMD, INC.	#P18230-001	93	393	33,822		
					5,038,785	28,756	
	Passthrough/Partial Passthrough						
		ACOUSTIC MEDSYSTEMS, INC.	A131852	93	394	159,325	
		AMERICAN COLLEGE OF RADIOLOGY	88797	93	394	59,757	
		BAYLOR COLLEGE OF MEDICINE	C0623	93	394	-6	
		BOSTON UNIVERSITY	4500002285:002	93	394	230,174	
		BOSTON UNIVERSITY	4500002515	93	394	182,293	
		BROWN UNIVERSITY	SUB 00001163 (CA159954)	93	394	46,218	
		CANCER TARGETED TECHNOLOGY	A126694	93	394	64,663	
		CASE WESTERN RESERVE UNIVERSITY	SUB RES512506 (CA198892)	93	394	115,128	
		CEDARS-SINAI MEDICAL CENTER	SUB 0001402018 (CA218526)	93	394	39,112	
		CITY OF HOPE	61244.2005803.669301	93	394	158,816	
		DANA-FARBER CANCER INSTITUTE	8731E	93	394	50	
		DANA-FARBER CANCER INSTITUTE	R01CA214912	93	394	5,570	
		MEMORIAL SLOAN-KETTERING CANCER CENTER	B4006	93	394	-562	
		NRG ONCOLOGY	NRG BSB - UCSF YR 1	93	394	780,852	
	OMNIOX INC.	A17-0353	93	394	198,613		
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	8787D	93	394	-732		
	STANFORD UNIVERSITY	61676311-116575	93	394	13,731		
	STANFORD UNIVERSITY	R01CA227687	93	394	382,021		
	STANFORD UNIVERSITY	7R01CA211602-03	93	394	91,944		
	STANFORD UNIVERSITY	R01CA199658	93	394	111,619		
	STANFORD UNIVERSITY	R01CA210553	93	394	116,833		
	THOMAS JEFFERSON UNIVERSITY	SUB 080-30000-S22601(CA194307)	93	394	128,375		
	UNIVERSITY OF HAWAII AT MANOA	KA1393	93	394	4,496		
	UNIVERSITY OF MICHIGAN	3003732467	93	394	121,289		
	UNIVERSITY OF MINNESOTA	SUB P006911701 (CA214550)	93	394	110,035		
	UNIVERSITY OF PENNSYLVANIA	568870	93	394	55,257		
	UNIVERSITY OF PITTSBURGH	0059566 (130769-2)	93	394	64,700		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003874	93	394	224		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00005316	93	394	254,801		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	3001174871	93	394	138,560		
	UNIVERSITY OF WASHINGTON	UWSC10730	93	394	28,006		
					3,661,164		

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	Passthrough/Partial Passthrough					
	ACCELERATED MEDICAL DIAGNOSTICS, LLC	A18-1262	93	395	34,544	
	AMERICAN COLLEGE OF RADIOLOGY	82594	93	395	2,331	
	BAYLOR COLLEGE OF MEDICINE	A133068	93	395	4,425	
	BRIGHAM AND WOMEN'S HOSPITAL	A132926	93	395	6,991	
	BRIGHAM AND WOMEN'S HOSPITAL	UCSF #A120606	93	395	937	
	CANCER TARGETED TECHNOLOGY	A132666	93	395	33,526	
	CEDARS-SINAI MEDICAL CENTER	1425551:1	93	395	104,099	
	CEDARS-SINAI MEDICAL CENTER	U01CA232859-01	93	395	48,376	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	872AC	93	395	-51,528	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001578733-CYC1	93	395	42,176	
	CHILDREN'S HOSPITAL LOS ANGELES	2004-05	93	395	10,632	
	CHILDREN'S HOSPITAL LOS ANGELES	RGF011025-A	93	395	453,715	
	CHILDREN'S HOSPITAL LOS ANGELES	SUB PBMTTC1401 (CA181050)	93	395	33	
	CHILDREN'S HOSPITAL LOS ANGELES	59464	93	395	-676	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	1U10CA180886-01	93	395	47,861	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	1UG1CA189955-01	93	395	2,188	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	201503563	93	395	16,949	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	20150682	93	395	56,198	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	89236	93	395	48,024	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	89464	93	395	-17	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	9500100715	93	395	-32,562	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	950010071504C	93	395	45,437	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	A121763	93	395	2,943	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	A128833	93	395	456	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	PRM:UM1CA097452	93	395	7,590	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	SUB UG1CA189955	93	395	60,468	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A124469	93	395	15,938	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A124960	93	395	21,336	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	SUB FP:FP00021561_SUB36_01 (CA	93	395	626	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	U10CA180886	93	395	34,341	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	201504232	93	395	2,325	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	FP15221_SUB882_01	93	395	9,883	
	CITY OF HOPE	51183.2000123.669399	93	395	224,502	
	CITY OF HOPE	52284.2002184.669302	93	395	232,413	
	COLUMBIA UNIVERSITY	89131	93	395	724	
	CORNELL UNIVERSITY	76088-10742	93	395	69,992	
	ECOG-ACRIN MEDICAL RESEARCH FOUNDATION INC.	5UG1CA189828-05-UC11-CYC1	93	395	14,084	
	FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 000821830 (CA154967)	93	395	4,596	
	FRED HUTCHINSON CANCER RESEARCH CENTER	79614	93	395	-4,596	
	FRED HUTCHINSON CANCER RESEARCH CENTER	CITN-09	93	395	7,568	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	8739D	93	395	-2,581	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	874B2	93	395	-43	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	SUB 0255-3141-4609 (CA207446)	93	395	15,223	
	INTEGRATED SENSORS, LLC	A16-0372-002	93	395	71,650	
	JOHN WAYNE INSTITUTE FOR CANCER TREATMENT AND RESEARCH	FARIES-15-10	93	395	114,869	
	JOHNS HOPKINS UNIVERSITY	ABTC 1301	93	395	10,339	
	JOHNS HOPKINS UNIVERSITY	2002439042	93	395	31,747	
	JOHNS HOPKINS UNIVERSITY	2002439000:3	93	395	22,495	
	JOHNS HOPKINS UNIVERSITY	2003965667	93	395	19,375	
	JOHNS HOPKINS UNIVERSITY	59895	93	395	770	
	JOHNS HOPKINS UNIVERSITY	80180	93	395	-2,230	
	JOHNS HOPKINS UNIVERSITY	ABTC1403:1	93	395	770	
	LEIDOS, INC.	SUB 13XS025 (HHSN261200800001E	93	395	61,987	
	MASSACHUSETTS GENERAL HOSPITAL	226035	93	395	16,673	
	MASSACHUSETTS GENERAL HOSPITAL	88218	93	395	-9,080	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	89402	93	395	18,691	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	SUB SAD-149321 (CA189823)	93	395	-5,443	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	SAF-194321/PO#66291556	93	395	198,864	
	MEDICAL COLLEGE OF WISCONSIN	R01CA184798	93	395	12,106	
	MEMORIAL SLOAN-KETTERING CANCER CENTER	229411-CYC4	93	395	21,366	
	NEW YORK UNIVERSITY	F7618-02:04	93	395	194,510	
	NRG ONCOLOGY	BIQSF YR1-UCSF	93	395	7,812	
	NRG ONCOLOGY	NRG-201385-CYC1	93	395	66,453	
	NRG ONCOLOGY	BN003-UCSF-JORDAN	93	395	3,407	
	NRG ONCOLOGY	GOG0237-UCI-02-CYC2	93	395	83,119	
	NRG ONCOLOGY	E5103	93	395	186,715	94,950
	NRG ONCOLOGY	NCTN05-FENG	93	395	15,000	
	NRG ONCOLOGY	NCTN05-SIMKO	93	395	5,293	
	NRG ONCOLOGY	SUB NCTN05-MAYADEV (CA180868)	93	395	14,109	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	NRG ONCOLOGY	TEWARI - YR. 4-CYC2	93	395	4,198		
	NRG ONCOLOGY	UCAI-YR.1-CYC5	93	395	4,323		
	NRG ONCOLOGY	UCLA - YR. 1.GANZ-YR5	93	395	5,434		
	NSABP FOUNDATION, INC.	TFED41-137	93	395	888		
	OREGON HEALTH & SCIENCE UNIVERSITY	1004086001UCDAVIS	93	395	17,102		
	OREGON HEALTH & SCIENCE UNIVERSITY	21B21	93	395	63,072		
	OREGON HEALTH & SCIENCE UNIVERSITY	SUB 9009627 UCSD (CA180888)	93	395	126,586		
	OREGON HEALTH & SCIENCE UNIVERSITY	9009627	93	395	10,562		
	OREGON HEALTH & SCIENCE UNIVERSITY	9009627_UCDAVIS_MACK	93	395	14,453		
	OREGON HEALTH & SCIENCE UNIVERSITY	1005019_UCIRVINE-CYC4	93	395	30,705		
	OREGON HEALTH & SCIENCE UNIVERSITY	34B25	93	395	70,403		
	OREGON HEALTH & SCIENCE UNIVERSITY	9009627_UCIRVINE-CYC4	93	395	95,889		
	OREGON HEALTH & SCIENCE UNIVERSITY	9009627_UCLA-4	93	395	27,045		
	OREGON HEALTH & SCIENCE UNIVERSITY	SWOG-201304-1-CYC5	93	395	22,258		
	OREGON HEALTH & SCIENCE UNIVERSITY	SWOG-201304-CYC4	93	395	130,335		
	PANDOMEDX	A18-2619	93	395	78,416		
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 59953-12989 (CA128814)	93	395	177,970		
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 59510-12770-UCSD (CA198103)	93	395	160,164		
	SIGNALRX PHARMACEUTICALS, INC	SUB 20170710 (CA192656)	93	395	320,504		
	SIGNALRX PHARMACEUTICALS, INC	875D2	93	395	-1,938		
	SRI INTERNATIONAL	R01CA214515	93	395	77,296		
	ST. JUDE CHILDREN'S RESEARCH HOSPITAL	111287230-7744212	93	395	73,041		
	STANFORD UNIVERSITY	61251710-118307	93	395	177,643		
	STANFORD UNIVERSITY	61251750-118307	93	395	43,789		
	STANFORD UNIVERSITY	61658251-117899	93	395	37,918		
	STANFORD UNIVERSITY	60958489-117119:3	93	395	21,571		
	SWOG	20154355	93	395	-11,112		
	SWOG	20161228	93	395	8,660		
	THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	SUB 000515449 (CA189823)	93	395	-3,460		
	UNIVERSITY OF ARKANSAS, FAYETTEVILLE	51758	93	395	-16,509		
	UNIVERSITY OF FLORIDA	UFDSP00011465	93	395	53,484		
	UNIVERSITY OF MINNESOTA	N005494302	93	395	74,367		
	UNIVERSITY OF MINNESOTA	SUB H005023201 (CA203348)	93	395	235,949		
	UNIVERSITY OF NEVADA, LAS VEGAS/UNLV RESEARCH FOUNDATION	17-22AY-01-CYC2	93	395	250,649		
	UNIVERSITY OF PENNSYLVANIA	SUB 3201460819-XX(CA233285)	93	395	199,933		
	UNIVERSITY OF PITTSBURGH	5R01CA178766-03	93	395	-511		
	UNIVERSITY OF PITTSBURGH	0048529(127109-1)	93	395	8,594		
	UNIVERSITY OF PITTSBURGH	0049527(127522-1)	93	395	183,526		
	UNIVERSITY OF SOUTHERN CALIFORNIA	86620293:2	93	395	33,675		
	UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	A18-0911-001	93	395	271,876		
	UNIVERSITY OF VIRGINIA	GB10562.159043	93	395	292,843		
	VALITOR, INC.	A132199	93	395	37,238		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA CALIFANO(CA204264)	93	395	9,933		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUPTA (CA222866)	93	395	59,948		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-19-267	93	395	68,537		
	YALE UNIVERSITY	GR103017(CON-80001259)	93	395	17,506		
	YALE UNIVERSITY	SUB M16A12480 (CA186689)	93	395	26,129		
	CURESEARCH FOR CHILDREN'S CANCER	78513	93	395	-26,240		
	IMMUNGENE, INC.	79007	93	395	4		
	WINSANTOR INC	877AG	93	395	-4,156		
	WINSANTOR INC	SUB 20183497(CA213555)	93	395	140,399		
	VIVREON BIOSCIENCES, LLC	VB-211574-CYC1	93	395	51,980		
	ALLIANCE FOR CLINICAL TRIALS IN ONCOLOGY	A011502	93	395	101		
	BIOMIMETIX JV, LLC	BMX-HGG-001	93	395	1,226		
	GLYTR THERAPEUTICS, INC.	GTI-211094-CYC1	93	395	39,947		
	ICF INTERNATIONAL, INC.	SUB 17RWSK0005(NIH)	93	395	39,503		
	THE EMMES COMPANY, LLC	89538	93	395	-35,994		
	THE EMMES COMPANY, LLC	A7530	93	395	1,536		
					6,552,003	94,950	
		Passthrough/Partial Passthrough					
		BAYLOR RESEARCH INSTITUTE	41010301401-CYC6	93	396	10,462	
		BRIGHAM AND WOMEN'S HOSPITAL	118360	93	396	288,987	
		CASE WESTERN RESERVE UNIVERSITY	SUB RES509813 (CA198941)	93	396	-21,224	
		CEDARS-SINAI MEDICAL CENTER	1441201	93	396	115,968	
		CEDARS-SINAI MEDICAL CENTER	1442747:3	93	396	3,010	
		CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	137592	93	396	34,937	
		COLUMBIA UNIVERSITY	1(GG012799-01)	93	396	233,227	
		INSTITUTE FOR SYSTEMS BIOLOGY	2018.0001:1	93	396	214,214	
		JOHNS HOPKINS UNIVERSITY	SUB 2002785140 (CA177669)	93	396	14,318	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	JOHNS HOPKINS UNIVERSITY	A17-0764-002	93	396	11,936		
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	SUB 5710004012 (CA184898)	93	396	219,781		
	NEW YORK UNIVERSITY	16-A1-00-005762-01	93	396	14,716		
	PURDUE UNIVERSITY	SUB 4102-85283 (CA221289)	93	396	120,091		
	ST. JUDE CHILDREN'S RESEARCH HOSPITAL	111913019-7593083	93	396	13,943		
	STANFORD UNIVERSITY	61643576-118326	93	396	178,083		
	STANFORD UNIVERSITY	62061288-124068-CYC1	93	396	13,330		
	UNIVERSITY OF COLORADO DENVER	FY19.591.001	93	396	17,025		
	UNIVERSITY OF PENNSYLVANIA	1P01CA165997-01A1	93	396	92,246		
	UNIVERSITY OF SOUTHERN CALIFORNIA	65232523-5	93	396	62,513		
	UNIVERSITY OF SOUTHERN CALIFORNIA	65279540-CYC5	93	396	13,311		
	UNIVERSITY OF SOUTHERN CALIFORNIA	65318381-4	93	396	-9,790		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	SUB 00001959 (CA182905)	93	396	110,286		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003639	93	396	76,208		
	UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	SUB 00003638 (CA196403)	93	396	84,695		
	UNIVERSITY OF WASHINGTON	9764 (CA211310-01)	93	396	20,209		
	WASHINGTON UNIVERSITY IN ST. LOUIS	1R21CA223836-01	93	396	80,806		
	PLANET BIOTECHNOLOGY, INC.	A131625	93	396	51,081		
					2,064,372		
		Passthrough/Partial Passthrough					
		CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	16-17-JV-G007740C-UCLA:01	93	397	4,415	
		CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	18-19-JV-G007740A-UCLA	93	397	4,276	
		CORNELL UNIVERSITY	78542-10760	93	397	18,233	
		DANA-FARBER CANCER INSTITUTE	1205201	93	397	11,637	
		INDIANA UNIVERSITY	IN4689835UCSF	93	397	45,600	
		INDIANA UNIVERSITY	IN4689836UCSF	93	397	320,187	
		INDIANA UNIVERSITY	IN4689861UCSF	93	397	20,047	
		INDIANA UNIVERSITY	IN4687579UCSF	93	397	8,328	
		INDIANA UNIVERSITY	IN4689856UCSF	93	397	206,181	
		INDIANA UNIVERSITY	IN4689883UCSF	93	397	34,472	
		INSTITUTE FOR SYSTEMS BIOLOGY	2018.0006	93	397	665,512	
		NORTHWESTERN UNIVERSITY	60040958UCSF	93	397	115,136	
	NORTHWESTERN UNIVERSITY	79188	93	397	-16,815		
	UNIVERSITY OF CHICAGO	SUB FP069111-01 (CA233307)	93	397	5,452		
	UNIVERSITY OF IOWA	S00446-01	93	397	7,200		
	UNIVERSITY OF MICHIGAN	3004314292	93	397	7,078		
	UNIVERSITY OF PITTSBURGH	0046110 (127890-1)	93	397	140,055		
	UNIVERSITY OF PITTSBURGH	9013520 (128999-1)	93	397	86,554		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-19-171	93	397	17,404		
	YESHIVA UNIVERSITY	31082B	93	397	51,466		
	NEW MEXICO STATE UNIVERSITY	U54CA132383	93	397	7,531		
	SYSTEMS BIOLOGY INSTITUTE	010201	93	397	55,385		
					1,815,334		
	Passthrough/Partial Passthrough						
	NRG ONCOLOGY	SUB 908798 (NCI)	93	398	155,261		
	PURDUE UNIVERSITY	11000418-002	93	398	26,894		
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	158716/158715	93	398	12,957		
					195,113		
	Passthrough/Partial Passthrough						
	BRIGHAM AND WOMEN'S HOSPITAL	CALGB/CA136	93	399	2,916		
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	58424	93	399	4,967		
					7,883		
	Passthrough/Partial Passthrough						
	UNIVERSITY OF WASHINGTON	UWSC10959	93	421	24,760		
					24,760		
	Passthrough/Partial Passthrough						
	ORGANIZATION OF TERATOLOGY INFORMATION SPECIALISTS	SUB NONE(20174089)	93	424	-70		
	MARCH OF DIMES FOUNDATION	SUB 20180428 (U380T000199-05-0	93	424	115,776	20,740	
					115,706	20,740	
	Passthrough/Partial Passthrough						
	REHABILITATION INSTITUTE OF CHICAGO	7246-CYC1	93	433	55,587		
	UNIVERSITY OF MINNESOTA	A005198604	93	433	21,793		
	BRANDEIS UNIVERSITY	403691	93	433	15,727		
					93,107		

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF INSURANCE	13038IA	93	511	115,013 115,013	64,878 64,878
	Passthrough/Partial Passthrough JOHNS HOPKINS UNIVERSITY	SUB 2002922541(DP005045)	93	542	71,608 71,608	
	Passthrough/Partial Passthrough ASSOCIATION OF AMERICAN MEDICAL COLLEGES ASSOCIATION OF AMERICAN MEDICAL COLLEGES CHILDREN'S NATIONAL HEALTH SYSTEM	SUB GT-32013-06 (1CLCMS331324- GT-32013-01/UCSF 80142	93 93 93	610 610 610	-1,122 14,658 -83 13,453	
	Passthrough/Partial Passthrough UNIVERSITY OF NEBRASKA	24-0520-0249-005	93	648	218,378 218,378	
	Passthrough/Partial Passthrough KAISER PERMANENTE DIVISION OF RESEARCH	RNG209336-01	93	687	99,122 99,122	
	Passthrough/Partial Passthrough MEDICAL COLLEGE OF WISCONSIN THE EMMES COMPANY, LLC VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO (ARRA) VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO (ARRA)	87423 20101609 83574 87210	93 93 93 93	701 701 701 701	316 5,693 -1,280 -5,701 -972	
	Passthrough/Partial Passthrough ACADEMIC PEDIATRIC ASSOCIATION	20152248	93	733	66,611 66,611	
	Passthrough/Partial Passthrough PUBLIC HEALTH ADVOCATES	20190083	93	738	27,032 27,032	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	16-2011	93	747	123,972 123,972	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1410730	93	757	22,954 22,954	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	18-10193	93	758	578,996 578,996	
	Passthrough/Partial Passthrough BRIGHAM AND WOMEN'S HOSPITAL	SUB NONE (HL101422)	93	827	-6,034 -6,034	
	Passthrough/Partial Passthrough HELUNA HEALTH	A132813	93	834	146,395 146,395	
	Passthrough/Partial Passthrough BAYLOR COLLEGE OF MEDICINE BETH ISRAEL DEACONESS MEDICAL CENTER BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL	5601104669 79622 SUB 110009 (A1068636) SUB 112044 (HL128135) SUB 225707 (HL123336) SUB PS#107223 (HL101422) 114117 5U01HL101422 BWH-101848-CYC2 SUB 117712 (HL134811) A124946	93 93 93 93 93 93 93 93 93 93 93 93 93 93	837 837 837 837 837 837 837 837 837 837 837 837 837 837	4,870 2,095 17,459 -36,253 9,630 17,385 3,915 5,223 -59,339 465,787 -8,970	

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	BRIGHAM AND WOMEN'S HOSPITAL	SUB 110007(AI068636)	93	837	12,139	
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 114963 (HL134168)	93	837	88,212	
	BROWN UNIVERSITY	SUB 00001266 (HL135200)	93	837	2,994	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000320-321-322 (HL08557)	93	837	81,288	
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000322 (HL085577)	93	837	53,452	
	CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S18-0011	93	837	24,134	
	CEDARS-SINAI MEDICAL CENTER	0001354492:005	93	837	105,778	
	CEDARS-SINAI MEDICAL CENTER	0001454814	93	837	37,500	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	137341	93	837	255,906	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	SUB 138275(HL131003)	93	837	62,792	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	SUB 138281 (HL131003)	93	837	462,360	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	SUB 2018 CVDC 138275 CHAIR (HL	93	837	11,376	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	81293	93	837	1,976	
	COLUMBIA UNIVERSITY	1(GG011028)	93	837	82,651	
	COLUMBIA UNIVERSITY	SUB GG10320 (HL123061)	93	837	11,804	
	COLUMBIA UNIVERSITY	81115	93	837	73,683	
	COLUMBIA UNIVERSITY MEDICAL CENTER	1(GG011659)	93	837	18,246	
	CORNELL UNIVERSITY	R24HL120847	93	837	12,949	
	DUKE UNIVERSITY	2036055	93	837	522,603	
	DUKE UNIVERSITY	203-7620	93	837	2,302	
	DUKE UNIVERSITY	SUB 2035665 (HL13753)	93	837	75,959	
	FRED HUTCHINSON CANCER RESEARCH CENTER	87388	93	837	-37,341	
	FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 0000977454 (HL122273)	93	837	24,112	
	FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 214710 (HL122273)	93	837	152,835	
	GEORGIA TECH RESEARCH CORPORATION	RG884-G1	93	837	237,833	
	GLADSTONE INSTITUTES	B8525	93	837	1,270	
	GLADSTONE INSTITUTES	R02177-C	93	837	42,309	
	GLADSTONE INSTITUTES	R2316-A	93	837	38,262	
	INDIANA UNIVERSITY	IN468764BUCLA	93	837	152,895	
	IOWA STATE UNIVERSITY	009896	93	837	36,247	
	KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	SUB 2018103333 (HL125440)	93	837	23,426	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209677-01	93	837	175,422	
	LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 22817-44-393 (HL136275)	93	837	326,039	
	LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 22817-50-393 (HL136275)	93	837	161,698	
	LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	88377	93	837	-71,923	
	LOMA LINDA UNIVERSITY (INCL NATL MEDICAL TECHNOLOGY TESTBED, INC.)	2160056-UCLA	93	837	123,516	
	LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	008874	93	837	28,920	
	LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	2013092430	93	837	66,453	
	MASSACHUSETTS GENERAL HOSPITAL	B5156	93	837	33	
	MASSACHUSETTS GENERAL HOSPITAL	U01HL23336	93	837	80,967	
	MASSACHUSETTS GENERAL HOSPITAL	SUB 231822 (HL140224)	93	837	662,074	
	MASSACHUSETTS GENERAL HOSPITAL	201522908:5	93	837	75,916	
	MASSACHUSETTS GENERAL HOSPITAL	20172788:1	93	837	99,322	
	MASSACHUSETTS GENERAL HOSPITAL	B4449	93	837	-541	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	CSF-215432	93	837	6,252	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	80329	93	837	13,711	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	SAF-243773	93	837	224,114	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	UNI-239863/PO #65936226	93	837	401,158	
	MEMORIAL HOSPITAL OF RHODE ISLAND	5001191-KLEIN	93	837	35,035	
	MEMORIAL HOSPITAL OF RHODE ISLAND	875F7	93	837	-288	
	NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	4144B.UCSF	93	837	56,603	
	NATIONAL JEWISH HEALTH	20100604_UCSF SUB	93	837	73,279	
	NATIONAL JEWISH HEALTH	20103403	93	837	99,161	
	NEW ENGLAND RESEARCH INSTITUTE, INC.	201500084	93	837	2,829	
	NEW ENGLAND RESEARCH INSTITUTE, INC.	SUB NONE (HL107407)	93	837	9,512	
	NEW ENGLAND RESEARCH INSTITUTE, INC.	G140030-CYC1	93	837	834	
	NEW YORK UNIVERSITY	20131088	93	837	13,824	
	NEW YORK UNIVERSITY	NYU-103915-CYC1	93	837	1,608	
	NEW YORK UNIVERSITY	NYU-202588-CYC1	93	837	72,801	
	NEW YORK UNIVERSITY	18-A0-00-1001035-01	93	837	188,665	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	KEY1774:5	93	837	69,894	
	NORTHWESTERN UNIVERSITY	60043010UCSF	93	837	40,755	
	NORTHWESTERN UNIVERSITY	60036200 UCSF	93	837	5,175	
	NORTHWESTERN UNIVERSITY	SP0028071-PROJ0007326:3	93	837	40,545	
	NORTHWESTERN UNIVERSITY	SUB 60043010 UCSD (HL130502)	93	837	854	
	OHIO STATE UNIVERSITY	89373	93	837	17,668	
	OHIO STATE UNIVERSITY	59805	93	837	-257	
	OHIO STATE UNIVERSITY	60064759	93	837	5,363	
	OREGON HEALTH & SCIENCE UNIVERSITY	1005364UCDAVIS	93	837	52,078	
	OREGON HEALTH & SCIENCE UNIVERSITY	SUB 1005338 UCSD (HL078610)	93	837	7,371	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	OREGON HEALTH & SCIENCE UNIVERSITY	1010835_UCSF	93	837	-2,787	
	OREGON HEALTH & SCIENCE UNIVERSITY	1002459_UCLA:4	93	837	78,578	
	PARTNERS HEALTHCARE SYSTEM, INC	229172	93	837	134,276	
	PENNSYLVANIA STATE UNIVERSITY	UCAHL098115_TO7	93	837	-1,734	
	PENNSYLVANIA STATE UNIVERSITY	UCAHL098115_TO5	93	837	405	
	PURDUE UNIVERSITY	C1564	93	837	1,277	
	RAND CORP	9920180117	93	837	20,299	
	RHODE ISLAND HOSPITAL	57361	93	837	-4,864	
	RTI INTERNATIONAL	15-312-0214047-52992L-CYC2	93	837	19,428	
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 60062-12921-UCSD (HL131474)	93	837	361,711	
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	60062-12920	93	837	394,385	
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	SUB 11639SUB (UM1HL119073)	93	837	40,114	
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	SUB 11903SUB (HL128630)	93	837	131,606	
	STANFORD UNIVERSITY	60594679-107635	93	837	54,179	
	STANFORD UNIVERSITY	61335463-121980	93	837	108,162	
	STANFORD UNIVERSITY	R01HL128170	93	837	126,201	
	STANFORD UNIVERSITY	SUB 60988003-118781 (HL083359)	93	837	128,290	
	STANFORD UNIVERSITY	SUB 61289425-123492 (HL132225)	93	837	53,028	
	STANFORD UNIVERSITY	SUB 61324668-122625(HL130840)	93	837	41,091	
	STANFORD UNIVERSITY	36B10	93	837	277,403	
	STANFORD UNIVERSITY	61786701-132591	93	837	59,269	
	STANFORD UNIVERSITY	SUB 61153993-121531(HL123689)	93	837	115,849	
	TEXAS TECHNICAL UNIVERSITY	C1006	93	837	-43,915	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000518828-002	93	837	117,347	
	TOURO COLLEGE AND UNIVERSITY SYSTEM	00007SC	93	837	164,605	
	TOURO COLLEGE AND UNIVERSITY SYSTEM	00008SC	93	837	18,545	
	TRANSTARGET, INC.	A133080	93	837	18,563	
	UNIVERSITY OF ARIZONA	381130	93	837	249,674	
	UNIVERSITY OF CHICAGO	SUB FP053857 (HL119967)	93	837	2,783	
	UNIVERSITY OF COLORADO BOULDER	SUB1554895(HL134887)	93	837	106,096	
	UNIVERSITY OF ILLINOIS AT CHICAGO	15927	93	837	170,136	
	UNIVERSITY OF IOWA	1001475908	93	837	134,670	
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3200000734-17-033	93	837	53,321	
	UNIVERSITY OF MARYLAND	1701192	93	837	9,888	
	UNIVERSITY OF MIAMI	667431	93	837	41,120	
	UNIVERSITY OF MICHIGAN	3004402852	93	837	18,331	
	UNIVERSITY OF MICHIGAN	73B44	93	837	16,747	
	UNIVERSITY OF MICHIGAN	A9957	93	837	194	
	UNIVERSITY OF MINNESOTA	N006187402	93	837	9,079	
	UNIVERSITY OF MINNESOTA	R01HL138539	93	837	267,274	
	UNIVERSITY OF MINNESOTA	N006187401	93	837	18,883	
	UNIVERSITY OF MISSISSIPPI	79683	93	837	18,170	
	UNIVERSITY OF NEW SOUTH WALES	RG161191-RUC02	93	837	-8	
	UNIVERSITY OF PENNSYLVANIA	567197	93	837	61,759	
	UNIVERSITY OF PITTSBURGH	SUB 0041597 (HL122144)	93	837	13,199	
	UNIVERSITY OF PITTSBURGH	CNVA00062106 (132385-1)	93	837	70,527	
	UNIVERSITY OF TEXAS-AUSTIN	UTA16-000560:2	93	837	273,689	
	UNIVERSITY OF VIRGINIA	SUB GB10392 153894 (HL136098)	93	837	15,063	
	UNIVERSITY OF WASHINGTON	BPO18370	93	837	35,395	
	UNIVERSITY OF WASHINGTON	SUB UWSC8735 (HL122199)	93	837	125,861	
	UNIVERSITY OF WASHINGTON	UWSC9050	93	837	46,439	
	UNIVERSITY OF WASHINGTON	10377	93	837	145,934	
	UNIVERSITY OF WASHINGTON	85948	93	837	4,259	
	UNIVERSITY OF WASHINGTON	UWSC8535:2	93	837	144,109	
	UNIVERSITY OF WISCONSIN SYSTEM	809K373	93	837	23,886	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB 08558-309843 (HL066941)	93	837	9,689	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB 08558-309844 (HL066941)	93	837	3,976	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB 08558-309845 (HL066941)	93	837	-15,845	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND (HL066941)	93	837	32,335	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI (A1081668)	93	837	86,765	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	81890	93	837	-1,205	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	87293	93	837	-26,322	
	WAKE FOREST UNIVERSITY	WFUHS 114488:2	93	837	33,483	
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-188-MOD-3	93	837	56,943	
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-18-452	93	837	126,110	
	YALE UNIVERSITY	SUB NONE (HL125918)	93	837	3,161	
	YALE UNIVERSITY	GK000124 (CON-80000470):3	93	837	40,682	
	YALE UNIVERSITY	GR102535 (CON-80001209)	93	837	32,585	
	YESHIVA UNIVERSITY	311297	93	837	3,362	
	MCGILL UNIVERSITY	SUB PO CC417 (HL128550)	93	837	110,428	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	OPTIMA INTEGRATED HEALTH, INC	A130200	93	837	199,705	
	THE HEKTOEN INSTITUTE OF MEDICINE	50811-324-UCSF01	93	837	4,663	
	ALBERT EINSTEIN COLLEGE OF MEDICINE	SUB 311257(HL140976)	93	837	107,081	
	HEALTHCORE, INC.	20151999	93	837	1	
	HUNTINGTON MEDICAL RESEARCH INSTITUTES	6085-18-01-CYC1	93	837	44,694	
	MCGUIRE RESEARCH INSTITUTE, INC.	1R34HL13811001	93	837	3,794	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT TYLER	SC18-01	93	837	160,478	
					11,764,994	
	Passthrough/Partial Passthrough					
	BAYLOR COLLEGE OF MEDICINE	7000000159	93	838	17,948	
	BOSTON UNIVERSITY	R01HL127002-05	93	838	88,850	
	BRIGHAM AND WOMEN'S HOSPITAL	117080	93	838	5,896	
	CEDARS-SINAI MEDICAL CENTER	20180851	93	838	459,563	
	CEDARS-SINAI MEDICAL CENTER	2P01HL108793-06A	93	838	196,969	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	57343	93	838	-770	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	3200930819:1	93	838	15,043	
	COLUMBIA UNIVERSITY	SUB 1 GG013356-01(HL138468)	93	838	214,183	
	COLUMBIA UNIVERSITY	1(GG010919-03):2	93	838	41,803	
	JOHNS HOPKINS UNIVERSITY	2003614631	93	838	70,193	
	MASSACHUSETTS GENERAL HOSPITAL	A126302	93	838	66	
MASSACHUSETTS GENERAL HOSPITAL	100465C	93	838	77,802		
MASSACHUSETTS GENERAL HOSPITAL	2013D003748	93	838	218,940	47,030	
MASSACHUSETTS GENERAL HOSPITAL	B6660	93	838	8,548		
MASSACHUSETTS GENERAL HOSPITAL	71B39	93	838	9,191		
NATIONAL JEWISH HEALTH	20111602_UCSF SUB	93	838	385,881		
NATIONAL JEWISH HEALTH	20116001-UCSF	93	838	332,641		
PARTNERS HEALTHCARE SYSTEM, INC	U01HL123009	93	838	13,668		
PENNSYLVANIA STATE UNIVERSITY	UCASF HL109086	93	838	10,940		
PENNSYLVANIA STATE UNIVERSITY	UCASFHL109086-SARP3	93	838	7,442		
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000503442 (HL122626)	93	838	26,553		
TULANE UNIVERSITY	TUL-HSC-557062-18/19	93	838	14,327		
UNIVERSITY OF CHICAGO	SUB FP063488-02-B (HL136991)	93	838	3,062		
UNIVERSITY OF COLORADO DENVER	FY15.727.002	93	838	-14,783		
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY14.064.001	93	838	9,206		
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY14.064.003	93	838	-22,186		
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.369.005	93	838	29,234		
UNIVERSITY OF ILLINOIS	7922:3	93	838	52,673		
UNIVERSITY OF MICHIGAN	3003837218	93	838	40,306		
UNIVERSITY OF MICHIGAN	3004355200	93	838	236,293		
UNIVERSITY OF MICHIGAN	3004647871-CYC2	93	838	107,933		
UNIVERSITY OF MICHIGAN	B3698	93	838	1,348		
UNIVERSITY OF MINNESOTA	A000213101	93	838	-81,793		
UNIVERSITY OF MINNESOTA	A005956202	93	838	91,823		
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5113231	93	838	98,682		
UNIVERSITY OF NORTH CAROLINA SYSTEM	5111458	93	838	53,215		
UNIVERSITY OF PENNSYLVANIA	565138	93	838	741		
UNIVERSITY OF PENNSYLVANIA	B8568	93	838	7,400		
UNIVERSITY OF PENNSYLVANIA	571558	93	838	25,048		
UNIVERSITY OF PENNSYLVANIA	572978	93	838	23,303		
UNIVERSITY OF PENNSYLVANIA	574381	93	838	172,676		
UNIVERSITY OF PITTSBURGH	0041577 (1251-1)	93	838	6,947		
UNIVERSITY OF PITTSBURGH	0041577(125120-2)	93	838	-4,359		
UNIVERSITY OF PITTSBURGH	0059236 (130132-1)	93	838	60,103		
UNIVERSITY OF PITTSBURGH	0059617 (130153-1)	93	838	3,933		
UNIVERSITY OF PITTSBURGH	U01HL128954	93	838	6,834		
UNIVERSITY OF PITTSBURGH	0035200 (123815-1)	93	838	34,381		
UNIVERSITY OF PITTSBURGH	9012549(130129-11)	93	838	877		
UNIVERSITY OF WASHINGTON	79420	93	838	97,478		
UNIVERSITY OF WASHINGTON	UWSC8540:3	93	838	605,595		
VANDERBILT UNIVERSITY MEDICAL CENTER	VUMC 44301	93	838	118,267		
VANDERBILT UNIVERSITY MEDICAL CENTER	VUMC 44299:3	93	838	10,534		
XFIBRA, LLC	8726C	93	838	-4,801		
COPD FOUNDATION	001	93	838	4,558		
COPD FOUNDATION	002	93	838	1,745		
COPD FOUNDATION	D2130	93	838	4,797		
COPD FOUNDATION	002-AMEND1:1	93	838	18,591		
KAER BIOTHERAPEUTICS CORPORATION	A132775	93	838	99		
				4,015,437	47,030	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	Passthrough/Partial Passthrough						
	BRIGHAM AND WOMEN'S HOSPITAL	87704	93	839	-2,966		
	CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	127909	93	839	35,936		
	CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	2_7909_UCSF_OL_L6_17	93	839	60,385		
	CHILDREN'S HOSPITAL LOS ANGELES	57458	93	839	-18,502		
	DIAGNOLOGIX LLC	SUB 20180337 (HL126285)	93	839	61,629		
	EMORY UNIVERSITY	SUB A19165(HL146147)	93	839	775		
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-2931-4609	93	839	374,556		
	KAISER PERMANENTE DIVISION OF RESEARCH	209203-001	93	839	4,272		
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	CLA-234667-02	93	839	566,222		
	NATIONAL JEWISH MEDICAL AND RESEARCH CENTER	SUB 2020072608 (HL089897)	93	839	32,336		
	NATIONAL MARROW DONOR PROGRAM	A111930	93	839	-33,108		
	OHIO STATE UNIVERSITY	60061716	93	839	6,528		
	OHIO STATE UNIVERSITY	SUB 60061829 (HL138116)	93	839	297,119		
	OHIO STATE UNIVERSITY	SUB 60057321(HL126945)	93	839	212,686		
	PENNSYLVANIA STATE UNIVERSITY	UCA-SFHL098115-02	93	839	3,661		
	PROTEOGENOMICS RESEARCH INSTITUTE FOR SYSTEMS MEDICINE	SUB NONE (HL119165)	93	839	20,338		
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 60062-12923-UCSD (HL131474)	93	839	192,832		
	THE SCRIPPS RESEARCH INSTITUTE	88254	93	839	716		
	UNIVERSITY OF MARYLAND	14822-20552001	93	839	123,004		
	UNIVERSITY OF MIAMI	SUB SPC-000840 (HL136291)	93	839	85,274		
	UNIVERSITY OF MICHIGAN	63474	93	839	24,309		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	201122155	93	839	191,139		
	UNIVERSITY OF PENNSYLVANIA	564154/10042446/14855/00	93	839	163,385		
	UNIVERSITY OF PENNSYLVANIA	565117	93	839	148,628		
	UNIVERSITY OF VERMONT	SUB 30768 SUB UCSD1(HL110955)	93	839	59,584		
	UNIVERSITY OF WASHINGTON	UWSC8734	93	839	56,270		
	UNIVERSITY SYSTEM OF MARYLAND	1600222-CYC1	93	839	44,728		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND (HL066941)	93	839	88,132		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND 309658 (HL066941)	93	839	32,335		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND 309878 (HL066941)	93	839	21,557		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA KIRK (HL066941)	93	839	-311		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83557	93	839	-850		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-14-194	93	839	52,481		
	YESHIVA UNIVERSITY	SUB 9-526-6969 (HL110900)	93	839	7,369		
	ANN & ROBERT H. LURIE CHILDREN'S HOSPITAL OF CHICAGO	901516-UCI-CYC2	93	839	15,745		
	JOHNS HOPKINS ALL CHILDREN'S HOSPITAL INC	SUB ACRI 9-001 (HL130048)	93	839	2,090		
						2,930,282	
		Passthrough/Partial Passthrough					
		GEORGE WASHINGTON UNIVERSITY	83075	93	840	-2,976	
		VITALANT	10841UC131	93	840	154,381	
						151,405	
		Passthrough/Partial Passthrough					
		BAYLOR COLLEGE OF MEDICINE	5U54AR068069-04	93	846	185,426	
		BIONIKS	B9496	93	846	-4,866	
		BOSTON UNIVERSITY	4500001983	93	846	242,507	
		BOSTON UNIVERSITY	4500002312	93	846	175,116	
		BOSTON UNIVERSITY	B0916	93	846	-1,148	
		BRIGHAM AND WOMEN'S HOSPITAL	119967	93	846	43,007	
		BRIGHAM AND WOMEN'S HOSPITAL	20163020-03	93	846	4,337	
		BROWN UNIVERSITY	00001093-CYC2	93	846	132,903	
		CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201003-0714-S167	93	846	40,428	
		CASE WESTERN RESERVE UNIVERSITY	RES513311	93	846	30,824	
	CASE WESTERN RESERVE UNIVERSITY	RES513683	93	846	99,481		
	DUKE UNIVERSITY	A030245	93	846	568		
	DUKE UNIVERSITY	A030253	93	846	42,003		
	EPIGEN BIOSCIENCES, INC.	SUB 20190461(AR072546)	93	846	29,882		
	JOHNS HOPKINS UNIVERSITY	1R01AR070773	93	846	43,538		
	MAINE MEDICAL CENTER	ROSEN-111071-B	93	846	90,437		
	MASSACHUSETTS GENERAL HOSPITAL	233131	93	846	16,793		
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	THE-214784	93	846	24,878		
	NATIONWIDE CHILDREN'S HOSPITAL	88176	93	846	-1,003		
	NORTHWELL HEALTH INC	500678UCSF	93	846	365,583	111,463	
	NORTHWESTERN UNIVERSITY	60036404 UCSF	93	846	192,549		
	NORTHWESTERN UNIVERSITY	60048026 UCI-CYC1	93	846	11,034		
	NORTHWESTERN UNIVERSITY	B0927	93	846	-1,412		
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 58556-12524 (AR 064873)	93	846	20,320		
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11859SUB-CYC1	93	846	127,696		

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			Prefix	Extension	Federal Expenditures		
DEPARTMENT OF HEALTH AND HUMAN SERVICES	STANFORD UNIVERSITY	61793858-104565	93	846	105,746		
	STANFORD UNIVERSITY	79660	93	846	39,610		
	SUTTER WEST BAY HOSPITALS	89097	93	846	-5,124		
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000502603-004-CYC3	93	846	84,043		
	TUFTS MEDICAL CENTER, INC.	5012099-SERV	93	846	89,001		
	UNIVERSITY OF ARIZONA	247411	93	846	346,093		
	UNIVERSITY OF CINCINNATI	59363	93	846	6,242		
	UNIVERSITY OF COLORADO DENVER	FY17.873.001	93	846	193,691		
	UNIVERSITY OF COLORADO DENVER	SUB 15.090.005 (AR067681)	93	846	100,367		
	UNIVERSITY OF COLORADO DENVER	SUB FY19.957.001 (AR070879)	93	846	47,750		
	UNIVERSITY OF CONNECTICUT	SUB UCHC6-80676187(AR070879)	93	846	-1,749		
	UNIVERSITY OF FLORIDA	UFDSP00012127-CYC1	93	846	78,443		
	UNIVERSITY OF FLORIDA	UDFSP00012254	93	846	22,499		
	UNIVERSITY OF FLORIDA	UFDSP00011907	93	846	140,445		
	UNIVERSITY OF FLORIDA	UFDSP00011910	93	846	77,971		
	UNIVERSITY OF MICHIGAN	3004881771	93	846	225,966		
	UNIVERSITY OF MICHIGAN	SUBK00007880	93	846	20,589		
	UNIVERSITY OF MICHIGAN	SUBK00005856	93	846	24,073		
	UNIVERSITY OF NORTH CAROLINA SYSTEM	5103374	93	846	-8,305		
	UNIVERSITY OF SOUTH CAROLINA	19-3792-CYC1	93	846	348		
	UNIVERSITY OF SOUTHERN CALIFORNIA	79693	93	846	-84		
	UNIVERSITY OF SOUTHERN CALIFORNIA	102517834	93	846	116,151		
	UNIVERSITY OF SOUTHERN CALIFORNIA	87118183:1	93	846	7,762		
	UNIVERSITY OF SOUTHERN CALIFORNIA	102070633:1	93	846	234,003		
	UNIVERSITY OF WISCONSIN-MADISON	SUB 630K464 (AR068373)	93	846	63,898		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	879A2	93	846	41,591		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA TERKELTAUB (AR060772)	93	846	23,902		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA D. CHANG(AR073496)	93	846	7,440		
	WASHINGTON STATE UNIVERSITY	A7266	93	846	-1,946		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-19-181	93	846	14,220		
	YESHIVA UNIVERSITY	310451	93	846	-1,402		
	CHILDREN'S NATIONAL HEALTH SYSTEM	300003331203	93	846	2,833		
	CONFLUENCE LIFE SCIENCES, LLP	85289	93	846	816		
	MAGNAMOSIS, INC.	070117	93	846	137,677		
	LOMA LINDA VETERANS ASSOCIATION FOR RESEARCH AND EDUCATION	010413	93	846	5,016		
	PROTEIN FOUNDRY	A19-0737	93	846	30,285		
					4,180,740	111,463	
	Passthrough/Partial Passthrough						
		ACOUSTIC MEDSYSTEMS, INC.	A127047	93	847	-21,476	
		ARBOR RESEARCH COLLABORATIVE FOR HEALTH	ARB041916	93	847	259	
		ARBOR RESEARCH COLLABORATIVE FOR HEALTH	80598	93	847	-4,202	
		AUGUSTA UNIVERSITY	3083524	93	847	132,126	
		AUGUSTA UNIVERSITY	30835-53	93	847	8,973	
		AUGUSTA UNIVERSITY	30835-60	93	847	9,101	
		AUGUSTA UNIVERSITY	80451	93	847	-3,265	
		AUGUSTA UNIVERSITY	SUB 32307-32 (DK115255)	93	847	18,670	
		AUGUSTA UNIVERSITY	U24DK076169	93	847	27,712	
		BAYLOR COLLEGE OF MEDICINE	008859	93	847	6,133	
		BAYLOR COLLEGE OF MEDICINE	7000000294:1	93	847	39,850	
		BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE	53308-2003839-00000-CYC2	93	847	104,045	
		BETH ISRAEL DEACONESS MEDICAL CENTER	SUB 01029372(DK111529)	93	847	35,755	
		BOSTON UNIVERSITY	SUB 4500002259(DK108612)	93	847	101,514	
	BOSTON UNIVERSITY	4500001991:002	93	847	8,436		
	BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	79765	93	847	185,764		
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 118780(DK112940)	93	847	211,788		
	BROAD INSTITUTE INC.	SUB 5216277-00000942(DK105554)	93	847	399,652		
	BROAD INSTITUTE INC.	879G3	93	847	-1,782		
	BROAD INSTITUTE INC.	SUB 5216277-5500000870 (DK1055)	93	847	72,692		
	BROAD INSTITUTE INC.	SUB 5216286-5500001263(DK10555)	93	847	96,482		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	28000004128	93	847	366,822		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201011-S2104	93	847	3,062		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201011-S202	93	847	38,431		
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000666 (5112425)	93	847	6,870		
	CASE WESTERN RESERVE UNIVERSITY	SUB RES509275 (DK094157)	93	847	22,166		
	CASE WESTERN RESERVE UNIVERSITY	871G0	93	847	-163		
	CASE WESTERN RESERVE UNIVERSITY	SUB RES512847 (DK114812)	93	847	35,920		
	CASE WESTERN RESERVE UNIVERSITY	SUB RES513292 (DK094157)	93	847	241,614		
	CEDARS-SINAI MEDICAL CENTER	0001285404	93	847	33,420		
	CEDARS-SINAI MEDICAL CENTER	0001285442	93	847	70,228		

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	CEDARS-SINAI MEDICAL CENTER	0001405364-003	93	847	12,337	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	137610	93	847	181,594	
	CHILDREN'S MERCY HOSPITAL, THE	13-0025	93	847	29,475	
	CHILDREN'S MERCY HOSPITAL, THE	13-0022:5	93	847	41,181	
	CHILDREN'S MERCY HOSPITAL, THE	18-0020	93	847	1,914	
	CITY OF HOPE	51504.2000556.669309 (5U01DK10	93	847	20,152	
	CITY OF HOPE	SUB 53234.2000556.669301(DK104	93	847	53,551	3,107
	CITY OF HOPE	010305	93	847	36,739	
	CITY OF HOPE	R01DK119590	93	847	12,978	
	COLUMBIA UNIVERSITY	SUB 1 (GG010427-05) (DK061734)	93	847	8,378	
	COLUMBIA UNIVERSITY	SUB 1(GG010427)(DK061734)	93	847	592,492	
	COLUMBIA UNIVERSITY	SUB GG005583-02 (DK061734)	93	847	381,368	
	COLUMBIA UNIVERSITY	6(GG015009-01)	93	847	43,884	
	COLUMBIA UNIVERSITY	79642	93	847	-22,844	
	EMORY UNIVERSITY	87984	93	847	-24,399	
	FLORIDA STATE UNIVERSITY	R01948-CYC1	93	847	52,298	
	GEORGE WASHINGTON UNIVERSITY	SUB S-GRD1213-KR40 (DK098246)	93	847	71,912	
	GEORGE WASHINGTON UNIVERSITY	876F0	93	847	-10,725	
	GEORGE WASHINGTON UNIVERSITY	S-DPP1819-JC18	93	847	336,881	
	GEORGE WASHINGTON UNIVERSITY	SUB S-DPP1819-JC03 (DK048489)	93	847	31,586	
	HARVARD UNIVERSITY	SUB 01060116 (DK110150)	93	847	9,915	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-3830-4609	93	847	168,162	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-2171-4609:1	93	847	7,076	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-2172-4609	93	847	3,635	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-A941-4609	93	847	29,943	
	INDIANA UNIVERSITY	A15-0013-004	93	847	42,450	
	INDIANA UNIVERSITY	IN-4687972-UCLA	93	847	23,877	
	INTELLIGENT OPTICAL SYSTEMS, INC.	IOS-3284-CYC1	93	847	31,316	
	JOHNS HOPKINS UNIVERSITY	2002297514	93	847	253,799	
	JOHNS HOPKINS UNIVERSITY	2003447892:1	93	847	31,377	
	JOHNS HOPKINS UNIVERSITY	2003837592	93	847	408	
	JOHNS HOPKINS UNIVERSITY	24756	93	847	10	
	KAISER PERMANENTE DIVISION OF RESEARCH	115-7257/1494	93	847	846	
	KAISER PERMANENTE DIVISION OF RESEARCH	115-7258/1493	93	847	19,971	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG200381-UCSF	93	847	18,068	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG200630-01	93	847	156,885	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG200631-03	93	847	-2,063	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG200631-04	93	847	11,896	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG200295-03:3	93	847	37,107	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209783-UCSF-01	93	847	11,523	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209804-01	93	847	163,676	
	LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 20108-44-342 (DK114457)	93	847	255,500	
	LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	5R01DK092575	93	847	53,813	
	LOYOLA UNIVERSITY OF CHICAGO	SUB 206423 (DK104842)	93	847	9,752	
	LOYOLA UNIVERSITY OF CHICAGO	206423:2	93	847	1,630	
	LOYOLA UNIVERSITY OF CHICAGO	SUB 206882 (DK106898)	93	847	61,593	
	LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 2420012-05003A (DK105541)	93	847	245,061	
	LUDWIG INSTITUTE FOR CANCER RESEARCH	BREN_242304-11-CYC1	93	847	28,037	
	LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 242001-05003B (DK105541)	93	847	299,075	
	MEDICAL COLLEGE OF WISCONSIN	201501396	93	847	182,099	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	YUKL1941-098824	93	847	113,900	
	NORTHWESTERN UNIVERSITY	60042868UCD	93	847	36,501	
	NORTHWESTERN UNIVERSITY	SUB 60050287 UCSD (DK117824)	93	847	15,550	
	OREGON HEALTH & SCIENCE UNIVERSITY	SUB 1005905 UCSD (DK102813)	93	847	35,054	
	RHODE ISLAND HOSPITAL	70171373041	93	847	524	
	STANFORD UNIVERSITY	60896104-116817	93	847	-424	
	STANFORD UNIVERSITY	61328829-116833:2	93	847	241,607	
	STANFORD UNIVERSITY	61933130-131179	93	847	99,706	
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53376 (DK110162)	93	847	5,332	
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53455 (DK112927)	93	847	65,837	
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53822 (DK117872)	93	847	171,665	
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53968 (DK117138)	93	847	12,226	
	THE UNIVERSITY OF ALABAMA SYSTEM (SYSTEMWIDE PARENT CODE)	SUB 000501524 (DK079337)	93	847	52,531	
	UNIVERSITY OF CHICAGO	FP064994	93	847	140,376	
	UNIVERSITY OF CHICAGO	FP046970-03-E-CYC1	93	847	9,535	
	UNIVERSITY OF CINCINNATI	009897-002	93	847	38,509	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY13.274.003	93	847	3,498	4,005
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.018.001	93	847	98,104	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY13.269.004:AMD5	93	847	-6	
	UNIVERSITY OF FLORIDA	UFDSPO0011567	93	847	100,458	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	UNIVERSITY OF HAWAII AT MANOA	KA1365	93	847	38,085	
	UNIVERSITY OF HAWAII AT MANOA	KA1467	93	847	26,124	
	UNIVERSITY OF HAWAII AT MANOA	KA1470	93	847	9,132	
	UNIVERSITY OF IOWA	W000834895	93	847	-7,275	
	UNIVERSITY OF IOWA	W000936998	93	847	9,312	
	UNIVERSITY OF IOWA	SUB 500272-01(DK116624)	93	847	15,361	
	UNIVERSITY OF MARYLAND	10018477	93	847	6,964	
	UNIVERSITY OF MARYLAND	C1444	93	847	-2,071	
	UNIVERSITY OF MASSACHUSETTS AMHERST	89002	93	847	-3,859	
	UNIVERSITY OF MICHIGAN	3004817920	93	847	13,768	
	UNIVERSITY OF MICHIGAN	SUBK00004867	93	847	2,621	
	UNIVERSITY OF MICHIGAN	3004967201	93	847	2,389	
	UNIVERSITY OF MICHIGAN	875CB	93	847	35	
	UNIVERSITY OF MICHIGAN	8760B	93	847	-7,816	
	UNIVERSITY OF MINNESOTA	SUB P006540201 (DK106786)	93	847	58,406	
	UNIVERSITY OF MINNESOTA	N005115009	93	847	5,051	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5110772	93	847	60,296	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	80488	93	847	-16,103	
	UNIVERSITY OF OREGON	SUB 215380A (DK095926)	93	847	13,901	
	UNIVERSITY OF PENNSYLVANIA	572042	93	847	-40,752	
	UNIVERSITY OF PENNSYLVANIA	U01DK103225	93	847	9,299	7,889
	UNIVERSITY OF PITTSBURGH	0019927(118536-5)	93	847	2,045	
	UNIVERSITY OF PITTSBURGH	0034844 (128385-2)	93	847	36,786	
	UNIVERSITY OF PITTSBURGH	SUB 0054687 ((129571-1)) (DK09	93	847	78,063	
	UNIVERSITY OF PITTSBURGH	87467	93	847	-5,419	
	UNIVERSITY OF SOUTH FLORIDA	188359	93	847	-100,910	
	UNIVERSITY OF SOUTH FLORIDA	SUB 6143-1147-00A (DK110621)	93	847	35,634	
	UNIVERSITY OF SOUTH FLORIDA	UC4DK112243	93	847	54,555	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 92129430 (DK110793)	93	847	118,430	
	UNIVERSITY OF SOUTHERN CALIFORNIA	108190240	93	847	76,919	
	UNIVERSITY OF SOUTHERN CALIFORNIA	66872909:2	93	847	-119	
	UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	161111-REGISTRY	93	847	92,628	
	UNIVERSITY OF VIRGINIA	GB10510.157898:1	93	847	40,629	
	UNIVERSITY OF WASHINGTON	SUB 698055 (DK082325)	93	847	32,165	
	UNIVERSITY OF WASHINGTON	UWSC10242	93	847	218,314	
	UNIVERSITY OF WASHINGTON	UWSC8994	93	847	13,077	
	UNIVERSITY OF WISCONSIN-MADISON	SUB 785K610(DK088925)	93	847	456,955	
	UNIVERSITY OF WISCONSIN-MADISON	884K553	93	847	3,377	
	VANDERBILT UNIVERSITY	UNIV 58354	93	847	127,025	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HENRY (DK098246)	93	847	42,656	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HENRY(DK098246)	93	847	58,653	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (DK097093)	93	847	11,084	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX 310177 DK098234-01A1	93	847	11,576	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX 5013860(DK102730)	93	847	17,269	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA VALLON (DK106102)	93	847	40,046	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (DK102438)	93	847	4,785	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	096070001-321430	93	847	66,809	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	87287	93	847	-2,596	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	87545	93	847	-429	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	87834	93	847	-4,972	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA AFARI (322353)112579741 (D	93	847	2,286	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RIVERA-NIEVES (322351) 098	93	847	12,562	
	VIRGINIA COMMONWEALTH UNIVERSITY	1R01DK094818-01A1	93	847	89,355	
	VIRGINIA COMMONWEALTH UNIVERSITY	SUB PD304070-SC106315 (DK10596	93	847	344,554	
	WAKE FOREST UNIVERSITY	WFUHS118258	93	847	75,882	
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-15-284 (DK078669)	93	847	117,151	
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-15-285 (DK078669)	93	847	33,078	
	YALE UNIVERSITY	GK000066 (CON-80000330)-CYC1	93	847	83,888	
	MCGILL UNIVERSITY	215685	93	847	96,142	
	OKLAHOMA MEDICAL RESEARCH FOUNDATION	0232-07UCLA:1	93	847	32,100	
	ORGANOVO, INC.	SUB 20182413 (DK115242)	93	847	73,393	
	SYNTR HEALTH TECHNOLOGIES, LLC	SHT-208505-CYC2	93	847	48,268	
	THE EMMES COMPANY, LLC	UC4 DK114839-01	93	847	55	
	HENNEPIN HEALTHCARE SYSTEM, INC.	R01DK107269	93	847	63,296	
	IMAGEIQ, INC.	878BC	93	847	12,500	
	KAISER FOUNDATION HOSPITALS	RNG200631-06	93	847	9,454	
	RIPTIDE BIOSCIENCE, INC.	A19-0704	93	847	15,543	
	SENTIA MEDICAL SCIENCES, INC.	1R43DK116362-01	93	847	38,849	
	SILICON KIDNEY LLC	SK 2019-01	93	847	31,267	
	SILICON KIDNEY LLC	SK 2019-02	93	847	34,335	

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	TARGESON, LLC	87880	93	847	-490	
	UNIVERSITY OF TENNESSEE SYSTEM (PARENT CODE)	A18-1009-S001	93	847	19,585	
					10,445,226	15,002
	Passthrough/Partial Passthrough					
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	79068	93	848	-11,499	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83446	93	848	-15,797	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83447	93	848	-5,059	
					-32,354	
	Passthrough/Partial Passthrough					
	CHILDREN'S MERCY HOSPITAL, THE	SUB 07-005 (DK066143)	93	849	959	
	MEDICAL COLLEGE OF WISCONSIN	SUB NONE (DK088831)	93	849	52,848	
	TEXAS BIOMEDICAL RESEARCH INSTITUTE (TEXAS BIOMED)	SUB 16-04613-401 (DK110096)	93	849	121,388	
	THE SCRIPPS RESEARCH INSTITUTE	SUB TSRI-20162946-GODINO(DK112	93	849	104,685	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000518751-SP001-001(DK0793	93	849	396,357	
	UNIVERSITY OF MINNESOTA	SUB P006923601(DK102932)	93	849	51,961	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA AFARI (1 R01 DK106415-01A1	93	849	-161	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA AFARI 316834 (DK106415-01	93	849	41,681	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GODINO (DK106415)	93	849	9,057	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GOLSHAN 317249 (DK106415	93	849	31,115	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LANG 316833 (1 R01 DK10641	93	849	9,538	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RIFKIN (DK105314)	93	849	16,266	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA THOMSON (DK112042)	93	849	172,921	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA VALLON (DK112042)	93	849	61,876	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	79445	93	849	-5,094	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	79446	93	849	-456	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83428	93	849	-29,854	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83477	93	849	-7,234	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83551	93	849	-433	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	877E5	93	849	21,148	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA (IX) (DK119528)	93	849	6,300	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (321959) SHL2118-06 (DK	93	849	9,624	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (321960) (DK111510)	93	849	15,036	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (DK102730)	93	849	43,173	
					1,122,702	
	Passthrough/Partial Passthrough					
	CASE WESTERN RESERVE UNIVERSITY	RES512886	93	850	160,822	
					160,822	
	Passthrough/Partial Passthrough					
	BAYLOR COLLEGE OF MEDICINE	54485-T	93	853	133,017	
	BETH ISRAEL DEACONESS MEDICAL CENTER	01025970	93	853	11,136	
	BOSTON UNIVERSITY	79A44	93	853	-47	
	BOSTON UNIVERSITY	A16-0139-005	93	853	61,496	
	BOSTON UNIVERSITY	SUB 4500002804 (NS108472)	93	853	277,999	
	BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	58029	93	853	-5,833	
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 108685 (NS 079201)	93	853	-18,346	
	BRIGHAM AND WOMEN'S HOSPITAL	114929-CYC2	93	853	62,571	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 18B-1097808(NS094403B)	93	853	125,408	
	CASE WESTERN RESERVE UNIVERSITY	79796	93	853	-19,328	
	CASE WESTERN RESERVE UNIVERSITY	RES512398	93	853	199,911	
	CAYETANO HEREDIA UNIVERSITY	20162017	93	853	26,195	
	CEDARS-SINAI MEDICAL CENTER	UG3NS 105703	93	853	31,864	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	57509	93	853	58,410	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	79776	93	853	18,805	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001322970	93	853	59,670	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001329653:4	93	853	38,471	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001329779:3	93	853	63,461	
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001358261:3	93	853	19,455	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	58865	93	853	-9,202	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	3210390817:7	93	853	90,072	
	COLD SPRING HARBOR LABORATORY	64100112	93	853	87,409	
	COLUMBIA UNIVERSITY	1(GG010432-02)	93	853	-2,403	
	COLUMBIA UNIVERSITY	SUB GG010312 (NS078059)	93	853	26,991	
	COLUMBIA UNIVERSITY	2(GG010432-01)	93	853	4,432	
	COLUMBIA UNIVERSITY	3(GG012011-02)	93	853	94,234	
	COLUMBIA UNIVERSITY	3(CG013057-07	93	853	370,601	
	CORNELL UNIVERSITY	16081320	93	853	31,797	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	CORNELL UNIVERSITY	183412	93	853	130,217	
	CORNELL UNIVERSITY	190630-03	93	853	122,677	
	CORNELL UNIVERSITY	190630-04	93	853	161,985	
	CORNELL UNIVERSITY	190630-05	93	853	73,431	
	DANA-FARBER CANCER INSTITUTE	1278001	93	853	191,483	
	DARTMOUTH COLLEGE	SUB R1070 (NS108809)	93	853	24,711	
	DREXEL UNIVERSITY	232674	93	853	14,756	
	DUKE UNIVERSITY	SUB 2034905 (NS092521)	93	853	366,202	
	DUKE UNIVERSITY	SUB A03-0100 (NS109401)	93	853	76,968	
	EMORY UNIVERSITY	T423135-CYC1	93	853	154,871	
	GLADSTONE INSTITUTES	R2442-A	93	853	72,850	
	GLADSTONE INSTITUTES	R2442-C	93	853	21,558	
	GLADSTONE INSTITUTES	R2442-E	93	853	78,819	
	GLADSTONE INSTITUTES	SUB R2400-A (NS094342)	93	853	75,368	
	GLADSTONE INSTITUTES	SUB R2432-A (NS097976)	93	853	50,734	
	GLADSTONE INSTITUTES	R02082-A	93	853	5,626	
	GLADSTONE INSTITUTES	R01750-A	93	853	215	
	GLADSTONE INSTITUTES	R2442-D-2	93	853	-18	
	HEALTH RESEARCH, INC.	5977-01-CYC1	93	853	55,116	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-0642-4609:2	93	853	250,936	
	INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2014-56074-CYC4	93	853	115,744	
	INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2014-56212-CYC4	93	853	129,853	
	IOWA STATE UNIVERSITY	4301738A	93	853	103,370	
	JOHNS HOPKINS UNIVERSITY	2003042369:2	93	853	77	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG200618	93	853	57,086	59,699
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG200620	93	853	17,318	
	KENNEDY KRIEGER INSTITUTE	1K12NS098482-01-CYC1	93	853	189,682	
	LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	R21NS109668	93	853	4,992	
	LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 240630-05003 (NS027036)	93	853	35,537	
	LUDWIG INSTITUTE FOR CANCER RESEARCH	233309-05012:02	93	853	14,873	
	MASSACHUSETTS GENERAL HOSPITAL	201604272	93	853	24,865	
	MASSACHUSETTS GENERAL HOSPITAL	20164300	93	853	5,884	
	MASSACHUSETTS GENERAL HOSPITAL	226396	93	853	36,057	
	MASSACHUSETTS GENERAL HOSPITAL	NN103	93	853	995	
	MASSACHUSETTS GENERAL HOSPITAL	A18-0600-001	93	853	88,086	
	MASSACHUSETTS GENERAL HOSPITAL	NN107	93	853	100,127	
	MASSACHUSETTS GENERAL HOSPITAL	A18-0600-002	93	853	46	
	MASSACHUSETTS GENERAL HOSPITAL	NS095388-CYC1	93	853	393	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003857-CYC1	93	853	141,590	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	UH2NS095495	93	853	71,629	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	81742	93	853	47,950	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	87338	93	853	-10,751	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	THE-224063-01:1	93	853	445	
	MEDICAL UNIVERSITY OF SOUTH CAROLINA	MUSC14-016:FIVE(5)	93	853	-7,540	
	MOREHOUSE SCHOOL OF MEDICINE	008650	93	853	51,457	
	NEURAL ANALYTICS	2R44NS092209-2	93	853	378,928	
	NORTHWESTERN UNIVERSITY	1U01NS080818-01A1	93	853	-365	
	NORTHWESTERN UNIVERSITY	SUB 60036745 UCSD (NS080818)	93	853	29,419	
	NORTHWESTERN UNIVERSITY	60036745 UC-CYC6	93	853	578	
	NORTHWESTERN UNIVERSITY	60041563 UCI-CYC3	93	853	169,445	
	PRINCETON UNIVERSITY	U19NS104648	93	853	232,054	
	RECOMBINETICS, INC	1R43NS097090-01A1	93	853	48,392	
	RUSH UNIVERSITY MEDICAL CENTER	15060903-SUB03	93	853	177,096	
	SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB P1015431 (R01NS104368)	93	853	123,385	
	SCINTILLON INSTITUTE	874E3	93	853	-17	
	SEACOAST SCIENCE, INC.	16-1004SC-CYC2	93	853	97,357	
	SEPULVEDA RESEARCH CORPORATION	LA10004_UC04:4	93	853	102,066	
	ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER	80844	93	853	75,609	
	STANFORD UNIVERSITY	61288309-120633	93	853	10,983	
	STANFORD UNIVERSITY	61304878-123178	93	853	18,174	
	STANFORD UNIVERSITY	61311381-124387-CYC3	93	853	114,396	
	STANFORD UNIVERSITY	61318549-12054-CYC3	93	853	5,511	
	STANFORD UNIVERSITY	61977990-123737-CYC1	93	853	84,755	
	STANFORD UNIVERSITY	A18-0238-001	93	853	127,103	
	TEMPLE UNIVERSITY	SUB 261426-UCSD (NS105961)	93	853	178,487	
	THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000508025-001:A01	93	853	22,759	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000510297-005:A02	93	853	17,895	
	THOMAS JEFFERSON UNIVERSITY	080-19000-K07201:1	93	853	7,645	
	UNIVERSITY OF ARIZONA	R01NS076856	93	853	3,537	
	UNIVERSITY OF CHICAGO	FP066261-G	93	853	71,037	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	UNIVERSITY OF CHICAGO	SUB FP063810-D(OD023281)	93	853	20,737	
	UNIVERSITY OF CHICAGO	FP060364-CYC3	93	853	77,791	
	UNIVERSITY OF CINCINNATI	008822-ADM-CRAMER-CYC1	93	853	72,152	
	UNIVERSITY OF CINCINNATI	80321	93	853	-7,212	
	UNIVERSITY OF CINCINNATI	SUB 010085-119530 (NS092076)	93	853	9,957	
	UNIVERSITY OF CINCINNATI	010085-135728	93	853	696	
	UNIVERSITY OF CINCINNATI	SUB 010785-135727 (NS095869)	93	853	4,814	
	UNIVERSITY OF CINCINNATI	008822-ADM-SAVER-1.4	93	853	11,155	
	UNIVERSITY OF CINCINNATI	010785-135728	93	853	1,502	
	UNIVERSITY OF CINCINNATI	010785-135728 HEMPHILL	93	853	1,900	
	UNIVERSITY OF CINCINNATI	010785-135728 MEISEL	93	853	77	
	UNIVERSITY OF CINCINNATI	SUB 011266-135727 (NS100699)	93	853	3,402	
	UNIVERSITY OF CINCINNATI	SUB 011337-135727 (NS099043)	93	853	561	
	UNIVERSITY OF CINCINNATI	U01NS091951-133897-CYC5	93	853	2,679	
	UNIVERSITY OF GEORGIA	SUB00001755	93	853	57,397	
	UNIVERSITY OF IOWA	W000873022	93	853	64,719	
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	SUB 3210000405-17-136 (NS09719)	93	853	166,056	
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	SUB 3048112415-17-189 (NS07089)	93	853	23,537	
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	81466	93	853	-11,382	
	UNIVERSITY OF MASSACHUSETTS AMHERST	19-010728 B00	93	853	96,639	
	UNIVERSITY OF MIAMI	SUB 664008 (NS092091)	93	853	75,527	
	UNIVERSITY OF MIAMI	SPC-000308	93	853	20,385	
	UNIVERSITY OF MIAMI	SPC-000223:5	93	853	97,517	
	UNIVERSITY OF MIAMI	SPC-000282-CYC1	93	853	102,510	
	UNIVERSITY OF MICHIGAN	3004167516	93	853	33,734	
	UNIVERSITY OF MICHIGAN	3004730634	93	853	101,406	
	UNIVERSITY OF MICHIGAN	SUBK00004112-ESETT	93	853	14,617	
	UNIVERSITY OF MICHIGAN	3002348507-SHN:30	93	853	19,052	6,892
	UNIVERSITY OF MICHIGAN	3002773601-ISPOT:34	93	853	2,202	
	UNIVERSITY OF MICHIGAN	SUBK00004114-ESETT:33	93	853	8,575	
	UNIVERSITY OF MICHIGAN	SUBK00007560	93	853	12,973	
	UNIVERSITY OF MICHIGAN	SUBK00008388	93	853	35,477	
	UNIVERSITY OF MICHIGAN	U01NS099046	93	853	25,591	
	UNIVERSITY OF MICHIGAN	3004674692-PNT	93	853	5,201	
	UNIVERSITY OF MONTANA	PG16-64514-03	93	853	265,118	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5108837	93	853	48,074	
	UNIVERSITY OF PENNSYLVANIA	572024	93	853	109,111	
	UNIVERSITY OF PENNSYLVANIA	566106-CYC4	93	853	12,845	
	UNIVERSITY OF PITTSBURGH	57605	93	853	-1,624	
	UNIVERSITY OF PITTSBURGH	59374	93	853	60,217	
	UNIVERSITY OF ROCHESTER	417266:1	93	853	8,218	
	UNIVERSITY OF ROCHESTER	417388	93	853	80,536	
	UNIVERSITY OF ROCHESTER	U01 NS061799	93	853	5,199	
	UNIVERSITY OF ROCHESTER	33456	93	853	10,606	
	UNIVERSITY OF SOUTHERN CALIFORNIA	85744618	93	853	157,545	
	UNIVERSITY OF SOUTHERN CALIFORNIA	84718050:4	93	853	951,525	
	UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER	78782	93	853	-1,021	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0012260C-CYC3	93	853	112,679	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0013748A	93	853	17,171	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	80B99	93	853	69,258	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	R01NS017950	93	853	102,631	
	UNIVERSITY OF TEXAS-AUSTIN	UTA17-000609	93	853	3,185,512	2,218,632
	UNIVERSITY OF UTAH	10035100-01:3	93	853	-33	
	UNIVERSITY OF VERMONT	32808SUB52599-CYC1	93	853	268,581	
	UNIVERSITY OF VIRGINIA	GB10094-147357	93	853	39,390	
	UNIVERSITY OF VIRGINIA	GB10094154461	93	853	8,500	
	UNIVERSITY OF VIRGINIA	21NS106592	93	853	20,933	
	UNIVERSITY OF WASHINGTON	752137	93	853	8,741	
	UNIVERSITY OF WISCONSIN-MADISON	SUB 578K325 (NS083514)	93	853	70,108	
	UNIVERSITY OF WISCONSIN-MADISON	R01NS110719	93	853	3,526	
	UNIVERSITY OF WISCONSIN-MADISON	SUB 716K063 131212(NS092870)	93	853	160	
	UNIVERSITY OF WISCONSIN-MADISON	SUB 818K484 (NS103844)	93	853	167,057	
	UNIVERSITY OF WISCONSIN-MADISON	SUB 847K836 (NS109486)	93	853	111,869	
	YESHIVA UNIVERSITY	311509	93	853	71,948	
	NEW YORK UNIVERSITY SCHOOL OF MEDICINE	18-A0-00-1000533-01	93	853	34,254	
	WINSANTOR INC	SUB NONE (NS105177)	93	853	96,031	
	NEURALSTEM INC.	SUB 20172379 (R44NS103703)	93	853	311,655	
	METHODIST HOSPITAL RESEARCH INSTITUTE, THE	AGMT00000770	93	853	1,138	
	CENTRAL MICHIGAN UNIVERSITY	SUB F63535 (NS099709)	93	853	96,973	
	ALLEN INSTITUTE	R01NS092474	93	853	167,829	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	NEUROLOGICAL DISORDERS & STROKE, NATIONAL INSTITUTE OF ALBERT EINSTEIN COLLEGE OF MEDICINE ALBERT EINSTEIN COLLEGE OF MEDICINE THE EMMES COMPANY, LLC AMERICAN LIFE SCIENCE PHARMACEUTICALS, INC. ASPIRE BIOSCIENCE, LLC BRAINBOX SOLUTIONS INC. C. LIGHT TECHNOLOGIES, INC. NEOKERA, LLC SECOND SIGHT MEDICAL PRODUCTS, INC UNIVERSITY OF NEBRASKA AT KEARNEY	98175C-04	93	853	274,355			
		R01NS104911	93	853	250,898			
		SUB 311235 (NS104911)	93	853	108,137			
		SUB NONE (NS062835)	93	853	84,930			
		SUB 20183456(NS110147)	93	853	106,100			
		AB-210334-CYC1	93	853	38,712			
		20185109	93	853	107,194			
		1R41NS100222-01A1	93	853	60,983			
		NK-209319-CYC1	93	853	216,703			
		20190428	93	853	213,662			
		17-022-01	93	853	27,677			
					16,396,297		2,285,223	
		Passthrough/Partial Passthrough						
			AKONNI BIOSYSTEMS	SUB 20180671(AI138903)	93	855	127,680	
			AMERICAN ONCOLOGIC HOSPITAL	SUB CORE B (AI102853)	93	855	166,522	
	AMERICAN ONCOLOGIC HOSPITAL	SUB PROJECT 4 (AI102853)	93	855	445,448			
	ANTIGEN DISCOVERY, INC	ADI-203880-CYC2	93	855	16,692			
	ARIZONA STATE UNIVERSITY/TEMPE	16-964-2	93	855	50,126			
	BAYLOR COLLEGE OF MEDICINE	7000000260	93	855	174,033			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY141TN078	93	855	6,546			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY151TN160	93	855	311,471			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY161TN182	93	855	29,757			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY161TN186	93	855	28,613			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY161TN207	93	855	51,691			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY141TN098	93	855	40,479			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY151TN104	93	855	220,288			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY181TN057	93	855	6,411,020			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY181TN112	93	855	2,780			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY181TN199	93	855	3,307			
	BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY181TN258-01	93	855	50,524			
	BETH ISRAEL DEACONESS MEDICAL CENTER	01029108	93	855	25,376			
	BOSTON MEDICAL CENTER CORPORATION	0371101	93	855	1,972			
	BOSTON UNIVERSITY	4500002391	93	855	47,599			
	BOSTON UNIVERSITY	4500002399	93	855	75,099			
	BRIGHAM AND WOMEN'S HOSPITAL	109925	93	855	159,882			
	BRIGHAM AND WOMEN'S HOSPITAL	110007	93	855	5,381			
	BRIGHAM AND WOMEN'S HOSPITAL	110237	93	855	599			
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 108561 (AI068636)	93	855	10,451			
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 110009 (AI068636)	93	855	38,720			
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 110206 (AI068636)	93	855	368,199			
	BRIGHAM AND WOMEN'S HOSPITAL	110207-4	93	855	65,183			
	BRIGHAM AND WOMEN'S HOSPITAL	110229	93	855	26,557			
	BRIGHAM AND WOMEN'S HOSPITAL	110238	93	855	5,592			
	BRIGHAM AND WOMEN'S HOSPITAL	110668	93	855	16,798			
	BRIGHAM AND WOMEN'S HOSPITAL	117056	93	855	24,261			
	BRIGHAM AND WOMEN'S HOSPITAL	117291	93	855	2,420,015	1,460,022		
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 110299 (AI068636)	93	855	6,531			
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 116529 (AI068636)	93	855	70,455			
	BRIGHAM AND WOMEN'S HOSPITAL	109930-2	93	855	412,561			
	BRIGHAM AND WOMEN'S HOSPITAL	110008-4	93	855	317,878			
	BRIGHAM AND WOMEN'S HOSPITAL	110009	93	855	20,045			
	BRIGHAM AND WOMEN'S HOSPITAL	110009-4	93	855	9,643			
	BRIGHAM AND WOMEN'S HOSPITAL	116529-1	93	855	3,036			
	BRIGHAM AND WOMEN'S HOSPITAL	20183519	93	855	50,806			
	BRIGHAM AND WOMEN'S HOSPITAL	58492	93	855	114,532			
	BRIGHAM AND WOMEN'S HOSPITAL	59130	93	855	3,635			
	BRIGHAM AND WOMEN'S HOSPITAL	B8593	93	855	3,417			
	BRIGHAM AND WOMEN'S HOSPITAL	SUB 110236 (AI068636)	93	855	7,821			
	BUCK INSTITUTE FOR RESEARCH ON AGING	SA14003-UC	93	855	7,822			
	CASE WESTERN RESERVE UNIVERSITY	RES512472	93	855	66,330			
	CASE WESTERN RESERVE UNIVERSITY	RES511162-CYC2	93	855	4,700			
	CASE WESTERN RESERVE UNIVERSITY	RES512474	93	855	27,330			
	CEDARS-SINAI MEDICAL CENTER	SUB 0001522646 (AI127406)	93	855	140,649			
	CHILD FAMILY HEALTH INTERNATIONAL	SUB HPTN-MGA-REGUC-1 (AI069536)	93	855	1,382,418	1,359,464		
	CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	128217002	93	855	382,444			
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001471889-CYC1	93	855	419,373			
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	58980	93	855	-62			
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001378105	93	855	278,992			
	CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001525527	93	855	71,820			

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	CHILDREN'S HOSPITAL LOS ANGELES	RGF010603-D	93	855	25,678	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	SUB 135407 (A1117804)	93	855	141,605	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	139469	93	855	127,205	
	COLORADO STATE UNIVERSITY	G-14944-1	93	855	154,743	
	COLUMBIA UNIVERSITY	7(GG008377-19)	93	855	116,244	
	COLUMBIA UNIVERSITY	07(GG011896-34)	93	855	142,649	
	COLUMBIA UNIVERSITY	U54A1138370	93	855	189,707	
	COLUMBIA UNIVERSITY	11(GG011896-34):3	93	855	46	
	COLUMBIA UNIVERSITY	14(GG011896-34) :3	93	855	-1,567	
	COLUMBIA UNIVERSITY	22(GG011896-49)	93	855	107,918	
	COLUMBIA UNIVERSITY	8(GG011896-34):3	93	855	55,973	
	DANA-FARBER CANCER INSTITUTE	1235903	93	855	103,520	
	DANA-FARBER CANCER INSTITUTE	R01A1134494	93	855	141,635	
	DARTMOUTH COLLEGE	009256	93	855	58,949	
	DARTMOUTH COLLEGE	009399	93	855	132,270	
	DUKE UNIVERSITY	2032191	93	855	937,518	
	DUKE UNIVERSITY	203-7713	93	855	60,027	
	DUKE UNIVERSITY	2037021	93	855	36,523	
	DUKE UNIVERSITY	225440	93	855	1,903	
	DUKE UNIVERSITY	57254	93	855	-424	
	DUKE UNIVERSITY	203-7689	93	855	150,893	
	DUKE UNIVERSITY	203-7859	93	855	494,676	
	DUKE UNIVERSITY	2035602:1	93	855	890	
	DUKE UNIVERSITY	2037748	93	855	30,704	
	DUKE UNIVERSITY	79562	93	855	63,067	
	DUKE UNIVERSITY	A18-2312	93	855	16,860	
	EMORY UNIVERSITY	SUB S899904 (A1090023)	93	855	161,843	
	EMORY UNIVERSITY	79294	93	855	19	
	EMORY UNIVERSITY	A016147	93	855	156,409	
	EMORY UNIVERSITY	A042615	93	855	298,470	
	EMORY UNIVERSITY	A115274	93	855	34,181	
	FHI 360	SUB 952/0100.0141 (A1068619)	93	855	37,111	
	FHI 360	865/0080.0020:18	93	855	-466	
	FHI 360	PO15002977:05	93	855	147,368	
	FHI 360	8966C	93	855	-421	
	FHI 360	896A6	93	855	-634	
	FHI 360	PO18002627	93	855	62,559	
	FHI 360	PO15001679:6	93	855	351	
	FHI 360	PO15004412:08	93	855	255,993	
	FHI 360	PO15004413	93	855	974,347	958,801
	FHI 360	PO16002764:02	93	855	12,718	14,175
	FHI 360	PO17001861:4	93	855	1,614,282	857,530
	FHI 360	PO17002026:2	93	855	9,468	
	FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 0000879576 (A1122978)	93	855	14,800	
	FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 0000929249 (A1068618)	93	855	145,874	
	FRED HUTCHINSON CANCER RESEARCH CENTER	0000923983	93	855	11,080	
	FRED HUTCHINSON CANCER RESEARCH CENTER	0000928219	93	855	9,469	
	FRED HUTCHINSON CANCER RESEARCH CENTER	0000958775	93	855	23,320	
	FRED HUTCHINSON CANCER RESEARCH CENTER	0000964852	93	855	-4,309	
	GEORGE WASHINGTON UNIVERSITY	16-M55	93	855	-49,771	
	GEORGETOWN UNIVERSITY	SUB 411316_GR411240-UCSD AWD-7	93	855	91,707	
	GEORGIA STATE UNIVERSITY	SP00013285-04-CYC1	93	855	131,162	
	GLADSTONE INSTITUTES	R2462-A	93	855	336,177	
	HARVARD UNIVERSITY	008714	93	855	44,798	
	HARVARD UNIVERSITY	114205-1379-5107412	93	855	149,346	
	HARVARD UNIVERSITY	116543.5108413	93	855	13,071	
	HARVARD UNIVERSITY	232560	93	855	42,046	
	HENRY FORD HEALTH SYSTEM	A120210	93	855	-6,453	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025578414609	93	855	142,638	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	SUB 0254-3241-4609 (A1106754)	93	855	-11,960	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1361-4609	93	855	365,685	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1369-4609	93	855	254,312	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8649-4609	93	855	251,503	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	C1507	93	855	77,666	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	C1867	93	855	105,647	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	SUB 0255-A131-4609 (A1135972)	93	855	485,578	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1368-4609:6	93	855	30,231	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8666-4609	93	855	12,772	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8673-4609	93	855	64,480	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-A001-4609	93	855	23,363	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8011-4609	93	855	200,470	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	80881	93	855	-2,316	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	8738G	93	855	-107,992	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	C0954	93	855	3,742	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	D2750	93	855	63,983	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	D3731	93	855	89,147	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	D3769	93	855	165,168	
	IMMUNE DEFICIENCY FOUNDATION	2U24AI086037-06	93	855	40,843	
	INDIANA UNIVERSITY	IN4688399 UCSFA	93	855	398,094	
	INDIANA UNIVERSITY	009351	93	855	17,609	
	INDIANA UNIVERSITY	A8133	93	855	-3,259	
	INDIANA UNIVERSITY	87264	93	855	1,578	
	INDIANA UNIVERSITY	IN4688916UCSF B	93	855	125,356	
	INTEGRATED BIOTHERAPEUTICS, INC	R56TOXVAX-UCSF-Y1	93	855	97,651	
	IOWA STATE UNIVERSITY	81628	93	855	242,719	
	IOWA STATE UNIVERSITY	B6525	93	855	1,188	
	JOHNS HOPKINS UNIVERSITY	2002656257	93	855	13,866	
	JOHNS HOPKINS UNIVERSITY	2003036375	93	855	63,424	
	JOHNS HOPKINS UNIVERSITY	2003124717	93	855	127,213	
	JOHNS HOPKINS UNIVERSITY	2003151007	93	855	24,226	
	JOHNS HOPKINS UNIVERSITY	SUB 2000303655(AI069918)	93	855	42,368	
	JOHNS HOPKINS UNIVERSITY	SUB 2002263085 (AI068632)	93	855	26,017	
	JOHNS HOPKINS UNIVERSITY	SUB 2002283571 (AI068632)	93	855	91,024	
	JOHNS HOPKINS UNIVERSITY	SUB 2002438807 (AI068632)	93	855	251,297	
	JOHNS HOPKINS UNIVERSITY	UM1AI068632	93	855	31,122	
	JOHNS HOPKINS UNIVERSITY	2002170251	93	855	130,502	
	JOHNS HOPKINS UNIVERSITY	2002240584	93	855	11,878	
	JOHNS HOPKINS UNIVERSITY	2003229857:1	93	855	102,026	
	JOHNS HOPKINS UNIVERSITY	2003414575	93	855	2,408	
	JOHNS HOPKINS UNIVERSITY	SUB 2003749517 (A1068632)	93	855	28,851	
	JOHNS HOPKINS UNIVERSITY	2002292916	93	855	22,575	
	JOHNS HOPKINS UNIVERSITY	2002292921:06	93	855	26,024	
	JOHNS HOPKINS UNIVERSITY	2002292925	93	855	14,434	
	JOHNS HOPKINS UNIVERSITY	2002320204	93	855	1,554	
	JOHNS HOPKINS UNIVERSITY	2003649374	93	855	7,557	
	JOHNS HOPKINS UNIVERSITY	2003671219	93	855	9,547	
	JOHNS HOPKINS UNIVERSITY	2003738316	93	855	33,132	
	JOHNS HOPKINS UNIVERSITY	2003749533:01	93	855	15,502	
	JOHNS HOPKINS UNIVERSITY	2003821277	93	855	22,247	
	JOHNS HOPKINS UNIVERSITY	2003913133	93	855	8,001	
	JOHNS HOPKINS UNIVERSITY	2004171087	93	855	2,865	
	JOHNS HOPKINS UNIVERSITY	20141864:6	93	855	106,096	
	JOHNS HOPKINS UNIVERSITY	20182538	93	855	1,646	
	JOHNS HOPKINS UNIVERSITY	8764C	93	855	-1,454	
	JOHNS HOPKINS UNIVERSITY	89404	93	855	-4,375	
	JOHNS HOPKINS UNIVERSITY	B4049	93	855	14	
	JOHNS HOPKINS UNIVERSITY	C1992	93	855	-156	
	JOHNS HOPKINS UNIVERSITY	LDR 04:03	93	855	155,989	
	JOHNS HOPKINS UNIVERSITY	LDR 31	93	855	69,825	
	JOHNS HOPKINS UNIVERSITY	LDR 32	93	855	30,793	
	JOHNS HOPKINS UNIVERSITY	SUB 2003978667 (AI068632)	93	855	82,365	
	JOHNS HOPKINS UNIVERSITY	SUB 2003989285 (AI068632)	93	855	20,283	
	JOHNS HOPKINS UNIVERSITY	2002740871:1	93	855	114,975	
	LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	20025-03-381	93	855	22,784	
	LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 26244-44-382 (AI109976)	93	855	249,633	
	LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 27318-44-384 (AI135731)	93	855	25,200	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B621111-CYC1	93	855	100,617	
	LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	30685-UCLA:2	93	855	783,299	
	MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	9529	93	855	101,382	
	MASSACHUSETTS GENERAL HOSPITAL	227111	93	855	36,037	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	878D9	93	855	-11,396	
	MEMORIAL SLOAN-KETTERING CANCER CENTER	SUB BD21131 (AI128517)	93	855	62,079	
	MOUNT SINAI MEDICAL CENTER	59279	93	855	22,335	
	MOUNT SINAI MEDICAL CENTER	57543	93	855	92,930	
	NATIONAL JEWISH HEALTH	SUB 2020096801 (AI117673)	93	855	1,005,487	
	NATIONAL JEWISH HEALTH	SUB 20098103 (AI117673)	93	855	86,723	
	NATIONAL JEWISH HEALTH	SUB 20098204 (AI117673)	93	855	7,552	
	NEW YORK UNIVERSITY	18-AO-00-1000450-01	93	855	44,888	
	NORTH CAROLINA STATE UNIVERSITY	A18-0598-001	93	855	43,581	
	NORTH CAROLINA STATE UNIVERSITY	R01AL139085	93	855	10,354	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	SUB SUL1847-04 (AI106987)	93	855	69,401		
		NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WONG1862	93	855	123,218	
		NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	PUL2104-01	93	855	8,092	
		NORTHROP GRUMMAN SYSTEMS CORPORATION	7500157108	93	855	731,378	
		NORTHWESTERN UNIVERSITY	60049111 UCLA	93	855	185,823	
		OAK CREST INSTITUTE OF SCIENCE	S14-164 UCLA: 5	93	855	96,501	
		OAK CREST INSTITUTE OF SCIENCE	SUB S14-164 (AI113048)	93	855	94,923	
		OHIO STATE UNIVERSITY	60054601	93	855	8,275	
		OREGON HEALTH & SCIENCE UNIVERSITY	871F5	93	855	334	
		PARTNERS HEALTHCARE SYSTEM, INC	224471	93	855	46,001	
		ROCKEFELLER UNIVERSITY	5R37AI037526	93	855	348,280	
		RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	108614	93	855	52,526	
		RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8127	93	855	9,738	
		RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	R01AI106398	93	855	-29,181	
		RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	010380	93	855	39,176	
		RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0790	93	855	10,993	
		RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0943	93	855	11,725	
		RXBIO HOLDINGS, INC.	24B63	93	855	2,778	
		SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	58295-12468-UCB	93	855	12,824	
		SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	59560-12797-UCLA:2	93	855	73,679	
		SILVER LAKE RESEARCH CORPORATION	041776	93	855	427,435	
		SOCIAL AND SCIENTIFIC SYSTEMS, INC.	87706	93	855	28	
		STANFORD UNIVERSITY	1U19AI109662-01	93	855	219,579	
		STANFORD UNIVERSITY	60892242-584	93	855	19,941	
		STANFORD UNIVERSITY	61097839-48307	93	855	25,439	
		STANFORD UNIVERSITY	61444536-120709	93	855	37,213	
		STANFORD UNIVERSITY	60625362-107582-08	93	855	27,748	
		STANFORD UNIVERSITY	61806605-48307	93	855	9,510	
		SUSTAINABLE SCIENCES INSTITUTE	IR1200-1	93	855	6,736	
		TEMPLE UNIVERSITY	262177-UC	93	855	103,059	
		TEXAS BIOMEDICAL RESEARCH INSTITUTE (TEXAS BIOMED)	PO 45756	93	855	36,070	
		THE SCRIPPS RESEARCH INSTITUTE	010557	93	855	15,344	
		THE SCRIPPS RESEARCH INSTITUTE	5-53938:1	93	855	372,647	
		THE TEXAS A&M UNIVERSITY SYSTEM	SUB M1800750 (AI127807)	93	855	63,869	
		THE TEXAS A&M UNIVERSITY SYSTEM	M1803705	93	855	257,995	
		THE TEXAS A&M UNIVERSITY SYSTEM	M1803707-CYC1	93	855	178,054	
		THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	82532	93	855	-42,238	
		THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	88971	93	855	-206	
		THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	B2198	93	855	-11,803	
		THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000510836-005	93	855	408,700	
		THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000510836-007	93	855	287,691	
		THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000503356-SP002-023(AI0277	93	855	66,301	
		THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 510836-004(AI067039)	93	855	395,661	
		THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000503356-SP002-020(AI0277	93	855	174,142	
		THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000503356-SP002-029 (AI027	93	855	17,278	
		UNIVERSITY HOSPITAL BASEL	4609/199	93	855	3,232	
		UNIVERSITY OF ARIZONA	408440	93	855	71,995	
		UNIVERSITY OF CHICAGO	SUB FP066835-B (AI136056)	93	855	28,802	
		UNIVERSITY OF COLORADO DENVER	FY19.956.001-CYC1	93	855	30,096	
		UNIVERSITY OF COLORADO DENVER	R21AI139839	93	855	42,803	
		UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY16.206.002:3	93	855	197,562	
		UNIVERSITY OF CONNECTICUT	UCH641200355	93	855	149,211	
		UNIVERSITY OF GEORGIA	RR374-126/S001202-CYC2	93	855	226,452	
		UNIVERSITY OF HAWAII AT MANOA	KA1128	93	855	1,284	
		UNIVERSITY OF IDAHO	R56AI118926	93	855	-3,871	
		UNIVERSITY OF IDAHO	R01AI131609	93	855	31,308	
		UNIVERSITY OF ILLINOIS	78707	93	855	-5,092	
		UNIVERSITY OF MASSACHUSETTS AMHERST	SUB WA00324479/RFS2016020 (AI1	93	855	128,114	
		UNIVERSITY OF MIAMI	SPC-000417	93	855	4,035	
		UNIVERSITY OF MIAMI	5P30AI073961-12	93	855	130,243	
		UNIVERSITY OF MICHIGAN	A18-0705-001	93	855	17,533	
		UNIVERSITY OF MICHIGAN	SUBK00008602	93	855	25,764	
		UNIVERSITY OF MINNESOTA	P004756905	93	855	126,633	
		UNIVERSITY OF MINNESOTA	P004756918	93	855	-736	
		UNIVERSITY OF MINNESOTA	P004756920	93	855	-1,382	
		UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1R01AI114310-01	93	855	-89	
		UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5103294	93	855	-35,293	
		UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5106135	93	855	8,525	
		UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5109463 (AI109965)	93	855	116,924	
		UNIVERSITY OF PENNSYLVANIA	560928	93	855	26,952	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	UNIVERSITY OF PENNSYLVANIA	566950	93	855	79,947		
	UNIVERSITY OF PITTSBURGH	0044312	93	855	70,925		
	UNIVERSITY OF PITTSBURGH	00507171276751	93	855	24,772		
	UNIVERSITY OF PITTSBURGH	R21A1140010	93	855	60,870		
	UNIVERSITY OF SOUTH FLORIDA	6144-1094-00-A	93	855	-11,313		
	UNIVERSITY OF SOUTH FLORIDA	009365	93	855	138,705		
	UNIVERSITY OF SOUTH FLORIDA	6123-1244-20-D-CYC1	93	855	77,224		
	UNIVERSITY OF SOUTH FLORIDA	6123-1247-00-D-CYC1	93	855	2,363		
	UNIVERSITY OF WASHINGTON	008046	93	855	24,137		
	UNIVERSITY OF WASHINGTON	UWSC9531	93	855	18,060		
	UNIVERSITY OF WASHINGTON	UWSC10418	93	855	291,561		
	UNIVERSITY OF WASHINGTON	11593SUB:02	93	855	73,735		
	UNIVERSITY OF WASHINGTON	UWSC10582	93	855	51,975		
	UNIVERSITY OF WISCONSIN-MADISON	1UM1A1114271-01	93	855	425,763		
	UNIVERSITY OF WISCONSIN-MADISON	01A11163282	93	855	3,019		
	UNIVERSITY OF WISCONSIN-MADISON	22C78	93	855	16,317		
	UNIVERSITY OF WISCONSIN-MADISON	892K570	93	855	1,708		
	UNIVERSITY OF WISCONSIN-MADISON	P01A1132132	93	855	14,864		
	VANDERBILT UNIVERSITY MEDICAL CENTER	VUMC 59104	93	855	82,145		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI (A1116194)	93	855	17,491		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI, JOHN C (C13A1159	93	855	22,831		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LOONEY (A1104283)	93	855	13,614		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LOONEY 309176 (A1036214)	93	855	13,530		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI C13A11599 (AI0913	93	855	19,518		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83587	93	855	-401		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	87857	93	855	-549		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88599	93	855	-1,701		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	89025	93	855	83		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RICHMAN (A1126620)	93	855	33,317		
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-18-240 (AI095542)	93	855	26,967		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU18241	93	855	3,783		
	WASHINGTON UNIVERSITY IN ST. LOUIS	82A18	93	855	2,923		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-67-CYC4	93	855	35,180		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-19-125-MOD-1	93	855	28,218		
	YALE UNIVERSITY	GK000160 (CON-80000452)-CYC3	93	855	119,525		
	YALE UNIVERSITY	B5675	93	855	-1		
	YALE UNIVERSITY	M16A12429 (CON-800000481)	93	855	24,331		
	HELUNA HEALTH	A122745	93	855	655,758		
	MICROBEDX INC.	210954-CYC1	93	855	38,177		
	INSTITUTE FOR CLINICAL RESEARCH	83327	93	855	3,946		
	LIGNAMED, LLC	A17-0459	93	855	-20		
	MABDX INC.	A18-1079	93	855	-2,994		
	METHODIST HOSPITAL RESEARCH INSTITUTE, THE	AGMT00002206	93	855	46,742		
	METHODIST HOSPITAL RESEARCH INSTITUTE, THE	C1516	93	855	-1,508		
	THE HEKTOEN INSTITUTE OF MEDICINE	50616-324-UCSF01	93	855	32,940		
	UNIVERSITY OF TORONTO	503460	93	855	317,118		
	VIVREON BIOSCIENCES, LLC	VB-208807-CYC1	93	855	-1,451		
	UNIVERSITY OF RHODE ISLAND	0007489/11012018	93	855	37,903		
	ALBERT EINSTEIN COLLEGE OF MEDICINE	010009	93	855	5,242		
	ALBERT EINSTEIN COLLEGE OF MEDICINE	86988	93	855	11,647		
	VITALANT	11530UCD150	93	855	98,683		
	CROSSLIFE TECHNOLOGIES INC.	SUB 20184957 (A1124779)	93	855	23,952		
	LUMINOSTICS, INC.	CA-0124624	93	855	65,933		
	SOUTHERN MEDICAL UNIVERSITY	SMU-5553612-CYC1	93	855	26,541		
	SUNOMIX THERAPEUTICS INC.	STI-208493-CYC1	93	855	96,147		
					40,314,890	4,649,992	
	Passthrough/Partial Passthrough						
		BRIGHAM AND WOMEN'S HOSPITAL	8721F	93	856	-12,020	
		CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000592 (HD088688)	93	856	268,484	
		DESIGNMEDIX, INC.	873GE	93	856	-44,283	
		EMORY UNIVERSITY	SUB T563785 (AI090023)	93	856	170,830	
		JOHNS HOPKINS UNIVERSITY	SUB 2002244654 (AI068632)	93	856	12,358	
		JOHNS HOPKINS UNIVERSITY	SUB 2004008683(AI068632)	93	856	39,228	
		NORTHEASTERN UNIVERSITY	SUB 500512-78050 (A1127594)	93	856	77,086	
		UNIVERSITY OF MONTANA	SUB PG19-61078-01(HHSN22018000	93	856	53,841	
		UNIVERSITY OF PENNSYLVANIA	SUB 552499 (AI082020)	93	856	59,444	
		VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA BELIAKOVA-BETHELL 317670 (93	856	5,278	
		VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 08705004 (AI08166	93	856	25,946	
		VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 09473001 (A112970	93	856	23,745	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RICHMAN(AI126619)	93	856	21,953		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SPINA (AI122389)	93	856	18,728		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI (AI081668)	93	856	61,835		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	875EC	93	856	20,498		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	8962D	93	856	49,587		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	JPA GUATELLI 318979 (AI129706)	93	856	63,464		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB BEADLE (AI131424)	93	856	43,945		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA VOLLBRECHT 320769 (AI12967	93	856	10,777		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	79457	93	856	-1,586		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	82102	93	856	-4,993		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83556	93	856	-28,057		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	877C2	93	856	-385		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	879BD	93	856	8,971		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	87A99	93	856	22,925		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI (AI116194)	93	856	50,444		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 092040003(AI11619	93	856	12,910		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 094730002 (AI1297	93	856	12,652		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 09473001(AI129706	93	856	59,955		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SPINA (AI104282)	93	856	60,392		
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-19-93 (AI095542)	93	856	103,527		
	GENE THERAPY SYSTEMS, INC.	83034	93	856	-144,781		
					1,122,698		
		Passthrough/Partial Passthrough					
		ADVANCED GENETIC SYSTEMS, INC.	B5558	93	859	-4,968	
		AKONNI BIOSYSTEMS	873B7	93	859	-55,569	
		ARIZONA STATE UNIVERSITY/TEMPE	SUB 15-695 (GM106081)	93	859	19,549	
		ARIZONA STATE UNIVERSITY/TEMPE	SUB 16-798 (GM113967)	93	859	29,540	
		ARIZONA STATE UNIVERSITY/TEMPE	SUB 17-245 (GM121698)	93	859	17,631	
		ARIZONA STATE UNIVERSITY/TEMPE	17-070:02	93	859	133,995	
		BOSTON UNIVERSITY	4500002742	93	859	5,924	
		BROWN UNIVERSITY	00001316	93	859	23,036	
		BROWN UNIVERSITY	R01GM118652	93	859	25,667	
		CAL STATE L.A. UNIVERSITY AUXILIARY SERVICES, INC. (UAS)	UCI231328-CYC3	93	859	5,312	
		CALIFORNIA INSTITUTE OF TECHNOLOGY	68-1095554:03	93	859	216	
		CALIFORNIA INSTITUTE OF TECHNOLOGY	88890	93	859	487	
	CALIFORNIA INSTITUTE OF TECHNOLOGY	5419077	93	859	4,747		
	CALIFORNIA STATE UNIVERSITY, FRESNO FOUNDATION	SC34040435-15-01	93	859	35,298		
	CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	87709	93	859	133		
	CARNEGIE INSTITUTION	6-10736-01	93	859	54,773		
	CASE WESTERN RESERVE UNIVERSITY	RES512970	93	859	6,657		
	CASE WESTERN RESERVE UNIVERSITY	RES512969:1	93	859	10,825		
	CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	12_8036_UCB_01	93	859	100,188		
	CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	12_8036_UCSF_01	93	859	220,901		
	CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	12_8036_UCLA_03:4	93	859	541,937		
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	79860	93	859	3,201		
	CHILDREN'S HOSPITAL OF PHILADELPHIA	3201300819	93	859	7,185		
	CITY UNIVERSITY OF NEW YORK	SUB CM00001969-00 (GM100946)	93	859	110,449		
	COLORADO STATE UNIVERSITY	G-35013-1	93	859	215,219		
	CORNELL UNIVERSITY	008628	93	859	60,554		
	CORNELL UNIVERSITY	63404	93	859	-109		
	CORNELL UNIVERSITY	88510	93	859	38,806		
	DUKE UNIVERSITY	2034849-CYC3	93	859	65,611		
	EMORY UNIVERSITY	8720C	93	859	-528		
	FRED HUTCHINSON CANCER RESEARCH CENTER	0000916050-CYC1	93	859	22,466		
	INDIAN HEALTH COUNCIL, INC.	SUB 20174777 (GM128073)	93	859	73,586		
	INDIAN HEALTH COUNCIL, INC.	SUB 20174885 (GM128073)	93	859	60		
	INDIANA UNIVERSITY	SUB IN-4686392-UCSD (GM120156)	93	859	103,537		
	INSTITUTE FOR SYSTEMS BIOLOGY	SUB 2017.0002 (GM127667)	93	859	96,589		
	IOWA STATE UNIVERSITY	430-21-35A	93	859	47,670		
	JOHNS HOPKINS UNIVERSITY	2002314076	93	859	887		
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	89351	93	859	48,580		
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	CLA-232782	93	859	35,378		
	MEDICAL COLLEGE OF WISCONSIN	63257	93	859	3		
	NANOCOLLECT BIOMEDICAL, INC.	SUB 20181937 (GM128223)	93	859	140,466		
	NATIONAL AUTONOMOUS UNIVERSITY OF MEXICO	201402451	93	859	16,336		
	NORTH CAROLINA STATE UNIVERSITY	2016-3285-01	93	859	108,487		
	NORTHWESTERN UNIVERSITY	SPO029368-PROJ0007727-CYC4	93	859	47,856		
	PENNSYLVANIA STATE UNIVERSITY	5280-UC-DHHS-6044	93	859	177,492		
	ROCKEFELLER UNIVERSITY	1P41GM109824-01	93	859	257,782		

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	ROCKEFELLER UNIVERSITY	1R01GM112108-01A1	93	859	54,044		
	ROCKEFELLER UNIVERSITY	7R01GM107124-02	93	859	25,622		
	SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	60019-13161-UCSB	93	859	48,636		
	ST. JUDE CHILDREN'S RESEARCH HOSPITAL	112156010-7660158	93	859	63,043		
	STANFORD UNIVERSITY	60544676-109623	93	859	26,138		
	STANFORD UNIVERSITY	61000019-469	93	859	68,786		
	STANFORD UNIVERSITY	SUB 61009649-108979 (GM106990)	93	859	62,307		
	STANFORD UNIVERSITY	60684362-112326:5	93	859	339,673		
	STANFORD UNIVERSITY	B3492	93	859	-453		
	STANFORD UNIVERSITY	R01GM079429	93	859	18,290		
	STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	77901	93	859	80,740		
	TEMPLE UNIVERSITY	SUB 258162UC (GM110749)	93	859	44,521		
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53043 (GM100934)	93	859	60,191		
	THE SCRIPPS RESEARCH INSTITUTE	88825	93	859	419		
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53979 (GM133157)	93	859	10,685		
	UNIVERSITY OF CHICAGO	SUB FP063513-02 (GM121964)	93	859	49,823		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY18.726.001_AMD3	93	859	31,854		
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY19.726.001	93	859	101,175		
	UNIVERSITY OF FLORIDA	UFDSP00010901	93	859	30,886		
	UNIVERSITY OF FLORIDA	UFDSP00011896-CYC2	93	859	72,543		
	UNIVERSITY OF ILLINOIS	083118-15900	93	859	470,853		
	UNIVERSITY OF MARYLAND	1903395 REQUEST: 2412	93	859	20,506		
	UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	OSP2018132	93	859	21,673		
	UNIVERSITY OF MASSACHUSETTS SYSTEM	RFS2015073	93	859	22,189		
	UNIVERSITY OF MICHIGAN	3003707885	93	859	82,020		
	UNIVERSITY OF MICHIGAN	3004658793	93	859	27,043		
	UNIVERSITY OF MICHIGAN	SUB 3004563655 (GM070862)	93	859	96,126		
	UNIVERSITY OF MICHIGAN	A16-0292-004	93	859	15,269		
	UNIVERSITY OF MICHIGAN	B4242	93	859	-957		
	UNIVERSITY OF MINNESOTA	SUB 0904509601 (GM110129)	93	859	52,413		
	UNIVERSITY OF MINNESOTA	SUB N002311201 (GM100310)	93	859	138,072		
	UNIVERSITY OF MINNESOTA	H006126301-CYC1	93	859	15,569		
	UNIVERSITY OF NEBRASKA	24-1123-0005-002	93	859	145,298		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105472	93	859	83,962		
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5104882:1	93	859	13,875		
	UNIVERSITY OF PITTSBURGH	81278	93	859	78,282		
	UNIVERSITY OF ROCHESTER	417145/ URFAO: GR510690-CYC1	93	859	2,768		
	UNIVERSITY OF TEXAS-AUSTIN	SUB UTA15-000328 (GM111926)	93	859	59,521		
	UNIVERSITY OF TEXAS-AUSTIN	UTA18-001139	93	859	50,152		
	UNIVERSITY OF UTAH	10044932-06	93	859	208,429		
	UNIVERSITY OF UTAH	SUB 10044932-14(GM082545)	93	859	74,124		
	UNIVERSITY OF VERMONT	31037SUB52164	93	859	30,521		
	UNIVERSITY OF VIRGINIA	GB10352 153125	93	859	141,916		
	UNIVERSITY OF WASHINGTON	UWSC8727:3	93	859	36,807		
	UNIVERSITY OF WISCONSIN-MADISON	80759	93	859	38,935		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA PATEL (GM085179)	93	859	56,833		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA PATEL (GM 085179)	93	859	51,518		
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	873A4	93	859	-852		
	VIRGINIA COMMONWEALTH UNIVERSITY	SUB PD303431-SC105094 (GM10989)	93	859	10,548		
	YESHIVA UNIVERSITY	88716	93	859	-137		
	DUQUESNE UNIVERSITY	G1700082	93	859	20,709		
	SCICRUNCH	20183548 (R41 GM131551)	93	859	38,758		
	AIRMRN, INC.	A19-2028	93	859	12,945		
	INNOSCOUTING LLC	SUB 20190976(NONE)	93	859	74,397		
	NEOVATIVE, INC.	210792-CYC1	93	859	24,718		
	SIMINSIGHTS INC	SI-205886-CYC1	93	859	381		
	ENDOCRINE SOCIETY, THE	87839	93	859	260		
						6,258,208	
		Passthrough/Partial Passthrough					
		SAN DIEGO COMMUNITY COLLEGE DISTRICT	SUB NONE (GM073590)	93	862	18,301	
						18,301	
		Passthrough/Partial Passthrough					
		BAYLOR COLLEGE OF MEDICINE	7000000309:1	93	865	623,506	
		BOSTON MEDICAL CENTER CORPORATION	SUB BMC ID 6928 (HD096798)	93	865	45,444	
		BROWN UNIVERSITY	00001325	93	865	58,126	
		CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	873EA	93	865	910	
		CHAPMAN UNIVERSITY	500480-SUB1-CYC1	93	865	1,661	
		CHILDREN'S HOSPITAL LOS ANGELES	8011-RGF009152-00-2	93	865	259,553	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	136763	93	865	12,748	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	138406	93	865	-258	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	1R01HD07812701	93	865	10,077	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	R21HD090196	93	865	128,790	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	8974D	93	865	13,860	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	139469	93	865	123,851	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	109528	93	865	62,335	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	109556	93	865	63,595	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	89558	93	865	-1	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	B3915	93	865	9,425	
	CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	D2617	93	865	103,775	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	3210050618	93	865	4,304	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	27007-3200880522:1	93	865	6,613	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	SUB 3200880522 (HD091185)	93	865	13,179	
	COLUMBIA UNIVERSITY	2(GG014111):1	93	865	113,731	
	COLUMBIA UNIVERSITY	3(GG010395-06)	93	865	88,635	
	CORNELL UNIVERSITY	17071036-02	93	865	18,863	
	CORNELL UNIVERSITY	15101696-03	93	865	13,712	
	DASCENA, INC.	A132391	93	865	1,307	
	DUKE UNIVERSITY	R01HD081044	93	865	4,641	
	DUKE UNIVERSITY	SUB 197946 215519 (HD 076676)	93	865	116	
	DUKE UNIVERSITY	8715F	93	865	44	
	DUKE UNIVERSITY	SUB 235518(HHSN- 2752010000031	93	865	12,814	
	DUKE UNIVERSITY	A030642	93	865	89,439	
	FARUS, LLC	SUB 015-R44HD082898-UCSD1 (HDO	93	865	25,768	
	FLINT REHABILITATION DEVICES	202871-CYC4	93	865	217,353	
	FLINT REHABILITATION DEVICES	FRD-200966-CYC3	93	865	23,039	
	FLORIDA STATE UNIVERSITY	R01776	93	865	8,909	
	FLORIDA STATE UNIVERSITY	R01988-CYC1	93	865	50,961	
	FLORIDA STATE UNIVERSITY	R01990	93	865	-2,271	
	FLORIDA STATE UNIVERSITY	SUB R01940 (HD089875)	93	865	64,039	
	FLORIDA STATE UNIVERSITY	R02043-CYC1	93	865	200,155	
	GEORGETOWN UNIVERSITY	412949_GR412948-UCD	93	865	81,799	
	GEORGIA INSTITUTE OF TECHNOLOGY	RJ381-G2	93	865	102,877	
	HARVARD PILGRIM HEALTH CARE	AH000583	93	865	113,941	
	HARVARD UNIVERSITY	87418	93	865	418	
	HARVARD UNIVERSITY	88389	93	865	12,006	
	HARVARD UNIVERSITY	SUB 114205-1128-5096796 AMP (H	93	865	278,840	
	HARVARD UNIVERSITY	SUB 114205-1130-5096798 SMARTT	93	865	628,181	
	HARVARD UNIVERSITY	114205-1386-5096800	93	865	99,780	
	HASKINS LABORATORIES, INC	R01HD086168	93	865	14,308	6,056
	HENRY FORD HEALTH SYSTEM	87645	93	865	245,980	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0254-3514-4609	93	865	-17,649	
	JOHNS HOPKINS UNIVERSITY	2002294060	93	865	169,639	
	JOHNS HOPKINS UNIVERSITY	2002295012:4	93	865	144,332	
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209743-UCSF-01	93	865	298,355	
	MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	2625:4	93	865	295,723	
	MASSACHUSETTS GENERAL HOSPITAL	231263	93	865	31,774	
	MASSACHUSETTS GENERAL HOSPITAL	SUB 230910 (HD068250)	93	865	274,176	
	MASSACHUSETTS GENERAL HOSPITAL	SUB 231626 (HD093578)	93	865	70,904	
	MICHIGAN STATE UNIVERSITY	RC106674A-CYC2	93	865	25,098	
	MU-JHU CARE LIMITED	R01HD080476	93	865	43,913	
	NATIONAL OPINION RESEARCH CENTER	3629-UCLA:02	93	865	61,392	
	NATIONWIDE CHILDREN'S HOSPITAL	30002425-05:03	93	865	93,848	
	NATIONWIDE CHILDREN'S HOSPITAL	R01HD091347	93	865	39,250	
	NEW YORK UNIVERSITY	19-A0-00-1002957-CYC1	93	865	28,941	
	NORTHWESTERN UNIVERSITY	60047828UCI-CYC1	93	865	5,848	
	OHIO STATE UNIVERSITY	60061268	93	865	46,509	
	OKLAHOMA STATE UNIVERSITY	1-571918-UCSF	93	865	29,433	
	OREGON HEALTH & SCIENCE UNIVERSITY	9009028_UCLA:7	93	865	5,661	
	OREGON HEALTH & SCIENCE UNIVERSITY	1013129_UCLA	93	865	262,941	
	PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION	20153450 (HD083399)	93	865	28,696	
	PENNSYLVANIA STATE UNIVERSITY	5581-UCI-DHHS-4807-CYC2	93	865	2,387	
	PENNSYLVANIA STATE UNIVERSITY	5970-UCLA-DHHS-0659	93	865	87,348	
	PRINCETON UNIVERSITY	SUB0000136:2	93	865	64,638	
	RADY CHILDREN'S HOSPITAL-SAN DIEGO	SUB 3282-UCSD-S1(HD077693)	93	865	11,312	
	RTI HEALTH SOLUTIONS	SUB NONE (HD054214)	93	865	156,231	132,840
	RTI INTERNATIONAL	89939	93	865	47,847	18,434
	RTI INTERNATIONAL	20163942	93	865	3,219	
	RTI INTERNATIONAL	79809	93	865	-739	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	RTI INTERNATIONAL	88782	93	865	3,149	
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11192SUB	93	865	900	
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11305SUB:2	93	865	39,203	
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11625SUB:1	93	865	178,433	
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	139502	93	865	52,396	
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11447SUB:1	93	865	105	
	SEQUOIA FOUNDATION	9098 UCSF	93	865	1,926	
	STANFORD UNIVERSITY	61269607120188	93	865	326,712	
	STANFORD UNIVERSITY	61245596-117723	93	865	8,591	
	STANFORD UNIVERSITY	61269608-120188	93	865	93,710	
	STANFORD UNIVERSITY	61538053-113992	93	865	-526	
	STANFORD UNIVERSITY	61704698-122525	93	865	295,541	
	STANFORD UNIVERSITY	61764715-116231	93	865	125,603	
	STANFORD UNIVERSITY	01HD094634	93	865	138,720	
	STANFORD UNIVERSITY	61780773-117723	93	865	235,156	
	STANFORD UNIVERSITY	A16-0544-003	93	865	35,217	
	STELLENBOSCH UNIVERSITY	S004190 / 55811	93	865	89,439	
	STELLENBOSCH UNIVERSITY	8729D	93	865	63,210	
	THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	87758	93	865	-832	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000504713-012 (HD061222)	93	865	49,400	
	TULANE UNIVERSITY	SUB TUL-HSC-553714-15/16 (HD52	93	865	15,629	
	TULANE UNIVERSITY	SUB TUL-HSC-553718-15/16 (HD05	93	865	25,358	
	TULANE UNIVERSITY	B6478	93	865	-4	
	TULANE UNIVERSITY	TUL-HSC-555751-17/18	93	865	16,961	
	UNIVERSITY OF ARIZONA	356680	93	865	234,097	
	UNIVERSITY OF CHICAGO	FP036878-03-PR-CR-04-CYC1	93	865	150,670	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	14-036-002:6	93	865	55,154	
	UNIVERSITY OF HAWAII AT MANOA	KA1186 (HD084633)	93	865	47,276	
	UNIVERSITY OF ILLINOIS	092492-17165-CYC1	93	865	27,451	
	UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	ZAC000B0	93	865	20,744	
	UNIVERSITY OF MICHIGAN	R01HD08523303	93	865	126,700	
	UNIVERSITY OF MINNESOTA	H006124302	93	865	10,649	
	UNIVERSITY OF NEVADA, LAS VEGAS/UNLV RESEARCH FOUNDATION	875A3	93	865	-862	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5106227 (HD086139)	93	865	18,613	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	58355	93	865	1,465	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5109010 (HD089880)	93	865	114,836	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105863:1	93	865	429,973	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5109045:1	93	865	66,529	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5111108	93	865	27,833	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5111126	93	865	16,178	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5111132	93	865	38,421	
	UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5113154	93	865	27,674	
	UNIVERSITY OF NOTRE DAME (INCL GEM)	203344UCD	93	865	25,461	
	UNIVERSITY OF PENNSYLVANIA	572609	93	865	2,605	
	UNIVERSITY OF PITTSBURGH	0048860 (126873-15)-CYC1	93	865	21,760	
	UNIVERSITY OF PITTSBURGH	59286	93	865	-38	
	UNIVERSITY OF SOUTHERN CALIFORNIA	009264	93	865	68,408	
	UNIVERSITY OF SOUTHERN CALIFORNIA	60664307:3	93	865	30,341	
	UNIVERSITY OF SOUTHERN CALIFORNIA	87892310-CYC2	93	865	51,767	
	UNIVERSITY OF TENNESSEE	008591	93	865	51,279	
	UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	006993	93	865	473,158	
	UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	GMO 171010	93	865	470,740	
	UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	SUB GMO 190904(HD094395)	93	865	55,668	
	UNIVERSITY OF UTAH	10034012-UCSF	93	865	65,430	
	UNIVERSITY OF UTAH	18-25914	93	865	3,167	
	UNIVERSITY OF UTAH	C0098	93	865	6,930	
	UNIVERSITY OF VIRGINIA	R01HD087413	93	865	3,455	
	UNIVERSITY OF WASHINGTON	UWSC9574-CYC1	93	865	24,457	
	UNIVERSITY OF WASHINGTON	UWSC9985	93	865	15,639	
	VANDERBILT UNIVERSITY MEDICAL CENTER	VUMC 58697-CYC3	93	865	47,095	
	WAYNE STATE UNIVERSITY	8754F	93	865	-327	
	WAYNE STATE UNIVERSITY	WSU17122	93	865	24,883	
	WESTAT	6579-S45	93	865	217,855	
	WESTAT	79227	93	865	-8,745	
	WITS HEALTH CONSORTIUM (PTY) LIMITED	D1404360-01	93	865	11,709	
	YALE UNIVERSITY	GK000090 (CON-80000365)	93	865	70,963	
	YALE UNIVERSITY	GR101949 (CON-80001116)	93	865	184,830	
	YALE UNIVERSITY	M14A12052 (A10949)	93	865	22,545	
	YALE UNIVERSITY	B7756	93	865	20,342	
	YALE UNIVERSITY	B7759	93	865	1,743	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	YESHIVA UNIVERSITY	310897-4	93	865	80,620		
	THE GAIA MEDICAL INSTITUTE LLC	SUB NONE (HD097039)	93	865	2,935		
	KAISER FOUNDATION RESEARCH INSTITUTION	R01HD095128	93	865	48,873		
	CHILDREN'S NATIONAL HEALTH SYSTEM	30002427	93	865	40,498		
	CHILDREN'S NATIONAL HEALTH SYSTEM	58309	93	865	-15,408		
	PATRICIA SULLIVAN CONSULTING	P0515039	93	865	482,681		
	PHOENIX NEST, INC.	SUB 20173598 (HD092110)	93	865	34,159		
	NORTHSHORE UNIVERSITY HEALTHSYSTEM RESEARCH INST	58094	93	865	58,990		
	SHARP HEALTHCARE FOUNDATION	R01HD096023	93	865	567		
	SHARP HEALTHCARE FOUNDATION	SUB #M-R012018 (HD096023)	93	865	73,212		
	UNIVERSITY OF KANSAS MEDICAL CENTER RESEARCH INSTITUTE, INC.	SUB P01000944164 (HD093933)	93	865	3,439		
					12,342,985	157,330	
	Passthrough/Partial Passthrough						
		AFASCI, INC.	201700586	93	866	251,700	
		BOSTON UNIVERSITY	4500001840	93	866	299,210	
		BOSTON UNIVERSITY	4500002826	93	866	26,596	
		BRIGHAM AND WOMEN'S HOSPITAL	111014-6	93	866	178,930	
	BRIGHAM AND WOMEN'S HOSPITAL	81605	93	866	-3,515		
	BRIGHAM AND WOMEN'S HOSPITAL	8784E	93	866	3,994		
	BROWN UNIVERSITY	00000843	93	866	155,910		
	BROWN UNIVERSITY	R01AG051170	93	866	89,462		
	BUCK INSTITUTE FOR RESEARCH ON AGING	SA20026-UC	93	866	24,745		
	BUCK INSTITUTE FOR RESEARCH ON AGING	SA23061	93	866	30,980		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201009-S200	93	866	46,408		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	2803232-S153	93	866	82,279		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201015-S215	93	866	44,613		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201019-S236	93	866	222,382		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	A8392	93	866	-6,907		
	CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	U19AG023122	93	866	554,144		
	CHAPMAN UNIVERSITY	2018-UCSB-AG054442	93	866	186,205		
	COLUMBIA UNIVERSITY	3(GG012904-01)	93	866	-28,566		
	COLUMBIA UNIVERSITY	1(GG010471-09)-CYC1	93	866	1,293,724		
	COLUMBIA UNIVERSITY	1(GG013394-01)-CYC1	93	866	46,832		
	COLUMBIA UNIVERSITY	2(GG010471-11)-CYC1	93	866	127,825		
	DUKE UNIVERSITY	R01AG046171	93	866	39,025		
	EMORY UNIVERSITY	A029539-5	93	866	-53,625		
	FLORIDA STATE UNIVERSITY	R01AG053297	93	866	21,439		
	FRED HUTCHINSON CANCER RESEARCH CENTER	871G9	93	866	10,886		
	FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 0000940803 (AG048209)	93	866	41,166		
	GLADSTONE INSTITUTES	R2468-A	93	866	341,731		
	GLADSTONE INSTITUTES	R2485-A	93	866	102,167		
	GLADSTONE INSTITUTES	R2485-B	93	866	26,492		
	HARVARD UNIVERSITY	116360-5100251-PROJECT 1	93	866	29,059		
	HARVARD UNIVERSITY	116362-5111695	93	866	48,251		
	HARVARD UNIVERSITY	116528-5061518-7	93	866	23,646		
	HEBREW SENIORLIFE INC.	10.10.91561	93	866	18,396		
	HEBREW SENIORLIFE INC.	91511	93	866	11,354		
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1211-4609	93	866	19,606		
	INDIAN HEALTH COUNCIL, INC.	SUB NONE (HS008101)	93	866	545		
	INDIANA UNIVERSITY	IN4683234UCSF	93	866	99,745		
	INDIANA UNIVERSITY	IN-4683237-UCSF	93	866	11,395		
	INDIANA UNIVERSITY	IN4683237UCSF	93	866	244,657		
	INDIANA UNIVERSITY	IN4683234UCSF CS	93	866	3,500		
	INNOSENSE LLC	IS-203749-CYC4	93	866	4,727		
	INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	4001-UCI-DHC-2018-CYC1	93	866	110,860		
	INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	4001-UCI-MBJ-2018-CYC1	93	866	127,050		
	JOHNS HOPKINS UNIVERSITY	2002476658-04	93	866	25,915		
	JOHNS HOPKINS UNIVERSITY	2004171429	93	866	104,445		
	KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	SUB 2015168560 (AG006781)	93	866	57,328		
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG200560-02UCSF	93	866	-5,691		
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209188-UCD	93	866	52,976		
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209188-UCSF	93	866	1,130		
	KAISER PERMANENTE DIVISION OF RESEARCH	88A48	93	866	-108,212		
	KAISER PERMANENTE DIVISION OF RESEARCH	RNG209404-UCSF	93	866	-7,503		
	MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	5246_UCSF	93	866	68,332		
	MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	5246-CYC3	93	866	80,709		
	MASSACHUSETTS GENERAL HOSPITAL	224849-5	93	866	8,463		
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	63788300	93	866	1,167,671		
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	CSF-234899	93	866	96,136		

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	79355	93	866	48,186	
		96467	93	866	5	
		87465	93	866	-410,590	
		WE12015-02	93	866	169,397	
		WE12015-07	93	866	459,611	
		WE12015-18	93	866	142,606	
		U19AG024904	93	866	124,862	
		60047861UCSF	93	866	115,522	
		SUB 60048330 UCSD (AG057441)	93	866	54,083	
		60050621 UCSF	93	866	205,792	
		SUB 60051680 UCSD (AG060426)	93	866	35,475	
		60047943 UCLA:02	93	866	14,535	
		SUB 60051415(AG050725)	93	866	24,336	
		SUB 21603-02 (AG053983)	93	866	100,568	
		21704-03-CYC1	93	866	126,156	
		SUB 21704-02 (AG056499)	93	866	89,282	
		1R01AG060726	93	866	1,691	
		5296-UCM-DHHS-2167	93	866	-472	
		5812-UCI-UWM-K562-CYC1	93	866	17,947	
		929-UCM-NIA-2167	93	866	17,913	
		9920190023-CYC1	93	866	1,784	
		010663	93	866	14,571	
		010324	93	866	37,995	
		0460-CYC1	93	866	96,016	
		SUB P1019113 (AG062232)	93	866	94,900	
		PO35208-CYC1	93	866	104,458	
		SUB 61089692-112006 (AG047366)	93	866	12,606	
		61586177-126873	93	866	33,954	
		61626840-127916-CYC1	93	866	139,986	
		SUB: 61626841-127916 (AG057707)	93	866	91,447	
		89659	93	866	4,432	
		007915	93	866	101,942	
		010412	93	866	55,379	
		SUB 5-53402 (AG057459)	93	866	45,074	
		87981	93	866	-20,427	
		310311	93	866	371,180	
		R01AG054621	93	866	31,466	
		FP0567154R37AG033590	93	866	116,094	
		FP056715-C:3	93	866	20,011	
		FY18.792.002	93	866	54,585	
		87BC5	93	866	6,094	
		FY19.830.004	93	866	24,308	18,792
		SUB 17170 (AG010161)	93	866	12,114	
		SUB OSP2018054 (AG045050)	93	866	17,672	
		SPC-000392	93	866	309,565	
		SUB SPC-000546 (AG056952)	93	866	15,585	
		3003282032	93	866	16,096	
		3002601380:9	93	866	192,617	
		A9473	93	866	-1,750	
		U01AG012495	93	866	57,486	21,872
		U01AG017719	93	866	3,247	
		SUB RF00016-2017-0033(AG051848	93	866	124,864	
		SUB RF00110-2018-0022(AG058252	93	866	229,192	
		RF00105-2018-0317	93	866	31,290	
		SUB RF00029-2019-0045 (AG05184	93	866	99,658	
		SUB RF00032-2019-0101 (AG05853	93	866	20,797	
		567734	93	866	13,470	
		571660	93	866	398,859	
		83002	93	866	-661	
		83202	93	866	-31,939	
		89075	93	866	970	
		89792	93	866	-12,320	
		SUB 576372 (AG061173)	93	866	129,280	
		0046842 (126362-2)-3	93	866	219,965	
		0061853 (131905-1)-CYC1	93	866	2,772	
		80876	93	866	117,692	
		416927-CYC4	93	866	73,149	
		1253-1118-00-A-CYC3	93	866	202,139	
		6118-1082-00-C	93	866	75,674	
		008717	93	866	38,583	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	UNIVERSITY OF SOUTHERN CALIFORNIA	64911596/10422190-CYC4	93	866	3,099	
	UNIVERSITY OF SOUTHERN CALIFORNIA	75696718	93	866	-35,851	
	UNIVERSITY OF SOUTHERN CALIFORNIA	79685690	93	866	141,972	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 79634313 (WEI2015-01)	93	866	84,345	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 80648183(AG037985)	93	866	6,474	
	UNIVERSITY OF SOUTHERN CALIFORNIA	75691348/A4 NIH	93	866	18,602	
	UNIVERSITY OF SOUTHERN CALIFORNIA	873BD	93	866	-4,059	
	UNIVERSITY OF SOUTHERN CALIFORNIA	873GC	93	866	1,507	
	UNIVERSITY OF SOUTHERN CALIFORNIA	93306651	93	866	-958	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 103366912(AG047992)	93	866	34,736	
	UNIVERSITY OF SOUTHERN CALIFORNIA	010210	93	866	50,412	
	UNIVERSITY OF SOUTHERN CALIFORNIA	010298	93	866	52,528	
	UNIVERSITY OF SOUTHERN CALIFORNIA	105741448-CYC1	93	866	323,246	
	UNIVERSITY OF SOUTHERN CALIFORNIA	105751256	93	866	93,345	
	UNIVERSITY OF SOUTHERN CALIFORNIA	105828736	93	866	100,493	
	UNIVERSITY OF SOUTHERN CALIFORNIA	106132015	93	866	83,863	
	UNIVERSITY OF SOUTHERN CALIFORNIA	106529702-CYC1	93	866	93,977	
	UNIVERSITY OF SOUTHERN CALIFORNIA	107784754-CYC1	93	866	89,543	
	UNIVERSITY OF SOUTHERN CALIFORNIA	109150990-CYC1	93	866	29,747	
	UNIVERSITY OF SOUTHERN CALIFORNIA	54096768:4	93	866	39,916	
	UNIVERSITY OF SOUTHERN CALIFORNIA	58867	93	866	1,647	
	UNIVERSITY OF SOUTHERN CALIFORNIA	75685631/106050036:02	93	866	7,223	
	UNIVERSITY OF SOUTHERN CALIFORNIA	78389953:2	93	866	37,723	
	UNIVERSITY OF SOUTHERN CALIFORNIA	78802	93	866	-41	
	UNIVERSITY OF SOUTHERN CALIFORNIA	79376	93	866	-18	
	UNIVERSITY OF SOUTHERN CALIFORNIA	79483	93	866	-56,138	
	UNIVERSITY OF SOUTHERN CALIFORNIA	79635074:01	93	866	28,630	
	UNIVERSITY OF SOUTHERN CALIFORNIA	87544370-CYC1	93	866	93,431	
	UNIVERSITY OF SOUTHERN CALIFORNIA	96456291	93	866	15,470	
	UNIVERSITY OF SOUTHERN CALIFORNIA	96477971:1	93	866	18,015	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 107080396(AG055367)	93	866	135,426	36,307
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 109161761 (AG059329)	93	866	25,902	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 112743702 (AG060470)	93	866	38,776	
	UNIVERSITY OF SOUTHERN CALIFORNIA	U24AG057437	93	866	91,563	
	UNIVERSITY OF SOUTHERN CALIFORNIA	103118915:1	93	866	442,604	
	UNIVERSITY OF SOUTHERN CALIFORNIA	80108370:4	93	866	66,786	
	UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	R01AG054076-03	93	866	146,090	
	UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON	18-84378-3-CYC1	93	866	16,525	
	UNIVERSITY OF TEXAS SYSTEM	18-018:1	93	866	16,287	
	UNIVERSITY OF TEXAS-AUSTIN	UTA16-000684-CYC1	93	866	20,220	
	UNIVERSITY OF UTAH	R01AG055606	93	866	-5,132	
	UNIVERSITY OF UTAH	79577	93	866	16,972	
	UNIVERSITY OF VERMONT	30340 SUB0002 UCSF	93	866	7,469	
	UNIVERSITY OF VERMONT	SUB 32667SUB53009(AG059451)	93	866	5,419	
	UNIVERSITY OF WASHINGTON	762200	93	866	27,746	
	UNIVERSITY OF WASHINGTON	SUB 752710 (AG16976)	93	866	38,380	
	UNIVERSITY OF WASHINGTON	SUB UWSC10150 (AG056711)	93	866	67,291	
	UNIVERSITY OF WASHINGTON	UWSC9789	93	866	14,174	
	UNIVERSITY OF WASHINGTON	SUB UWSC10651 (AG016976)	93	866	24,878	
	UNIVERSITY OF WASHINGTON	UWSC10655	93	866	43,510	
	UNIVERSITY OF WASHINGTON	UWSC7732-CYC5	93	866	26,592	
	UNIVERSITY OF WISCONSIN-MADISON	674K660	93	866	2,423	
	UNIVERSITY OF WISCONSIN-MADISON	SUB 793K041 (AG057784)	93	866	59,608	
	UNIVERSITY OF WISCONSIN-MADISON	708K363:2	93	866	90,937	
	UNIVERSITY OF WISCONSIN-MADISON	832K871	93	866	134,806	
	UNIVERSITY OF WISCONSIN-MADISON	834K190	93	866	823,986	
	UNIVERSITY OF WISCONSIN-MADISON	834K234	93	866	50,611	
	UNIVERSITY OF WISCONSIN-MADISON	809K012:1	93	866	38,798	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (AG053325)	93	866	25,725	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83500	93	866	-474	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83502	93	866	-7,995	
	VIRGINIA COMMONWEALTH UNIVERSITY	FP00001819_SA001:2	93	866	73,102	
	WAKE FOREST UNIVERSITY	88650	93	866	-31,095	
	WAKE FOREST UNIVERSITY	SUB WFUHS 118269 (AG060897)	93	866	58,926	
	WAKE FOREST UNIVERSITY	WFUHS 551083	93	866	12,636	
	WASHINGTON UNIVERSITY IN ST. LOUIS	88601	93	866	-151,114	
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-14-333 (AG032438)	93	866	15,274	
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-15-135 (AG049369)	93	866	1,170,907	
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-19-168(AG049369)	93	866	32,258	
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-18-425	93	866	8	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-19-20	93	866	962,306		
	YALE UNIVERSITY	GR101447 (CON-80001091):01	93	866	128,901		
	YALE UNIVERSITY	GR104659(CON-80001481)	93	866	23,333		
	YESHIVA UNIVERSITY	57606	93	866	839		
	KAISER FOUNDATION RESEARCH INSTITUTION	RNG29404-UCI-CYC1	93	866	156,895		
	KAISER FOUNDATION RESEARCH INSTITUTION	76865	93	866	-894		
	UNIVERSITY OF TORONTO	UOFT-209025-CYC1	93	866	2,109		
	VIVREON BIOSCIENCES, LLC	VB-211713-CYC1	93	866	121,592		
	KECK GRADUATE INSTITUTE OF APPLIED LIFE SCIENCES	GR750000UCI-CYC2	93	866	6,818		
	SCRIPPS RESEARCH INSTITUTE (FLORIDA)	86878	93	866	42,649		
	TEXAS A&M HEALTH SCIENCE CENTER	SUB M1703563 (AG056574)	93	866	21,730		
	AMYDIS DIAGNOSTICS	SUB 20184137 (AG058350)	93	866	169,725		
	AMYDIS DIAGNOSTICS	SUB 20190908(AG057421)	93	866	70,779		
	ELIMU INFORMATICS, INC.	SUB 37 (AG058357)	93	866	34,477		
	SPINOGENIX, INC.	SI-209411-CYC1	93	866	143,036		
					18,485,425	76,971	
		Passthrough/Partial Passthrough					
		BAYLOR COLLEGE OF MEDICINE	7000000842	93	867	581,131	
		BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE	008636	93	867	4,757	
		CALIFORNIA INSTITUTE OF TECHNOLOGY	58016	93	867	373	
		CALIFORNIA INSTITUTE OF TECHNOLOGY	S378172:2	93	867	84,861	
		CASE WESTERN RESERVE UNIVERSITY	RES512338-CYC1	93	867	28	
		CASE WESTERN RESERVE UNIVERSITY	RES514042-CYC1	93	867	28,820	
		CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	B1684	93	867	-43,578	
		CHILDREN'S HOSPITAL OF PHILADELPHIA	3209850813	93	867	6,032	
		CORNELL UNIVERSITY	R01EY027036	93	867	202,196	
		CORNELL UNIVERSITY	161219952	93	867	50,864	
		CORNELL UNIVERSITY	18304502	93	867	146,835	
		ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-0731-4609	93	867	72,897	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-7713-4609	93	867	47,417		
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	U10EY025990	93	867	172,731		
	JAEB CENTER FOR HEALTH RESEARCH, INC.	06002685	93	867	785		
	JAEB CENTER FOR HEALTH RESEARCH, INC.	201603120	93	867	7,169		
	JAEB CENTER FOR HEALTH RESEARCH, INC.	SU10 EY011751-20	93	867	20,270		
	JAEB CENTER FOR HEALTH RESEARCH, INC.	B0015	93	867	1,057		
	JAEB CENTER FOR HEALTH RESEARCH, INC.	SUB NONE (EY11751)	93	867	2,903		
	JAEB CENTER FOR HEALTH RESEARCH, INC.	C02/U10 EY11751	93	867	3,461		
	JAEB CENTER FOR HEALTH RESEARCH, INC.	U10 EY11751	93	867	2,526		
	JOHNS HOPKINS UNIVERSITY	2002473559	93	867	8,325		
	JOHNS HOPKINS UNIVERSITY	2002507432:04	93	867	28,799		
	JOHNS HOPKINS UNIVERSITY	79665	93	867	-799		
	JOHNS HOPKINS UNIVERSITY	A9888	93	867	16,719		
	MEDICAL COLLEGE OF WISCONSIN	1U24EY029891-01	93	867	186,773		
	PENNSYLVANIA STATE UNIVERSITY	U10EY023533	93	867	3,119		
	PENNSYLVANIA STATE UNIVERSITY	UCDEY023533	93	867	137		
	PENNSYLVANIA STATE UNIVERSITY	80953	93	867	54,213		
	STANFORD UNIVERSITY	63405	93	867	-9		
	STANFORD UNIVERSITY	63344	93	867	6,581		
	STANFORD UNIVERSITY	A00-1375-006	93	867	28,465		
	STANFORD UNIVERSITY	R01EY028287	93	867	62,967		
	THE SCRIPPS RESEARCH INSTITUTE	SUB 5-53499(EY028642)	93	867	39,605		
	THE SCRIPPS RESEARCH INSTITUTE	5-27164	93	867	157,126		
	THE SCRIPPS RESEARCH INSTITUTE	88612	93	867	1,537		
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000512884 (EY026574)	93	867	396,770		
	UNIVERSITY OF IOWA	89143	93	867	443		
	UNIVERSITY OF LOUISVILLE RESEARCH FOUNDATION, INC.	ULRF 17-0884-01-CYC2	93	867	110,166		
	UNIVERSITY OF MICHIGAN	3004645125:1	93	867	143,303		
	UNIVERSITY OF MICHIGAN	SUB 3004210904(EY026641)	93	867	4,682		
	UNIVERSITY OF OKLAHOMA	SUB RS20151124 (EY025947)	93	867	-13,773		
	UNIVERSITY OF ROCHESTER	417376G / UR FAO GR510807	93	867	35,724		
	UNIVERSITY OF SOUTHERN CALIFORNIA	54529007	93	867	80,647		
	UNIVERSITY OF SOUTHERN CALIFORNIA	16935UCLA:1	93	867	4,844		
	UNIVERSITY OF SOUTHERN CALIFORNIA	72730838-CYC4	93	867	100,125		
	UNIVERSITY OF SOUTHERN CALIFORNIA	79508336:1	93	867	188,800		
	UNIVERSITY OF TEXAS-AUSTIN	UTA18-000547	93	867	20,365		
	UNIVERSITY OF WASHINGTON	UWSC7854	93	867	236,407		
	UNIVERSITY OF WASHINGTON	UWSC10239	93	867	78,477		
	UNIVERSITY OF WASHINGTON	U01HL130114	93	867	19,244		
	VALITOR, INC.	A128186	93	867	-1,816		

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-16-120 (EY025181)	93	867	15,908		
	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-16-20 (EY025183)	93	867	79,787		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-119	93	867	664		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU1871	93	867	340,758		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-230-MOD-3	93	867	244,711		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-121-MOD-3	93	867	4,186		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-122-MOD-3/2934575E	93	867	9,596		
	WASHINGTON UNIVERSITY IN ST. LOUIS	WU-19-248-CYC1	93	867	95,058		
	YALE UNIVERSITY	GR100289-CYC2	93	867	65,940		
	UNIVERSITY OF LOUISVILLE	ULRF 17-0884-02:1	93	867	132,086		
	LINEAGE CELL THERAPEUTICS, INC.	BTI-207738-CYC2	93	867	228,311		
					4,608,503		
	Passthrough/Partial Passthrough	STANFORD UNIVERSITY	R01EB026094	93	876	91,329	91,329
	Passthrough/Partial Passthrough	DREXEL UNIVERSITY	800096	93	877	18,259	18,259
	Passthrough/Partial Passthrough	CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	16-17-LO-G0075000-UCLA:01	93	879	82,018	
	COLUMBIA UNIVERSITY	1(GG012264)	93	879	105,441		
	NORTHWESTERN UNIVERSITY	A18-0375-001	93	879	18,972		
	UNIVERSITY OF UTAH	89197	93	879	-5,174		
					201,257		
Passthrough/Partial Passthrough	CALIFORNIA DEPARTMENT OF INSURANCE	160351A	93	881	117,545	117,545	
Passthrough/Partial Passthrough	WASHINGTON UNIVERSITY IN ST. LOUIS	SUB-WU-17-344 (P01AG051443)	93	886	89,861	89,861	
Passthrough/Partial Passthrough	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1810056	93	898	64,519	64,519	
Passthrough/Partial Passthrough	LOS ANGELES COUNTY DEPARTMENT OF MENTAL HEALTH	PH-003304	93	914	694,907	694,907	
Passthrough/Partial Passthrough	BOSTON UNIVERSITY	4500002529	93	928	21,737	21,737	
Passthrough/Partial Passthrough	INDIAN HEALTH COUNCIL, INC.	SUB 102313 (IHS0081-01-00)	93	933	32,071	32,071	
Passthrough/Partial Passthrough	FHI 360	953/0080.0142:11	93	936	33,035	33,035	
Passthrough/Partial Passthrough	CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	58114	93	937	-25,613	-25,613	
Passthrough/Partial Passthrough	HELUNA HEALTH	12U65PS004454	93	939	504,111	504,111	
Passthrough/Partial Passthrough	HELUNA HEALTH	0471.0101	93	940	30,076	30,076	
Passthrough/Partial Passthrough	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	27515	93	945	419		

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DEPARTMENT OF HEALTH AND HUMAN SERVICES					419	
	Passthrough/Partial Passthrough PUBLIC HEALTH INSTITUTE	01483-CYC1	93	959	73,621 73,621	
	Passthrough/Partial Passthrough CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000468 (HP28717)	93	969	222,548 222,548	
	Passthrough/Partial Passthrough FHI 360	780/0080.0214:06	93	977	32,908 32,908	
	Passthrough/Partial Passthrough EDUARDO MONDLANE UNIVERSITY EDUARDO MONDLANE UNIVERSITY EDUARDO MONDLANE UNIVERSITY GEORGIA INSTITUTE OF TECHNOLOGY JOHNS HOPKINS UNIVERSITY LOMA LINDA UNIVERSITY (INCL NATL MEDICAL TECHNOLOGY TESTBED, INC.) MAKERERE UNIVERSITY UNIVERSITY OF SOUTH FLORIDA YALE UNIVERSITY YALE UNIVERSITY MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES	SUB C0010 (TW010135) 87531 SUB C0012(TW011216) RF135-G1 2002590467 2170175:1 MAKCHS062017 1211-1065-00-D GK000694 (CON-8000637) SUB GR105447(CON-80001660) (TW D71-MU01 1R25-04	93 93 93 93 93 93 93 93 93 93 93	989 989 989 989 989 989 989 989 989 989 989	59,449 179 47,856 170,447 4,435 81,110 16,494 233,842 -22,760 17,961 19,412 9,113 637,537	11,197 11,197
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10016	93	994	1,808,144 1,808,144	647,115 647,115
	Direct					
	ADMH PHS (SAMHSA) MENTAL HEALTH - CENTER FOR MENTAL HEALTH SERVICES	VARIOUS	93	RD	227,223	
	ADMH PHS (SAMHSA) PREVENTION - CENTER FOR SUBSTANCE ABUSE PREVENTION	VARIOUS	93	RD	1,165,927	531,003
	ADMH PHS (SAMHSA) TREATMENT - CENTER FOR SUBSTANCE ABUSE TREATMENT	VARIOUS	93	RD	26,786	
	AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	VARIOUS	93	RD	261,836	
	CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	RD	28,496,118	10,159,769
	CDC NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH	VARIOUS	93	RD	2,281,003	28,272
	ENVIRONMENTAL HEALTH SCIENCES, NATIONAL INSTITUTE OF	VARIOUS	93	RD	2,119,183	418,178
	FDA PHS FOOD AND DRUG ADMINISTRATION	VARIOUS	93	RD	5,936,014	563,162
	HCFA CENTERS FOR MEDICARE AND MEDICAID SERVICES	VARIOUS	93	RD	590,658	
	HRSA HHS OFFICE OF MINORITY HEALTH	VARIOUS	93	RD	456,938	
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	RD	15,337,216	3,025,997
	NIH AGING, NATIONAL INSTITUTE ON	VARIOUS	93	RD	157,014,049	19,250,800
	NIH ALCOHOL ABUSE AND ALCOHOLISM, NATIONAL INSTITUTE OF	VARIOUS	93	RD	19,939,685	2,938,298
	NIH ARTHRITIS, MUSCULOSKELETAL & SKIN DISEASES, NATIONAL INSTITUTE OF	VARIOUS	93	RD	37,992,070	1,118,705
	NIH CHILD HEALTH & HUMAN DEVELOPMENT, NATIONAL INSTITUTE OF	VARIOUS	93	RD	78,021,162	9,588,714
	NIH DEAFNESS & OTHER COMMUNICATION DISORDERS, NATIONAL INSTITUTE ON	VARIOUS	93	RD	19,410,548	741,564
	NIH DENTAL AND CRANIOFACIAL RESEARCH,NATIONAL INSTITUTE OF	VARIOUS	93	RD	32,581,350	2,766,488
	NIH DIABETES, DIGESTIVE & KIDNEY DISEASES, NATIONAL INSTITUTE OF	VARIOUS	93	RD	100,292,445	7,003,350
	NIH DRUG ABUSE, NATIONAL INSTITUTE OF	VARIOUS	93	RD	68,546,267	14,084,274
	NIH ENVIRONMENTAL HEALTH SCIENCES, NATIONAL INSTITUTE OF	VARIOUS	93	RD	38,848,039	4,475,290
	NIH JOHN F. FOGARTY INTERNATIONAL CENTER	VARIOUS	93	RD	6,164,410	2,025,431
	NIH MEDICINE, NATIONAL LIBRARY OF	VARIOUS	93	RD	4,348,081	357,802
	NIH MENTAL HEALTH, NATIONAL INSTITUTE OF (NIMH)	VARIOUS	93	RD	148,804,154	19,294,228
	NIH NATIONAL CANCER INSTITUTE	VARIOUS	93	RD	247,810,056	48,672,806
	NIH NATIONAL CENTER FOR ADVANCING TRANSLATIONAL SCIENCES	VARIOUS	93	RD	2,544	
	NIH NATIONAL CENTER FOR COMPLEMENTARY AND INTEGRATIVE HEALTH	VARIOUS	93	RD	8,015,639	690,135
	NIH NATIONAL EYE INSTITUTE	VARIOUS	93	RD	58,630,524	3,144,335
	NIH NATIONAL HEART, LUNG AND BLOOD INSTITUTE	VARIOUS	93	RD	156,864,380	20,189,791
	NIH NATIONAL HUMAN GENOME RESEARCH INSTITUTE	VARIOUS	93	RD	28,516,289	3,045,923
	NIH NATIONAL INST OF ALLERGY AND INFECTIOUS DISEASES	VARIOUS	93	RD	247,230,926	57,447,980
	NIH NATIONAL INSTITUTE OF BIOMEDICAL IMAGING AND BIOENGINEERING	VARIOUS	93	RD	35,387,193	4,900,520
	NIH NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCE	VARIOUS	93	RD	239,046,295	17,527,984
	NIH NATIONAL INSTITUTE ON MINORITY HEALTH AND HEALTH DISPARITIES	VARIOUS	93	RD	7,421,015	1,291,322
	NIH NATIONAL INSTITUTES OF HEALTH CENTER FOR SCIENTIFIC REVIEW	VARIOUS	93	RD	32,170,685	497,188
	NIH NATIONAL INSTITUTES OF HEALTH OFFICE OF THE DIRECTOR	VARIOUS	93	RD	36,074,685	5,141,428
	NIH NEUROLOGICAL DISORDERS & STROKE, NATIONAL INSTITUTE OF	VARIOUS	93	RD	144,621,010	19,400,097

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	NIH NIH NATIONAL CENTER FOR ADVANCING TRANSLATIONAL SCIENCES	VARIOUS	93	RD	55,887,248	5,432,054
	NIH NIH/MISCELLANEOUS AGENCIES & DEPARTMENTS	VARIOUS	93	RD	15,980,703	378,884
	NIH NURSING RESEARCH, NATIONAL INSTITUTE OF	VARIOUS	93	RD	7,081,114	567,208
	OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	VARIOUS	93	RD	11,677	
	PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	VARIOUS	93	RD	9,763,270	1,036,009
	PHS PHS OFFICE OF ADOLESCENT HEALTH	VARIOUS	93	RD	783,506	38,513
	PHS PHS OFFICE OF WOMEN'S HEALTH	VARIOUS	93	RD	536,147	27,206
	SEC ADMINISTRATION FOR COMMUNITY LIVING	VARIOUS	93	RD	1,342,701	238,628
	SEC HHS OFFICE OF THE SECRETARY	VARIOUS	93	RD	268,696	
	NIH NATIONAL HEART, LUNG AND BLOOD INSTITUTE (ARRA)	VARIOUS	93	RD	-3	
	NIH NATIONAL INSTITUTES OF HEALTH CLINICAL CENTER	VARIOUS	93	RD	78,467	
	CDC CENTERS FOR DISEASE CONTROL AND PREVENTION (ARRA)	VARIOUS	93	RD	108,609	
	AGING, NATIONAL INSTITUTE ON	VARIOUS	93	RD	736,997	59,430
	CHILD HEALTH & HUMAN DEVELOPMENT, NATIONAL INSTITUTE OF	VARIOUS	93	RD	1,206,026	75,643
	DIABETES, DIGESTIVE & KIDNEY DISEASES, NATIONAL INSTITUTE OF	VARIOUS	93	RD	267,520	
	DRUG ABUSE, NATIONAL INSTITUTE OF	VARIOUS	93	RD	797,863	93,440
	JOHN F. FOGARTY INTERNATIONAL CENTER	VARIOUS	93	RD	110,050	
	MENTAL HEALTH, NATIONAL INSTITUTE OF (NIMH)	VARIOUS	93	RD	1,333,119	598,603
	NATIONAL CANCER INSTITUTE	VARIOUS	93	RD	650,276	
	NATIONAL EYE INSTITUTE	VARIOUS	93	RD	1,336,176	486,957
	NATIONAL HEART, LUNG AND BLOOD INSTITUTE	VARIOUS	93	RD	290,147	
	NATIONAL HUMAN GENOME RESEARCH INSTITUTE	VARIOUS	93	RD	2,490,034	1,072,370
	NATIONAL INST OF ALLERGY AND INFECTIOUS DISEASES	VARIOUS	93	RD	1,854,941	
	NATIONAL INSTITUTE OF BIOMEDICAL IMAGING AND BIOENGINEERING	VARIOUS	93	RD	163,045	
	NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCE	VARIOUS	93	RD	499,733	
	NATIONAL INSTITUTE ON MINORITY HEALTH AND HEALTH DISPARITIES	VARIOUS	93	RD	184,844	
	NEUROLOGICAL DISORDERS & STROKE, NATIONAL INSTITUTE OF	VARIOUS	93	RD	591,776	
	NIH DENTAL AND CRANIOFACIAL RESEARCH,NATIONAL INSTITUTE OF (ARRA)	VARIOUS	93	RD	2,020	
	NIH NIH NATIONAL CENTER FOR RESEARCH RESOURCES	VARIOUS	93	RD	-1,732	
	OHDS HHSOHDS/MISCELLANEOUS AGENCIES & DEPARTMENTS	VARIOUS	93	RD	571,444	123,510
	PHS PHS HEALTH, ASSISTANT SECRETARY FOR	VARIOUS	93	RD	80,266	
	NIH NATIONAL CANCER INSTITUTE	VARIOUS	93	RD	13,369	
	NIH NATIONAL HEART, LUNG AND BLOOD INSTITUTE	VARIOUS	93	RD	59,617	
	NIH NATIONAL INST OF ALLERGY AND INFECTIOUS DISEASES	VARIOUS	93	RD	49,270	
	Passthrough/Partial Passthrough					
	BUCK INSTITUTE FOR RESEARCH ON AGING	SA40002-UC	93	RD	26,373	
	CALIFORNIA ASSOCIATION OF HEALTH FACILITIES	201502630	93	RD	-351	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1511002	93	RD	204,654	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1820B	93	RD	2	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	18-10610	93	RD	77,506	
	CELLERANT THERAPEUTICS, INC.	79617	93	RD	2,089	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	950008021512C	93	RD	32,291	
	COLD SPRING HARBOR LABORATORY	64580239	93	RD	144,163	
	COLORADO STATE UNIVERSITY	G-33752-01	93	RD	272,762	
	COLUMBIA UNIVERSITY	U19A1067773	93	RD	213	
	COLUMBIA UNIVERSITY	1(GG012976-05)	93	RD	98,421	
	COLUMBIA UNIVERSITY	1(GG013057-08)	93	RD	287,940	
	COLUMBIA UNIVERSITY	1(GG013057-09)	93	RD	203,810	
	COLUMBIA UNIVERSITY	2(GG013057-04)	93	RD	58,146	
	COLUMBIA UNIVERSITY	4(GG012936-01)	93	RD	177,981	
COMMUNITY HEALTH IMPROVEMENT PARTNERS	SUB 5834-122-01 (DP005834)	93	RD	10,165		
DANA-FARBER CANCER INSTITUTE	R01CA172067	93	RD	12,003		
DUKE UNIVERSITY	SUB 206993 (2752010000031)	93	RD	-2,182		
DUKE UNIVERSITY	203-6729	93	RD	80,712		
DUKE UNIVERSITY	2036702	93	RD	746		
DUKE UNIVERSITY	A03-1227	93	RD	13,665		
ETHIOPIAN PUBLIC HEALTH ASSOCIATION	88951	93	RD	-288		
FHI 360	PO16001621	93	RD	269,945	261,048	
FHI 360	PO17003415	93	RD	157,910	126,648	
FLORIDA STATE UNIVERSITY	R02075	93	RD	202,168		
GLADSTONE INSTITUTES	60270	93	RD	-6		
GLADSTONE INSTITUTES	R2491-A	93	RD	100,206		
GLADSTONE INSTITUTES	R2512-A	93	RD	23,284		
HARVARD PILGRIM HEALTH CARE	PH000615C	93	RD	3,792		
HARVARD UNIVERSITY	112199-5106829	93	RD	19,011		
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	02580512HHSN272201400008C	93	RD	324,723		
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8680-4609	93	RD	82,610		
KAISER PERMANENTE DIVISION OF RESEARCH	OOS030104-UCB	93	RD	10,712		
LANKENAU INSTITUTE FOR MEDICAL RESEARCH	06297-0793	93	RD	162,301		
LEIDOS BIOMEDICAL RESEARCH, INC.	16X114	93	RD	328,858		

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	LEIDOS BIOMEDICAL RESEARCH, INC.	39A96	93	RD	-1,738	
	LP THERAPEUTICS, INC.	201602618	93	RD	49,158	
	MANDALMED, INC.	A128262	93	RD	328,883	
	MASSACHUSETTS GENERAL HOSPITAL	87A57	93	RD	761	
	MASSACHUSETTS GENERAL HOSPITAL	NN101	93	RD	-5,298	
	MASSACHUSETTS GENERAL HOSPITAL	27966	93	RD	1	
	MASSACHUSETTS GENERAL HOSPITAL	232788	93	RD	12,197	
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	80890	93	RD	40,647	
	MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	A126667	93	RD	2,938	
	MITCHELL GROUP, INC.	TMG/OASIS-SAREL- YEAR 5-2017/2	93	RD	97,576	
	MOUNT SINAI MEDICAL CENTER	UH3AT009149-CYC1	93	RD	4,245	
	N2 BIOMEDICAL	008514	93	RD	71,966	
	NANOCELECT BIOMEDICAL, INC.	SUB 20183492 (DA045460)	93	RD	70,000	
	NATIONAL FRAGILE X FOUNDATION	201603349	93	RD	3,346	
	NATIONWIDE CHILDREN'S HOSPITAL	700179-0623-00	93	RD	1,814	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	NEY2150-01	93	RD	4,981	
	NORTHROP GRUMMAN CORPORATION	7500128578	93	RD	42,007	
	OREGON HEALTH & SCIENCE UNIVERSITY	201500026	93	RD	158,909	
	OREGON HEALTH & SCIENCE UNIVERSITY	S1320	93	RD	1,010	
	OREGON HEALTH & SCIENCE UNIVERSITY	1010095_UCDAVIS	93	RD	184,905	
	OREGON HEALTH & SCIENCE UNIVERSITY	1010517_UCBERKELEY_A5	93	RD	34,831	
	PUBLIC HEALTH INSTITUTE	88529	93	RD	613	
	Q-CHEM, INC.	046857	93	RD	24,989	
	Q-CHEM, INC.	046858	93	RD	3,719	
	RAND CORP	9920180101	93	RD	11,067	
	REVERAGEN BIOPHARMA, INC.	201701161	93	RD	32,479	
	REVERAGEN BIOPHARMA, INC.	201701162	93	RD	13,489	
	REVERAGEN BIOPHARMA, INC.	A18-2621	93	RD	14,575	
	RUSH UNIVERSITY MEDICAL CENTER	15122904-SUB01-CYC1	93	RD	36,896	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-S5S-S-15-004544	93	RD	557,258	
	SRI INTERNATIONAL	21912	93	RD	33,382	
	ST. JUDE CHILDREN'S RESEARCH HOSPITAL	HSN272201400006C	93	RD	4,194	
	STANFORD UNIVERSITY	61624544-45510	93	RD	109,820	
	STANFORD UNIVERSITY	61799594-131106	93	RD	132,603	
	STANFORD UNIVERSITY	61835904-125082	93	RD	62,089	
	STANFORD UNIVERSITY	61947242-44290	93	RD	65,028	
	STANFORD UNIVERSITY	61962502-131179	93	RD	57,220	
	STANFORD UNIVERSITY	61987623-135726	93	RD	115,306	
	STATE OF MARYLAND	17-17509-G	93	RD	265	
	STOCHASTECH CORPORATION	201700616	93	RD	20,858	
	SUNY UNIVERSITY AT ALBANY	18-9	93	RD	190,461	2,782
	SUTTER WEST BAY HOSPITALS	280201015-S216	93	RD	149,485	
	TELESECURITY SCIENCES, INC.	TSS160003	93	RD	218	
	THE SCRIPPS RESEARCH INSTITUTE	SUB ADVANCE APPROVAL	93	RD	148,440	
	THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	502889SP004001	93	RD	456,985	
	UNIVERSITY OF COLORADO DENVER	FY18.572.001-CYC1	93	RD	14,385	
	UNIVERSITY OF COLORADO DENVER	FY19.001.012-CYC1	93	RD	97,347	
	UNIVERSITY OF FLORIDA	36A79	93	RD	-1	
	UNIVERSITY OF FLORIDA	SUB 20090630 (NIDDK/NIAID/NICH)	93	RD	-44,373	
	UNIVERSITY OF IOWA	W000696003	93	RD	47,683	
	UNIVERSITY OF IOWA	R01AR070031	93	RD	188,701	
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3200002154-19-256-CYC1	93	RD	3,702	
	UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3200001431-18-177	93	RD	13,548	
	UNIVERSITY OF MARYLAND	-20746001	93	RD	111,313	
	UNIVERSITY OF MARYLAND, BALTIMORE	1400243L-CYC1	93	RD	225,592	
	UNIVERSITY OF MASSACHUSETTS AMHERST	18-009932 B00	93	RD	77,967	
	UNIVERSITY OF MICHIGAN	3004829743-CYC1	93	RD	20,925	
	UNIVERSITY OF MICHIGAN	3004686906	93	RD	95,858	
	UNIVERSITY OF PENNSYLVANIA	562134	93	RD	6,555	
	UNIVERSITY OF PENNSYLVANIA	572701	93	RD	203,742	
	UNIVERSITY OF PENNSYLVANIA	574270	93	RD	63,146	
	UNIVERSITY OF PENNSYLVANIA	60235	93	RD	-5,642	
	UNIVERSITY OF ROCHESTER	417207	93	RD	1,034	
	UNIVERSITY OF ROCHESTER	417342-G / UR FAO GR510790	93	RD	36,333	
	UNIVERSITY OF SOUTH FLORIDA	09000015	93	RD	1,372	
	UNIVERSITY OF SOUTHERN CALIFORNIA	100574101-CYC1	93	RD	160,843	
	UNIVERSITY OF SOUTHERN CALIFORNIA	107897015	93	RD	1,929	
	UNIVERSITY OF SOUTHERN CALIFORNIA	110623667	93	RD	109,209	
	UNIVERSITY OF SOUTHERN CALIFORNIA	90972930	93	RD	-1,079	
	UNIVERSITY OF TEXAS-AUSTIN	UTA18-000127	93	RD	2,930	

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			Prefix	Extension	Federal Expenditures		
DEPARTMENT OF HEALTH AND HUMAN SERVICES	UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	83117	93	RD	-733		
	UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	82496	93	RD	-9,521		
	UNIVERSITY OF UTAH	10035609	93	RD	7,110		
	UNIVERSITY OF UTAH	B6060	93	RD	45,301		
	UNIVERSITY OF VERMONT	28557SUBUCDAVIS	93	RD	4,762		
	UNIVERSITY OF WASHINGTON	3UH3MH106338	93	RD	31,424		
	UNIVERSITY OF WASHINGTON	762195	93	RD	212,330		
	UNIVERSITY OF WASHINGTON	UWSC10779	93	RD	92,215		
	WESTAT	SUB S8954 (HHSN271201100027C)	93	RD	185,222		
	YALE UNIVERSITY	GR100911 (CON-80000973)	93	RD	113,157		
	YALE UNIVERSITY	GR102957 (CON-80001272)	93	RD	130,146		
	YESHIVA UNIVERSITY	311172	93	RD	195,576		
	HELUNA HEALTH	044418	93	RD	88,901		
	HELUNA HEALTH	044812	93	RD	51,562		
	HELUNA HEALTH	046669	93	RD	28,617		
	HELUNA HEALTH	SPO#16150	93	RD	191		
	CELL BIOLOGICS, INC.	PA-16-303	93	RD	65,577		
	NANOMIX INC.	A18-1309	93	RD	9,249		
	RADOPTICS LLC	009094	93	RD	32,533		
	RADOPTICS LLC	010010	93	RD	25,328		
	UNIVERSITY OF COLOMBO	2223475-CYC1	93	RD	50,633		
	HENNEPIN HEALTHCARE RESEARCH INSTITUTE	HHSH250201500009C	93	RD	19,694		
	ALLEN INSTITUTE	2017-0573	93	RD	841,851	14,762	
	MEADOWLARK OPTICS, INC.	044261	93	RD	148,678		
	PEOPLE POWER COMPANY	045076	93	RD	251,493		
	THE EMMES COMPANY, LLC	82569	93	RD	-1,137		
	VITALANT	10841UCD132	93	RD	41,213		
	CHICAGO ASSOCIATION FOR RESEARCH AND EDUCATION IN SCIENCE	CSP LUO 0001	93	RD	-589		
	ENABLE BIOSCIENCES INC.	D2141	93	RD	14,741		
	IMATREX, INC.	21C47	93	RD	94,277		
	THERANOSTEC INC.	A19-2859	93	RD	3,554		
	DEPARTMENT OF HEALTH AND HUMAN SERVICES Total					2,126,718,620	290,954,529
	CORPORATION FOR NATIONAL AND COMMUNITY SRVC					2,356,021,078	299,688,690
		Passthrough/Partial Passthrough					
		JUMPSTART FOR YOUNG CHILDREN, INC.	88601	94	006	702	
		JUMPSTART FOR YOUNG CHILDREN, INC.	89522	94	006	-921	
	JUMPSTART FOR YOUNG CHILDREN, INC.	18-490200-CYC20	94	006	49,707		
	JUMPSTART FOR YOUNG CHILDREN, INC.	880200-CYC1	94	006	152,032		
	JUMPSTART FOR YOUNG CHILDREN, INC.	89057	94	006	-100		
					201,419		
	Direct						
	CORPORATION FOR NATIONAL AND COMMUNITY SERVICE	VARIOUS	94	RD	127,982		
	Passthrough/Partial Passthrough						
	JUMPSTART FOR YOUNG CHILDREN, INC.	60368	94	RD	15,015		
	JUMPSTART FOR YOUNG CHILDREN, INC.	880200	94	RD	73,099		
					216,096		
CORPORATION FOR NATIONAL AND COMMUNITY SRVC Total					417,515		
SOCIAL SECURITY ADMINISTRATION							
	Passthrough/Partial Passthrough						
	CHILDREN'S HOSPITAL OF PHILADELPHIA	UM1CA228823	96	395	7,429		
					7,429		
	Passthrough/Partial Passthrough						
	XERIS PHARMACEUTICALS, INC.	A129827	96	847	10,617		
					10,617		
	Passthrough/Partial Passthrough						
	UNIVERSITY OF MICHIGAN	3004717564	96	RD	1,613		
					1,613		
SOCIAL SECURITY ADMINISTRATION Total					19,659		
DEPARTMENT OF HOMELAND SECURITY							
	Passthrough/Partial Passthrough						
	THE CENTER FOR RURAL DEVELOPMENT	FY140009203UCDAVIS	97	005	-62		
					-62		
	Passthrough/Partial Passthrough						
	HRL LABORATORIES, LLC	14089-503866-DS-CYC10	97	007	2,196		
	UNIVERSITY OF SOUTHERN CALIFORNIA	73880521	97	007	-10,031		

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DEPARTMENT OF HOMELAND SECURITY	SURESCAN CORPORATION	042378	97	007	19,400	
					11,565	
	Passthrough/Partial Passthrough					
	SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB 20174100-SIBS (EMW-2016-FP	97	044	255,551	
	SKIDMORE COLLEGE	32170-1	97	044	125,480	
					381,030	
	Passthrough/Partial Passthrough					
	ARIZONA STATE UNIVERSITY/TEMPE	ASU-209466-CYC2	97	061	90,157	10,962
					90,157	10,962
	Passthrough/Partial Passthrough					
	GEORGE MASON UNIVERSITY	78319	97	065	4,697	
					4,697	
	Passthrough/Partial Passthrough					
	PEPPERPRINT	UCB2015-HSHQDC-15-C-B0010	97	077	91,059	
UNIVERSITY OF OREGON	251370A:4	97	077	70,107		
				161,166		
Passthrough/Partial Passthrough						
UNIVERSITY OF ILLINOIS	2016-01414-03-7850:3	97	108	54,439		
				54,439		
Direct						
DEPARTMENT OF HOMELAND SECURITY	VARIOUS	97	RD	2,301,365	64,977	
Passthrough/Partial Passthrough						
SIGNATURE SCIENCE, LLC	S1020	97	RD	51,588		
				2,352,953	64,977	
DEPARTMENT OF HOMELAND SECURITY Total				3,055,946	75,939	
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT						
Passthrough/Partial Passthrough						
ASTRAEA NATIONAL LESBIAN ACTION FOUNDATION	GLHRP---15--1	98	001	232,136	100,000	
INTERNATIONAL BUSINESS & TECHNICAL CONSULTANTS, INC.	15-IBTCI-00027	98	001	41,873		
INTERNATIONAL PLANNED PARENTHOOD FEDERATION	SIFPO2-SA3-51214010	98	001	1,971		
NATIONAL ACADEMY OF SCIENCES	2000007143	98	001	70,394		
NATIONAL ACADEMY OF SCIENCES	009660	98	001	123,287		
NATIONAL ACADEMY OF SCIENCES	2000009144	98	001	84,959		
OHIO STATE UNIVERSITY	60054302	98	001	39,640		
PARTNERS IN HOPE (MALAWI)	81019	98	001	-128		
POPULATION COUNCIL - NEW YORK	SH1503	98	001	27,626		
RIGHT TO CARE	20163138:3	98	001	1,003,768		
SOCIAL IMPACT, INC.	85427	98	001	-1		
SUSTAINABLE SCIENCES INSTITUTE	USAID-4100-2	98	001	29,368		
TUFTS UNIVERSITY	201502576	98	001	144,099	4,219	
UCP WHEELS FOR HUMANITY	80041	98	001	65,916		
UNIVERSITY OF FLORIDA	UFDSP00011429	98	001	185,279	53,979	
UNIVERSITY RESEARCH CO., LLC	041898	98	001	383,342		
				2,433,528	158,197	
Passthrough/Partial Passthrough						
NORTHEASTERN UNIVERSITY	500421-78053	98	865	14,609		
				14,609		
Passthrough/Partial Passthrough						
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER	016258	98	RD	377,029	158,449	
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER	IWYP76FP	98	RD	293,723		
MAKERERE UNIVERSITY	MAKSPH-001-18	98	RD	63,765		
MICHIGAN STATE UNIVERSITY	RC107526 UC DAVIS	98	RD	63,314		
NATIONAL ACADEMY OF SCIENCES	2000006165	98	RD	8,274		
NATIONAL ACADEMY OF SCIENCES	2000007151	98	RD	35,755		
NATIONAL ACADEMY OF SCIENCES	AID0AAA1100012	98	RD	122,703		
INTERNATIONAL RESCUE COMMITTEE, INC	60556	98	RD	27,225		
INTERNATIONAL RESCUE COMMITTEE, INC	AID-OFDA-A-17-00064	98	RD	33,070		
ALLEN INSTITUTE	2014-0571	98	RD	191,167		
GLOBAL ALLIANCE FOR IMPROVED NUTRITION	201864738	98	RD	172,870		
				1,388,896	158,449	
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT Total				3,837,033	316,646	
OTHER FEDERAL AGENCIES						

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OTHER FEDERAL AGENCIES	Direct					
	CONSUMER FINANCIAL PROTECTION BUREAU	VARIOUS	99	RD	-4,093	
	FEDERAL COMMUNICATIONS COMMISSION	VARIOUS	99	RD	37,294	
	Passthrough/Partial Passthrough					
	3E TECHNOLOGIES INTERNATIONAL, INC.	59639	99	RD	2,224	
	3E TECHNOLOGIES INTERNATIONAL, INC.	58681	99	RD	2,293	
	AERODYNE RESEARCH, INC.	ARI 11423-1	99	RD	130,929	
	AEROSPACE CORPORATION	4600005842	99	RD	57,373	
	AEROSPACE CORPORATION	20182871	99	RD	73,534	
	AGNITRON TECHNOLOGY, INC.	59020	99	RD	28,584	
	AGNITRON TECHNOLOGY, INC.	SB180133	99	RD	241,699	
	AGNITRON TECHNOLOGY, INC.	SB190231	99	RD	6,662	
	ALMOND BOARD OF CALIFORNIA	18.HARV3A/EHSANI	99	RD	30,088	
	AMERICAN PHYSICAL SOCIETY	PHY-1622510 AND DE-SC0011076	99	RD	19,608	
	AMERICAN THROMBOSIS AND HEMOSTASIS NETWORK	ATHN2014 ATHN 2 842 1	99	RD	-23,904	
	AMES LABORATORY	SC-19-492	99	RD	182,305	
	ANGSTROM DESIGNS ENGRG SERVS	NASA STTR UCSB 101617-UCSB04	99	RD	111,521	
	ARGONNE NATIONAL LABORATORY	9F-60030	99	RD	58,225	
	ARGONNE NATIONAL LABORATORY (DOE GOCO LAB OPERATED BY UNIV OF CHICAGO)	8F-30189	99	RD	8,946	
	ARIZONA STATE UNIVERSITY/TEMPE	17-253	99	RD	96,558	
	ARIZONA STATE UNIVERSITY/TEMPE	A16-0487-007	99	RD	18,452	
	ARIZONA STATE UNIVERSITY/TEMPE	ASUB00000010	99	RD	15,442	
	ARIZONA STATE UNIVERSITY/TEMPE	ASUB00000021	99	RD	522,705	
	ARIZONA STATE UNIVERSITY/TEMPE	ASUB00000189	99	RD	53,941	
	ARIZONA STATE UNIVERSITY/TEMPE	ASUB00000244	99	RD	28,059	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15031.001-A	99	RD	13,448	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14474.001-A	99	RD	10,104	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15344.001-A	99	RD	51,856	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB HST-GO-14610.010-A (NAS5-2	99	RD	214	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB HST-GO-14675.008-A (NAS5-2	99	RD	160	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	010021	99	RD	44,595	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15014.003-A	99	RD	73,057	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15032.002-A	99	RD	84,978	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15039.003-A	99	RD	50,309	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15222.001-A	99	RD	6,974	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15225.002-A	99	RD	9,841	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15356.002-A	99	RD	43,645	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB HST-GO- 15461.001-A (NAS5-	99	RD	31,874	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB HST-GO-14606.006-A (NAS5-	99	RD	46,816	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	SUB HST-GO-15080.001-A(NONE)	99	RD	17,210	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-15006.003-A	99	RD	33,330	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13742.005-A	99	RD	15,373	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13826.019-A	99	RD	9,239	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14154.001-A	99	RD	3,225	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14808.002-A	99	RD	112,759	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14894.004-A	99	RD	1,056	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14922.003-A	99	RD	19,963	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14936.001-A	99	RD	8,945	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15172.001-A	99	RD	707	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15176.002-A	99	RD	694	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15265.002-A	99	RD	4,440	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15275.012-A	99	RD	45,177	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15396.004-A	99	RD	1,555	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15476.001-A	99	RD	5,053	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51405.001-A	99	RD	87,433	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51412.001-A	99	RD	101,431	
	ATOX BIO	SUB ATB-202 (HHSO1002014000013	99	RD	54,823	
	BAE SYSTEMS (GREAT BRITAIN)	1017370	99	RD	12,304	
	BATTELLE MEMORIAL INSTITUTE	009536	99	RD	26,093	
	BATTELLE MEMORIAL INSTITUTE	009657	99	RD	47,221	
	BATTELLE MEMORIAL INSTITUTE	217103	99	RD	7,082	
	BAYLOR COLLEGE OF MEDICINE	79093	99	RD	-8,571	
	BCN BIOSCIENCES	79279	99	RD	100,388	
	BOEING COMPANY, THE	PO NO. 1169752	99	RD	34,326	
	BOEING COMPANY, THE	1468949	99	RD	-26,270	
	BOEING COMPANY, THE	1477408	99	RD	3,753	
	BOISE STATE UNIVERSITY	20163497	99	RD	32,897	
	BOOZ ALLEN HAMILTON INC.	S900815BAH	99	RD	73,087	
	BOOZ ALLEN HAMILTON INC.	S901742BAH TO 1	99	RD	22,545	
	BOOZ ALLEN HAMILTON INC.	S901742BAH TO 2	99	RD	18,972	

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			Prefix	Extension	Federal Expenditures	
OTHER FEDERAL AGENCIES	BORON SPECIALTIES, LLC	20181672	99	RD	100,044	
	BOSTON UNIVERSITY	4500002882	99	RD	25,935	
	BRIGHTON YOUNG UNIVERSITY	A15-0216-004	99	RD	211,971	
	BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A00-1382-019	99	RD	56,658	
	CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	14418	99	RD	15,428	
	CALIFORNIA DEPARTMENT OF EDUCATION	CN150380:2	99	RD	-10,170	20,979
	CALIFORNIA DEPARTMENT OF EDUCATION	CN170223	99	RD	10,990	5,845
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	SUB 16-10844 (NONE)	99	RD	410,630	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	182BB	99	RD	2,272	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	18-10003	99	RD	8,694	
	CALIFORNIA STATE COASTAL CONSERVANCY	15-050	99	RD	1,223	
	CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S18-0019	99	RD	256,254	
	CARNEGIE MELLON UNIVERSITY	009950	99	RD	49,973	
	CEDARS-SINAI MEDICAL CENTER	0001395754	99	RD	42,845	
	CHROMOLOGIC	HHSN272201700012C	99	RD	-9,468	
	COGNIONICS, INC.	SUB UCSD093016 (W81XWH-18-C-00	99	RD	157,329	
	COLORADO SCHOOL OF MINES	401245-5803	99	RD	196,181	
	COLORADO STATE UNIVERSITY	007958	99	RD	148,899	
	COLORADO STATE UNIVERSITY	G-01688:01	99	RD	4,193	
	COLUMBIA UNIVERSITY	1(GG013379)	99	RD	43,380	
	CREARE INCORPORATED	CREARE 83251	99	RD	7,519	
	CREARE INCORPORATED	CREARE S609 (PO 94476)	99	RD	48,810	
	DANA-FARBER CANCER INSTITUTE	SUB 20171987(NONE)	99	RD	9,679	
	DCS CORPORATION	SUB APX03-S024 (W911NF-10-D-00	99	RD	42,517	
	DISTANT FOCUS CORPORATION	SUB P4010 (W15QKN-17-C-0008)	99	RD	31,991	
	DUKE UNIVERSITY	SUB 20144899 (HHSN-27520100000	99	RD	8,499	
	DUKE UNIVERSITY	SUB 203-8494 (HHSN275201000003	99	RD	2,587	
	DUKE UNIVERSITY	235432	99	RD	4,667	
	DUKE UNIVERSITY	77661	99	RD	-2,937	
	DUKE UNIVERSITY	873C9	99	RD	5,021	
	EASTERN RESEARCH GROUP, INC.	010082	99	RD	20,317	
	EASTERN RESEARCH GROUP, INC.	010393	99	RD	22,201	
	EDUCATION, TRAINING & RESEARCH ASSOCIATES	63483	99	RD	380,963	
	EDUCATION, TRAINING & RESEARCH ASSOCIATES	65004	99	RD	115,090	
	EDUCATION, TRAINING & RESEARCH ASSOCIATES	A00-0714-005	99	RD	265,099	
	ENGILITY CORP.	SUB PO-0011431 14463-PETTT-UCS	99	RD	243,804	
	ENGILITY CORP.	877E8	99	RD	95,274	
	ERC, INCORPORATED	PO NO. PS150006	99	RD	13,883	
	ERC, INCORPORATED	PO NO. PS150008	99	RD	13,254	
	ERC, INCORPORATED	PS180038	99	RD	72,553	
	FAST-TRACK DRUGS & BIOLOGICS, LLC	HHSN27500008-1078-NCIG7-UCLA	99	RD	144,891	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	009911	99	RD	40,000	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	644405:1	99	RD	461,515	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	646772	99	RD	29,143	
	FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	654315	99	RD	43,599	
	FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 0000865653 (HHSN2682016000	99	RD	57,047	
	FREEDOM PHOTONICS LLC	S7017-01	99	RD	155,319	
	FREEDOM PHOTONICS LLC	S7104-01	99	RD	20,157	
	FREEDOM PHOTONICS LLC	59201	99	RD	573	
	FREEDOM PHOTONICS LLC	59212	99	RD	88	
	FREEDOM PHOTONICS LLC	S7132-01	99	RD	102,160	
	FREEDOM PHOTONICS LLC	S7135-02	99	RD	5,879	
	GALOIS INC	2015-007	99	RD	324,367	
	GALOIS INC	2017-002	99	RD	43,388	
	GENERAL ATOMICS	4500059085	99	RD	577,360	
	GENERAL ATOMICS	SUB 4500071386 (DE-SC0018108)	99	RD	162,529	
	GENERAL ELECTRIC COMPANY (INCL GE HEALTHCARE, GE LIGHTING INST)	PO NO. 401109530	99	RD	19,407	
	GLOBAL ALGAE INNOVATIONS	171038	99	RD	343,124	
	GLOBAL SCIENCES & TECHNOLOGY, INC.	877GF	99	RD	-644	
	HASS AVOCADO BOARD	20164932	99	RD	34,621	
	HEALTH RESEARCH AND EDUCATION TRUST	80781	99	RD	7,276	
	HLS RESEARCH, INC.	89333	99	RD	-351	
	HONEYWELL INTERNATIONAL INC.	350172674E	99	RD	285,703	
	HONEYWELL INTERNATIONAL INC.	3502468901E	99	RD	156,421	
	HP INC.	CW2275044	99	RD	98,342	
	HRL LABORATORIES, LLC	16129-173125-QS	99	RD	128,308	
	HYPRES, INC.	009530	99	RD	19,012	
	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	D3987	99	RD	18,247	
	INDIANA UNIVERSITY	IN4685446UCSF	99	RD	4,418	
	INFERLINK CORPORATION	79046	99	RD	5,208	

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OTHER FEDERAL AGENCIES	INFOSCITEX CORPORATION	A16-0500-004	99	RD	15,151	
	INTERNATIONAL BUSINESS MACHINES CORPORATION	W911NF-16-3-0001	99	RD	332,860	
	INTERNATIONAL BUSINESS MACHINES CORPORATION	4918005468	99	RD	56,860	
	INTERNATIONAL BUSINESS MACHINES CORPORATION	CW2926115	99	RD	234,618	
	IQ SOLUTIONS INC.	WERB09.20.17	99	RD	53,021	
	IQ SOLUTIONS INC.	8952F	99	RD	-4,928	
	JET PROPULSION LABORATORY	A16-0081-001	99	RD	87,793	
	JET PROPULSION LABORATORY	11588413:001	99	RD	29,189	
	JET PROPULSION LABORATORY	1551859:002	99	RD	4,139	
	JET PROPULSION LABORATORY	1576352	99	RD	18,548	
	JET PROPULSION LABORATORY	1576353	99	RD	233,905	
	JET PROPULSION LABORATORY	1581189	99	RD	86,032	
	JET PROPULSION LABORATORY	1581439	99	RD	60,703	
	JET PROPULSION LABORATORY	1584220	99	RD	4,957	
	JET PROPULSION LABORATORY	1585610	99	RD	150,259	
	JET PROPULSION LABORATORY	1587173	99	RD	26,489	
	JET PROPULSION LABORATORY	1587256	99	RD	8,578	
	JET PROPULSION LABORATORY	1587312	99	RD	16,319	
	JET PROPULSION LABORATORY	1587430	99	RD	12,942	
	JET PROPULSION LABORATORY	1587490	99	RD	195,377	
	JET PROPULSION LABORATORY	1587631	99	RD	68,687	
	JET PROPULSION LABORATORY	1587992	99	RD	44,961	
	JET PROPULSION LABORATORY	1589511	99	RD	1,183	
	JET PROPULSION LABORATORY	1590154	99	RD	32,329	
	JET PROPULSION LABORATORY	1590158	99	RD	150,710	
	JET PROPULSION LABORATORY	1590202	99	RD	5,722	
	JET PROPULSION LABORATORY	1591172	99	RD	21,887	
	JET PROPULSION LABORATORY	1592509	99	RD	83,393	
	JET PROPULSION LABORATORY	1594502	99	RD	61,432	
	JET PROPULSION LABORATORY	1594653	99	RD	70,395	
	JET PROPULSION LABORATORY	1596092	99	RD	109,781	
	JET PROPULSION LABORATORY	1601851	99	RD	30,806	
	JET PROPULSION LABORATORY	1605992	99	RD	6,460	
	JET PROPULSION LABORATORY	57144	99	RD	72,780	
	JET PROPULSION LABORATORY	57566	99	RD	-2,561	
	JET PROPULSION LABORATORY	SUB1588114 (NONE)	99	RD	46,773	
	JET PROPULSION LABORATORY	1385250:017	99	RD	41,892	
	JET PROPULSION LABORATORY	1424022:029	99	RD	46,991	
	JET PROPULSION LABORATORY	1525520:003	99	RD	89,982	
	JET PROPULSION LABORATORY	1561962:003	99	RD	24,978	
	JET PROPULSION LABORATORY	1564163	99	RD	27,436	
	JET PROPULSION LABORATORY	1568167:002	99	RD	18,405	
	JET PROPULSION LABORATORY	1578669:002	99	RD	862,787	
	JET PROPULSION LABORATORY	1580267:004	99	RD	382,938	
	JET PROPULSION LABORATORY	1581388	99	RD	5,583	
	JET PROPULSION LABORATORY	1585114	99	RD	10,620	
	JET PROPULSION LABORATORY	1589490:002	99	RD	15,713	
	JET PROPULSION LABORATORY	1591277:002	99	RD	376,017	10,115
	JET PROPULSION LABORATORY	1593244:002	99	RD	3,830	
	JET PROPULSION LABORATORY	1594400	99	RD	51,956	
	JET PROPULSION LABORATORY	1602115:001	99	RD	47,904	
	JET PROPULSION LABORATORY	1605109	99	RD	7,275	
	JET PROPULSION LABORATORY	1605140	99	RD	7,275	
	JET PROPULSION LABORATORY	1605150	99	RD	7,275	
	JET PROPULSION LABORATORY	1605352	99	RD	9,275	
	JET PROPULSION LABORATORY	1605816	99	RD	9,275	
	JET PROPULSION LABORATORY	1607035	99	RD	8,638	
	JET PROPULSION LABORATORY	1607668	99	RD	85,907	
	JET PROPULSION LABORATORY	1607936	99	RD	36,571	
	JET PROPULSION LABORATORY	1608885	99	RD	6,211	
	JET PROPULSION LABORATORY	1610641	99	RD	5,670	
	JET PROPULSION LABORATORY	1610879	99	RD	30,062	
	JET PROPULSION LABORATORY	1612338	99	RD	31,844	
	JET PROPULSION LABORATORY	1614568	99	RD	74,111	
	JET PROPULSION LABORATORY	1614619	99	RD	43,432	
	JET PROPULSION LABORATORY	1615143	99	RD	9,657	
	JET PROPULSION LABORATORY	1615472	99	RD	82,064	
	JET PROPULSION LABORATORY	1616122	99	RD	5,511	
	JET PROPULSION LABORATORY	1616469	99	RD	70,647	
	JET PROPULSION LABORATORY	1616608	99	RD	34,392	

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OTHER FEDERAL AGENCIES	JET PROPULSION LABORATORY	1617451	99	RD	120,981	
	JET PROPULSION LABORATORY	1617725	99	RD	3,351	
	JET PROPULSION LABORATORY	1620598	99	RD	23,252	
	JET PROPULSION LABORATORY	1622593	99	RD	9,005	
	JET PROPULSION LABORATORY	1623803-CYC1	99	RD	3,544	
	JET PROPULSION LABORATORY	78040	99	RD	25,587	
	JET PROPULSION LABORATORY	79220	99	RD	-21,703	
	JET PROPULSION LABORATORY	A18-0107	99	RD	22,537	
	JET PROPULSION LABORATORY	1576945	99	RD	47,104	
	JET PROPULSION LABORATORY	1578100:002	99	RD	13,923	
	JET PROPULSION LABORATORY	1587840	99	RD	18,605	
	JET PROPULSION LABORATORY	1591586	99	RD	7,399	
	JET PROPULSION LABORATORY	1595546	99	RD	-39	
	JET PROPULSION LABORATORY	1599512	99	RD	5,271	
	JET PROPULSION LABORATORY	1599746	99	RD	108,150	
	JET PROPULSION LABORATORY	1603071:001	99	RD	67,644	
	JET PROPULSION LABORATORY	1606278	99	RD	42,101	
	JET PROPULSION LABORATORY	1607065	99	RD	8,186	
	JET PROPULSION LABORATORY	1607550	99	RD	14,753	
	JET PROPULSION LABORATORY	1612758	99	RD	121,682	
	JET PROPULSION LABORATORY	1623639	99	RD	66,766	
	JET PROPULSION LABORATORY	1625574	99	RD	729	
	JET PROPULSION LABORATORY	1626612	99	RD	8,612	
	JET PROPULSION LABORATORY	1628771	99	RD	17,440	
	JOHNS HOPKINS UNIVERSITY	118127:4	99	RD	5,784	
	JOHNS HOPKINS UNIVERSITY	042646	99	RD	24,907	
	JOHNS HOPKINS UNIVERSITY	20190850	99	RD	62,657	
	KAISER PERMANENTE DIVISION OF RESEARCH	OOS030284 - UCSF	99	RD	17,677	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A17-0824-001	99	RD	23,222	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	25035	99	RD	-737	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A17-0491-003	99	RD	66,803	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B623027	99	RD	74,604	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B627365	99	RD	88,686	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B628096	99	RD	306,219	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	SUB B626625 (B623353)	99	RD	15,815	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	86276	99	RD	-334	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618798:1	99	RD	64,622	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B629453	99	RD	47,288	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B630009	99	RD	52,752	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B631991	99	RD	27,212	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B632821	99	RD	9,139	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B633255	99	RD	49,112	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B633579	99	RD	3,665	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	SUB B629114 (B623353)	99	RD	19,790	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	SUB B632472 (B623353)	99	RD	94,447	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B625851	99	RD	24,118	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B626618	99	RD	163,651	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B627680	99	RD	12,235	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B628592	99	RD	79,829	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B628597	99	RD	105,000	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B629225	99	RD	97,952	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B630453	99	RD	99,820	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B631639	99	RD	44,054	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618203	99	RD	40,505	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B629734	99	RD	11,183	
	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	26723	99	RD	1,013	
	LEIDOS, INC.	20180936	99	RD	551,501	
	LEIDOS, INC.	P010123388 R7	99	RD	5,334	
	LEIDOS, INC.	P010207183 TASK ORDER 1	99	RD	2,551	
	LEIDOS, INC.	P010207183 TASK ORDER 2	99	RD	24,196	
	LINKED, INC.	20175172	99	RD	210,082	
	LOCKHEED MARTIN CORPORATION	59428	99	RD	2,258	
	LOCKHEED MARTIN CORPORATION	59438	99	RD	444	
	LOCKHEED MARTIN CORPORATION	4103676491	99	RD	24,924	
	LOS ALAMOS NATIONAL SECURITY, LLC	419069	99	RD	74,383	
	LOS ALAMOS NATIONAL SECURITY, LLC	466292	99	RD	133,003	
	LOS ALAMOS NATIONAL SECURITY, LLC	468451	99	RD	89,987	
	LOS ALAMOS NATIONAL SECURITY, LLC	411352:1	99	RD	22,707	
	LOS ALAMOS NATIONAL SECURITY, LLC	525705	99	RD	52,065	
	LOS ALAMOS NATIONAL SECURITY, LLC	77762	99	RD	-5,343	

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OTHER FEDERAL AGENCIES	LOS ALAMOS NATIONAL SECURITY, LLC	442172	99	RD	18,949	
	LOS ALAMOS NATIONAL SECURITY, LLC	487034	99	RD	41,435	
	LOS ANGELES POLICE FOUNDATION	20144647	99	RD	35,187	
	LOYOLA UNIVERSITY OF CHICAGO	SUB 206499 (DK104718)	99	RD	120,458	
	LUNA INNOVATIONS INCORPORATED	3500.02UCSB	99	RD	4,921	
	LUNA INNOVATIONS INCORPORATED	59436	99	RD	12,385	
	MASSACHUSETTS GENERAL HOSPITAL	SUB 20162263(NS090259)	99	RD	60,554	
	MAXENTRIC TECHNOLOGIES LLC	SUB UCSD-4313-1 (W911QX-16-C-0	99	RD	73,521	
	MAXENTRIC TECHNOLOGIES LLC	20184852	99	RD	41,543	
	MIDWEST RESEARCH INST	XEJ-9-82309-01:1	99	RD	41,945	
	MIDWEST RESEARCH INST	XGJ-9-92039-01	99	RD	45,693	
	MIDWEST RESEARCH INST	XEJ-8-82269-01	99	RD	2,672	
	MOLECULAR EXPRESS	HHSN272201700081C	99	RD	10,525	
	MORTON PHOTONICS	MP-UCSB-05	99	RD	31,303	
	MORTON PHOTONICS	MP-UCSB-06	99	RD	16,540	
	MORTON PHOTONICS	MP-UCSB-08	99	RD	142,766	
	MORTON PHOTONICS	MP-UCSB-09	99	RD	33,085	
	MORTON PHOTONICS	MP-UCSB-10	99	RD	16,127	
	MORTON PHOTONICS	MP-UCSB-11	99	RD	10,260	
	MORTON PHOTONICS	MP-UCSB-12	99	RD	5,298	
	NATIONAL ACADEMY OF SCIENCES	200008303	99	RD	103,954	
	NATIONAL FISH AND WILDLIFE FOUNDATION	0806.18.059767	99	RD	156,612	
	NATIONAL FISH AND WILDLIFE FOUNDATION	0806.18.059850	99	RD	97,439	4,988
	NATIONAL FISH AND WILDLIFE FOUNDATION	SA17-3877-01	99	RD	19,763	
	NEVADA SYSTEM OF HIGHER EDUCATION	UNR 17-70	99	RD	15,833	
	NEW ENGLAND RESEARCH INSTITUTE, INC.	BEST-CLI	99	RD	1,230	
	NORTH PACIFIC RESEARCH BOARD	26886	99	RD	53,199	
	NORTHROP GRUMMAN CORPORATION	8140000936	99	RD	70,898	
	NORTHROP GRUMMAN CORPORATION	79164	99	RD	559	
	NORTHWESTERN UNIVERSITY	010555	99	RD	76,357	
	OAK RIDGE NATIONAL LABORATORY	4000158675	99	RD	95,643	
	OAK RIDGE NATIONAL LABORATORY	010143	99	RD	90,183	
	OAK RIDGE NATIONAL LABORATORY	4000156470	99	RD	41,892	
	OAK RIDGE NATIONAL LABORATORY	4000164960	99	RD	285,231	
	OAK RIDGE NATIONAL LABORATORY	4000171188	99	RD	-7,261	
	OCEANIT LABORATORIES, INC.	20174411	99	RD	72,680	
	OEWAVES	20175273	99	RD	-612	
	OEWAVES	20185029	99	RD	37	
	OREGON STATE UNIVERSITY	S1977A-B	99	RD	23,534	
	PACIFIC NORTHWEST NATIONAL LABORATORIES	445977	99	RD	233,622	
	PACIFIC NORTHWEST NATIONAL LABORATORIES	455500	99	RD	30,321	
	PACIFIC NORTHWEST NATIONAL LABORATORIES	440551	99	RD	152,088	
	PACIFIC NORTHWEST NATIONAL LABORATORIES	26725	99	RD	-8,540	
	PALO ALTO RESEARCH CENTER	P314576	99	RD	218,231	
	PELAGIQUE, LLC	W81XWH-16-C-0146	99	RD	264,794	
	PELAGIQUE, LLC	57044	99	RD	-7	
	PENNSYLVANIA STATE UNIVERSITY	S17-23	99	RD	265,713	
	PHASE DIAGNOSTICS, INC.	20170815	99	RD	86,048	
	PHASE DIAGNOSTICS, INC.	20170820	99	RD	129,202	
	PHYSICAL SCIENCES INC.	59594	99	RD	-143	
	PHYSICAL SCIENCES INC.	83682-1991-46	99	RD	80,736	
	PREDICTIVE SCIENCE INC.	20154780:001	99	RD	131,892	
	PRINCETON PLASMA PHYSICS LABORATORY	SUB S015887-C (DE-ACO2-09CH114	99	RD	53,108	
	PRINCETON PLASMA PHYSICS LABORATORY	S015719-C	99	RD	77,427	
	PROFUSA, INC.	A132493	99	RD	17,406	
	PUBLIC HEALTH INSTITUTE	SUB 01486 (18-95423)	99	RD	6,112	
	PUBLIC POLICY INSTITUTE OF CALIFORNIA	PPIC (20170091) IES	99	RD	136,134	
	Q-CHEM, INC.	27844	99	RD	21,268	
	QUESTEK INNOVATIONS LLC	1597	99	RD	266,730	133,206
	QUESTEK INNOVATIONS LLC	010148	99	RD	85,190	
	QUESTEK INNOVATIONS LLC	86726	99	RD	7,500	
	RADIABEAM TECHNOLOGIES, LLC	20164153	99	RD	6,198	
	RADIABEAM TECHNOLOGIES, LLC	20164239	99	RD	65,807	
	RADIABEAM TECHNOLOGIES, LLC	20182362	99	RD	47,999	
	RADIABEAM TECHNOLOGIES, LLC	20182832	99	RD	35,294	
	RADIABEAM TECHNOLOGIES, LLC	20182840	99	RD	122,309	
	RAND CORP	9920180039	99	RD	156,089	
	RAND CORP	9920160065:03	99	RD	3,381	
	RAYTHEON BBN TECHNOLOGIES CORP.	90013	99	RD	476,636	
	RAYTHEON BBN TECHNOLOGIES CORP.	90056	99	RD	341,597	

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			Prefix	Extension	Federal Expenditures	
OTHER FEDERAL AGENCIES	RDRETC	873G6	99	RD	538	
	REMOTE SENSING SYSTEMS	20192490	99	RD	80,246	
	RICE UNIVERSITY	R18719	99	RD	151,068	
	RICE UNIVERSITY	R53822	99	RD	16,923	
	RIGHT TO CARE	20175168	99	RD	138,825	
	RTI INTERNATIONAL	29-312-0214448-65402L	99	RD	148,965	
	SAN DIEGO COUNTY	SUB 554660 (NONE)	99	RD	1,318,022	
	SCARLESS LABORATORIES, INC	5R44DE026080-02	99	RD	137,794	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004566	99	RD	49,432	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004631	99	RD	200,802	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-16-005087	99	RD	101,052	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SUB CRB-SSS-S-15-004567 (HHSN2	99	RD	188,065	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-17-005215	99	RD	107,789	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-17-005217	99	RD	43,988	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-17-005252	99	RD	88,882	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SUB 20173862(CRB-SSS-S-16-0050	99	RD	52,110	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	79160	99	RD	-484	
	SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SUB CRB-SSS-S-18-005449 (HHSN2	99	RD	6,164	
	SOFIE BIOSCIENCES, INC	2R44MH097271-05	99	RD	356,650	
	SONOMA COUNTY WATER AGENCY	TW# 18/19-016	99	RD	69,515	
	SOUTHERN METHODIST UNIVERSITY	009930	99	RD	42,589	
	SOUTHWEST RESEARCH INSTITUTE	J99010MO:11	99	RD	181,758	
	SOUTHWEST RESEARCH INSTITUTE	J99090AD:1	99	RD	180,013	26,876
	SRI INTERNATIONAL	P020682	99	RD	168,057	
	SRI INTERNATIONAL	A17-0607-002	99	RD	198,107	
	STANFORD UNIVERSITY	63904	99	RD	-377	
	STATE UNIVERSITY OF NEW YORK	SUB 68799(DESC0012583)	99	RD	185,624	
	STATE UNIVERSITY SYSTEM OF FLORIDA	16266110-03	99	RD	54,735	
	SWOG	S1607	99	RD	34,441	
	SYSTEM OF SYSTEMS SECURITY CONSORTIUM	SUB PLA-0009 (FA8750-16-9-9000	99	RD	89,593	
	TELEDYNE TECHNOLOGIES, INC.	PO00130549	99	RD	165,129	
	TELEDYNE TECHNOLOGIES, INC.	PO00140147	99	RD	92,146	
	TELEDYNE TECHNOLOGIES, INC.	PO00144148	99	RD	190,035	
	TEXAS A&M UNIVERSITY - COLLEGE STATION	AB0313907	99	RD	17,432	
	THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	A18-0360-S001	99	RD	54,398	
	THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000509388-TOLO-001	99	RD	148,380	
	THINK-NOW INC.	20154140	99	RD	8,814	
	TOYON RESEARCH CORPORATION	SC18-F072-1	99	RD	19,103	
	TOYON RESEARCH CORPORATION	SC18-F077-1	99	RD	13,223	
	TOYON RESEARCH CORPORATION	SC19-F123-1	99	RD	38,331	
	TOYON RESEARCH CORPORATION	SC19-F126-1	99	RD	48,277	
	TOYON RESEARCH CORPORATION	SC19-F131-1	99	RD	23,981	
	TRISTAN TECHNOLOGIES	010503	99	RD	42,102	
	TUNITAS THERAPEUTICS	77997	99	RD	-4,369	
	UNITED PURPOSE	A16-0164-007	99	RD	32,589	
	UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	633547	99	RD	281,657	
	UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	653200	99	RD	30,387	
	UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	653349	99	RD	67,128	
	UNIVERSITIES SPACE RESEARCH ASSOCIATION	SUB 08600-012 (NNA16BD14C)	99	RD	37,167	
	UNIVERSITIES SPACE RESEARCH ASSOCIATION	NAS2-97001	99	RD	43,649	
	UNIVERSITY OF ARIZONA	20152604 (HHSN2612012000311)	99	RD	108,965	
	UNIVERSITY OF ARIZONA	SUB 20160294 (HHSN261201200031	99	RD	27,349	
	UNIVERSITY OF ARIZONA	009643	99	RD	34,141	
	UNIVERSITY OF COLORADO BOULDER	1556355	99	RD	65,635	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1546525:1	99	RD	66,481	
	UNIVERSITY OF HAWAII AT MANOA	MA1226	99	RD	11,730	
	UNIVERSITY OF IOWA	57016	99	RD	-5,650	
	UNIVERSITY OF IOWA	1002082693:1	99	RD	51,168	
	UNIVERSITY OF IOWA	1002081198	99	RD	120,000	
	UNIVERSITY OF MARYLAND	59744-Z9177201	99	RD	152,733	
	UNIVERSITY OF MARYLAND	65579-Z9232201	99	RD	61,834	
	UNIVERSITY OF MARYLAND	70973-Z9307201	99	RD	194,283	
	UNIVERSITY OF MEMPHIS	A17-0190-S005:3	99	RD	42,511	
	UNIVERSITY OF MICHIGAN	3004871545	99	RD	921	
	UNIVERSITY OF MINNESOTA	A005821705:10	99	RD	26,617	
	UNIVERSITY OF MISSISSIPPI	66111350819-07	99	RD	14,896	
	UNIVERSITY OF MISSISSIPPI	66111320819-02	99	RD	7,148	
	UNIVERSITY OF NEBRASKA	26-0520-0187-003	99	RD	1,682	
	UNIVERSITY OF NEW HAMPSHIRE	17-007-07	99	RD	141,355	
	UNIVERSITY OF NEW HAMPSHIRE	06-001	99	RD	744,356	70,594

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OTHER FEDERAL AGENCIES	UNIVERSITY OF NOTRE DAME (INCL GEM)	203278UCB	99	RD	1,019,941	
	UNIVERSITY OF NOTRE DAME (INCL GEM)	203278UCSB	99	RD	378,956	
	UNIVERSITY OF PENNSYLVANIA	567391	99	RD	92,870	
	UNIVERSITY OF PITTSBURGH	0024031-5:05	99	RD	49,980	
	UNIVERSITY OF PITTSBURGH	0051433-1	99	RD	13,427	
	UNIVERSITY OF PITTSBURGH	0051433-5	99	RD	64,890	
	UNIVERSITY OF SOUTH FLORIDA	A16-0255-003	99	RD	8,763	
	UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 77364731(WEI1675-1915)	99	RD	6,711	
	UNIVERSITY OF SOUTHERN CALIFORNIA	95781679	99	RD	46,588	
	UNIVERSITY OF SOUTHERN CALIFORNIA	95994470	99	RD	970,064	
	UNIVERSITY OF SOUTHERN CALIFORNIA	107627989	99	RD	146,267	
	UNIVERSITY OF SOUTHERN CALIFORNIA	107691279	99	RD	17,023	
	UNIVERSITY OF SOUTHERN CALIFORNIA	109129159	99	RD	49,872	
	UNIVERSITY OF SOUTHERN CALIFORNIA	115250657-CYC1	99	RD	5,513	
	UNIVERSITY OF SOUTHERN CALIFORNIA	77793929:2	99	RD	31,957	
	UNIVERSITY OF SOUTHERN CALIFORNIA	D2947	99	RD	27,589	
	UNIVERSITY OF SOUTHERN CALIFORNIA	114482400	99	RD	24,323	
	UNIVERSITY OF SOUTHERN CALIFORNIA	90121560	99	RD	351,461	
	UNIVERSITY OF UTAH	009346	99	RD	41,328	
	UNIVERSITY OF VIRGINIA	G118518.156867	99	RD	744,317	
	UNIVERSITY OF VIRGINIA	G118518.156870	99	RD	401,817	
	VANDERBILT UNIVERSITY	SUB VUMC 44030 (HHSN2722014000	99	RD	40,297	
	VAULT NANO INC.	20191510	99	RD	19,824	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA BAKER (W81XWH-16-1-0015)	99	RD	6,981	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (322169) (14EIA18560026	99	RD	35,507	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (DK111510)	99	RD	46,628	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MORLAND (W81XWH-12-1-0614)	99	RD	34,629	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SPINA SUB 103475877 (A1036	99	RD	27,397	
	VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA STONEHAM (A1140991)	99	RD	38,760	
	WASHINGTON UNIVERSITY IN ST. LOUIS	59909	99	RD	-7,337	
	WESTAT	SUB 6410-S-02 (HHSN27120160000	99	RD	7,299	
	WESTAT	6182-S24	99	RD	6,102	
	WESTAT	6579-S11/ HHSN275201800001	99	RD	724,356	
	WESTAT	77772	99	RD	-19,816	
	WESTAT	B5445	99	RD	-38,007	
	WOODS HOLE OCEANOGRAPHIC INSTITUTION	A101326	99	RD	80,895	
	WYLE LABORATORIES	T73047	99	RD	65,613	
	ZYMERGEN, INC.	4282	99	RD	60,810	
	THE GAIA MEDICAL INSTITUTE LLC	SUB 20183636 (HD090817)	99	RD	99,704	
	INTERNATIONAL COMPUTER SCIENCE INSTITUTE	27500-1	99	RD	120,781	
	SEMICONDUCTOR RESEARCH CORPORATION	2018-JU-2778	99	RD	5,119,894	2,940,647
	SEMICONDUCTOR RESEARCH CORPORATION	57326	99	RD	85,931	
	CALTRANS CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0638	99	RD	372,846	
	AUTOMATE SCIENTIFIC, INC.	NIH/NIDA 1R41DA044788-01	99	RD	80,343	
	BECHTEL CORPORATION	120366	99	RD	63,417	
	GEOSYNTEC CONSULTANTS	1972PFAS-1	99	RD	69,914	
	10DBX LLC	10DBX 7243-2017-2767	99	RD	31,331	
	ACTASYS INC.	77767	99	RD	1,471	
	ACTASYS INC.	80NSSC18C0028	99	RD	64,022	
	APTIMA, INC.	SUB 1238-2063 (W81XWH-18-C-031	99	RD	25,503	
	BURLESON CONSULTING, INC.	SNA-001	99	RD	46,983	
	CALIFORNIA ASSOCIATION OF SANITATION AGENCIES	17-DG-11052021	99	RD	42,620	
	CALIFORNIA OLIVE COMMITTEE	A18-0057	99	RD	26,820	
	DIAGNOSTIC BIOCHIPS, INC.	2017-UCSB-001	99	RD	21,252	
	FENWAY HEALTH	422-UCLA:1	99	RD	5,436	
	FIRST RF CORPORATION	SUB T20136 (W31P4Q-17-C-0097)	99	RD	49,516	
	FIRST RF CORPORATION	SUB T20539 (FA8750-18-C-0060)	99	RD	44,651	
	FORWARD PHOTONICS, LLC	N17A-T006	99	RD	683	
	FORWARD PHOTONICS, LLC	20183067	99	RD	48,898	
	GARVAN INSTITUTE OF MEDICAL RESEARCH	APP1122227	99	RD	48,948	
	HENNEPIN HEALTHCARE RESEARCH INSTITUTE	20180148	99	RD	14,753	
	HENNINGSON, DURHAM & RICHARDSON, INC.	HDR MSA 1000300000780, TO 1 -	99	RD	223,577	
	JP ANALYTICS, LLC	CV17001	99	RD	-8,769	
	NATIONAL TECHNOLOGY AND ENGINEERING SOLUTIONS OF SANDIA, LLC	1862252	99	RD	79,455	
	NUMERATE, INC.	1R43HL139143-01	99	RD	18,373	
	NUMERATE, INC.	78132	99	RD	13,596	
	OPERANT SOLAR CORPORATION	57114	99	RD	46,569	
	PANERATECH, INC.	79383	99	RD	-479	
	SEGANA LLC	78107	99	RD	15,595	
	SPACE SCIENCES INNOVATIONS INC.	20181667	99	RD	27,392	

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OTHER FEDERAL AGENCIES	SURFORCE, LLC	SB180082	99	RD	270	
	POPULATION SERVICES INTERNATIONAL	4442-UCSF-23 APR 18	99	RD	310,262	
	GUIDESTAR OPTICAL SYSTEMS, INC.	PO730-20180815	99	RD	36,319	
	MANUFACTURING TECHNIQUES, INC.	35696	99	RD	21,744	
	UES, INC.	S-111-049-001	99	RD	2,150	
	SETI INSTITUTE	009725	99	RD	128,067	
	CALIFORNIA STATE UNIVERSITY	X0131117-UCSBO	99	RD	4,670	
	CHARLES STARK DRAPER LABORATORY, INC.	873FD	99	RD	-235	
	CHARLES STARK DRAPER LABORATORY, INC.	SB180177	99	RD	78,811	
	SLAC NATIONAL ACCELERATOR LABORATORY	186496	99	RD	74,974	
	SLAC NATIONAL ACCELERATOR LABORATORY	189155	99	RD	25,706	
	TRIAD NATIONAL SECURITY, LLC	521997	99	RD	6,281	
	BIOMIMETIX JV, LLC	BMX-HN-001	99	RD	15,132	
	ICF INTERNATIONAL, INC.	TASK 0028	99	RD	13,759	
	ICF INTERNATIONAL, INC.	TASK32	99	RD	15,606	
	THE EMMES COMPANY, LLC	20182357	99	RD	7,564	
	U.S. Highbush Blueberry Council	201700387	99	RD	9,573	8,673
	U.S. Highbush Blueberry Council	20170763	99	RD	-73	
	ADVANCED LIFE TECHNOLOGIES LLC	W81XWH18C0095	99	RD	7,210	
	ALLERGAN INC.	6718	99	RD	-2	
	ARETE ASSOCIATES, INC.	AZ-401259	99	RD	24,872	
	ATANALYTICS	AT-SC001	99	RD	34,795	
	ATOM OPTOELECTRONICS INC.	W911NF19P0026	99	RD	11,630	
	BATTELLE ENERGY ALLIANCE, LLC (BEA)	197743	99	RD	308	
	CALIFORNIA RURAL INDIAN HEALTH BOARD, INC.	20184458	99	RD	414,219	326,000
	CHEMELECTRONICS LLC	20190862	99	RD	34,052	
	DAVREN US NUTS LLC	SA19-0065	99	RD	7,153	
	FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY	C-5000 FAMU # 005994	99	RD	69,644	
	GENXCOMM, INC.	062218-1	99	RD	96,699	
	IMS GOVERNMENT SOLUTIONS INC.	2017-IMS-SC-UCLA001	99	RD	26,162	
	IMS GOVERNMENT SOLUTIONS INC.	2017-IMS-SC-UCLA002	99	RD	10,138	
	LONGWAVE PHOTONICS LLC	20183560	99	RD	40,874	
	MEDICAL SCIENCE AND COMPUTING, LLC	S-2018-001-UCSF-BCBB	99	RD	74,119	
	MISSION SUPPORT AND TEST SERVICES LLC	144064-07	99	RD	81,390	
	NATIONAL KIDNEY FOUNDATION	4063	99	RD	10,360	
	NEXUS PHOTONICS, LLC	80NSSC18P2147	99	RD	46,494	
	NIMBIS SERVICES	NIMBIS-F-1605-UCSB	99	RD	71,670	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84238 - 01 - 444957	99	RD	47,539	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84009 - 02 - 444988	99	RD	175,337	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84014 - 02 - 444988	99	RD	25,929	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84041 - 02 - 444988	99	RD	57,975	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84053 - 02 - 444951	99	RD	9,857	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84057 - 02 - 444951	99	RD	110,727	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84076 - 02 - 444988	99	RD	127,817	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84082 - 02 - 444988	99	RD	106,804	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84097 - 02 - 444653	99	RD	109,423	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84098 - 02 - 444988	99	RD	66,220	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84126 - 02 - 444653	99	RD	139,916	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84127 - 02 - 444988	99	RD	140,241	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84128 - 02 - 444653	99	RD	7,975	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84132 - 02 - 444988	99	RD	27,462	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84140 - 02 - 444947	99	RD	42,216	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84151 - 02 - 444949	99	RD	5,954	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84153 - 02 - 444988	99	RD	79,277	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84162 - 02 - 444988	99	RD	61,757	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84166 - 02 - 444988	99	RD	31,935	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84184 - 02 - 444951	99	RD	37,698	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84188 - 02 - 444949	99	RD	62,936	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84193 - 02 - 444927	99	RD	40,928	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84195 - 02 - 444988	99	RD	15,496	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84201 - 01 - 557755	99	RD	15,143	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84204 - 01 - 444988	99	RD	94,012	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84205 - 01 - 446306	99	RD	30,940	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84211 - 01 - 444653	99	RD	70,171	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84215 - 01 - 444988	99	RD	25,304	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84218 - 01 - 444955	99	RD	185,928	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84219 - 01 - 444908	99	RD	22,801	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84220 - 01 - 444951	99	RD	256,787	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84224 - 01 - 444988	99	RD	24,908	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84227 - 01 - 444653	99	RD	113,674	

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OTHER FEDERAL AGENCIES	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84235 - 01 - 444956	99	RD	16,823	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84236 - 01 - 444938	99	RD	67,055	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84237 - 01 - 558109	99	RD	18,626	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84240 - 01 - 444956	99	RD	20,952	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84241 - 01 - 444956	99	RD	72,311	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84246 - 01 - 444988	99	RD	232,491	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - CHEN, TSUI-HUA	99	RD	69,266	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - COHEN, BETH	99	RD	54,676	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - HAAN, MARY	99	RD	3,116	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - HARALDSSON	99	RD	15,760	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - LEE, SEI	99	RD	130,590	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - MACKIN, ROBERT	99	RD	27,655	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - MAGUEN	99	RD	77,178	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - MAKLASHINA	99	RD	164,707	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - MUKHERJEE	99	RD	32,470	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - SALONER, DAVID	99	RD	31,945	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - SUDORE, REBECCA	99	RD	54,208	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - TANNER	99	RD	10,012	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - GOLDMAN, SAMUEL	99	RD	39,748	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	JPA - HENDERSON SABES	99	RD	15,586	
	NOVARTIS AG	CRAD001CUS168T	99	RD	-1,121	
	OAK RIDGE ASSOCIATED UNIVERSITIES	SB190033	99	RD	150	
	PHYSICAL OPTICS CORPORATION	010133	99	RD	15,000	
	POPULATION HEALTH RESEARCH INSTITUTE	2018-2167-PHRI	99	RD	4,160	
	POWERTRAIN INC.	PURCHASE ORDER 180815-1	99	RD	646,553	
	POWERTRAIN INC.	PURCHASE ORDER 180926-1	99	RD	378,242	
	POWERTRAIN INC.	PURCHASE ORDER 180928-02	99	RD	594,365	278,820
	QR PHARMA, INC	79179	99	RD	2	
	QUINC.TECH LLC	QUINC.TECH 12859-2018-2688	99	RD	57,767	
	SA PHOTONICS, INC.	1053-UCLA0718	99	RD	38,105	
	SARCOMA ALLIANCE THROUGH RESEARCH COLLABORATION	20183843	99	RD	43,636	
	SILVUS TECHNOLOGIES INC.	SK001-19-UCLA-RFA	99	RD	9,023	
	SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS	19-024-C01	99	RD	1,570	
	SPR THERAPEUTICS, INC	20192736	99	RD	14,091	
	THE SOUTHERN COMPANY	SCS10368115	99	RD	601,882	243,385
	TRANSPARENT ARMOR SOLUTIONS INC.	20192165	99	RD	30,345	
	UNDERSEA TECHNOLOGY INNOVATION CONSORTIUM	UTIC 2018-476 PROJECT AGREEMEN	99	RD	111,342	50,012
					51,588,495	4,120,140
OTHER FEDERAL AGENCIES Total					51,588,495	4,120,140
RESEARCH AND DEVELOPMENT	Total				3,782,198,098	466,768,180
DEPARTMENT OF HEALTH AND HUMAN SERVICES - TITLE IV-E FOSTER CARE PROGRAM CLUSTER						
DEPARTMENT OF HEALTH AND HUMAN SERVICES						
	Passthrough/Partial Passthrough					
	ALPINE, COUNTY OF	C000113661	93	658	9,712	
	ALPINE, COUNTY OF	CC2018-15	93	658	1,148	
	AMADOR, COUNTY OF	C000113818	93	658	15,463	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-01124	93	658	131,196	4,265
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	16-IA-00775	93	658	5,774,739	5,708,802
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	16-IA-00870	93	658	21,525	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	33475	93	658	3	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-01125	93	658	60,340	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	17-3027	93	658	2,076,597	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	18-3029	93	658	653,783	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	18-3016	93	658	1,869,564	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	28950	93	658	-1,092	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	28961	93	658	-11,152	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	18-3026	93	658	2,806,969	59,152
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	18-3028	93	658	16,797,925	13,795,897
	COUNTY OF SONOMA	C000113777	93	658	29,637	
	FRESNO COUNTY	C000113590	93	658	219,211	
	GLENN, COUNTY OF	CMS-2017-09	93	658	1,131	
	GLENN, COUNTY OF	C000113767	93	658	158,046	
	INYO, COUNTY OF	EW-2017-11	93	658	402	
	INYO, COUNTY OF	C000113814	93	658	44,498	
	LAKE, COUNTY OF	CW-2017-14	93	658	-541	
	MADERA, COUNTY OF	C000113840	93	658	45,900	
	MENDOCINO, COUNTY OF	C000113527	93	658	252	
	MENDOCINO, COUNTY OF	C000113755	93	658	25,500	
	MENDOCINO, COUNTY OF	C000113756	93	658	5,100	
	MERCED, COUNTY OF	CW-2018-19	93	658	51,000	

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	MERCED, COUNTY OF	EW-2018-19	93	658	103,770	
	MODOC, COUNTY OF	C000113789	93	658	8,530	
	MONO, COUNTY OF	C000113649	93	658	11,519	
	NAPA, COUNTY OF	C000113705	93	658	7,650	
	NEVADA, COUNTY OF	84A24	93	658	-143	
	NEVADA, COUNTY OF	C000113769	93	658	6,923	
	PLACER, COUNTY OF	CW-2017-25	93	658	440	
	PLACER, COUNTY OF	C000113812	93	658	13,027	
	PLUMAS, COUNTY OF	CW-2017-26	93	658	1,063	
	PLUMAS, COUNTY OF	C000113837	93	658	8,962	
	SACRAMENTO, COUNTY OF	720500018314	93	658	-6,378	
	SACRAMENTO, COUNTY OF	720500018585	93	658	2,107	
	SACRAMENTO, COUNTY OF	7805000-19-314	93	658	127,036	
	SACRAMENTO, COUNTY OF	7805000-19-585	93	658	107,757	
	SAN JOAQUIN COUNTY	CW-2017-28	93	658	-1,225	
	SAN JOAQUIN COUNTY	80A24	93	658	2,177	
	SAN JOAQUIN COUNTY	C000113815	93	658	25,039	
	SANTA CRUZ, COUNTY OF	84A08	93	658	-234	
	SHASTA, COUNTY OF	81A38	93	658	-8,295	
	SHASTA, COUNTY OF	CW-2018-29	93	658	7,797	
	SHASTA, COUNTY OF	GENT-2018-29	93	658	40,545	
	TEHAMA, COUNTY OF	C000113759	93	658	3,432	
	TUOLUMNE, COUNTY OF	C000113816	93	658	6,775	
	VENTURA COUNTY	37B33	93	658	2,400	
	VENTURA COUNTY	C000113793	93	658	22,864	
					31,280,392	19,568,116
DEPARTMENT OF HEALTH AND HUMAN SERVICES Total					31,280,392	19,568,116
DEPARTMENT OF HEALTH AND HUMAN SERVICES - TITLE IV-E FOSTER CARE PROGRAM CLUSTER Total					31,280,392	19,568,116
SNAP Cluster						
DEPARTMENT OF AGRICULTURE						
	Passthrough/Partial Passthrough					
	ALAMEDA COUNTY	23C09	10	561	10,440	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	73B01	10	561	1,848,895	9,187
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	A17-0400	10	561	88,235	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	88296	10	561	-244	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	88494	10	561	-356,794	-153,304
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	37B00	10	561	6,355,039	324,325
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	18-3056	10	561	1,660,551	126,437
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	22C75	10	561	6,321,151	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	25857	10	561	89	
	CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	25879	10	561	8	
	MONO, COUNTY OF	EW-2018-21	10	561	21,548	
	CALIFORNIA STATE UNIVERSITY CHICO/CSU CHICO RESEARCH FOUNDATION	18-7015	10	561	33,200	
	CALIFORNIA STATE UNIVERSITY CHICO/CSU CHICO RESEARCH FOUNDATION	SUB 18-051(18-7015)	10	561	12,297	
	CALIFORNIA STATE UNIVERSITY CHICO/CSU CHICO RESEARCH FOUNDATION	SUB18-049	10	561	13,638	
					16,008,053	306,645
DEPARTMENT OF AGRICULTURE Total					16,008,053	306,645
SNAP Cluster Total						
Health Center Program Cluster						
DEPARTMENT OF HEALTH AND HUMAN SERVICES						
	Passthrough/Partial Passthrough					
	NORTHEAST VALLEY HEALTH CORPORATION	20141037	93	224	456,986	
	NORTHEAST VALLEY HEALTH CORPORATION	57155	93	224	-294	
					456,693	
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	527	1,576,758	
					1,576,758	
DEPARTMENT OF HEALTH AND HUMAN SERVICES Total					2,033,451	
Health Center Program Cluster Total					2,033,451	
Medicaid Cluster						
DEPARTMENT OF HEALTH AND HUMAN SERVICES						
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	16-93578	93	778	4,847,745	2,611,920
	CITY AND COUNTY OF SAN FRANCISCO	D3247	93	778	307,163	
	COUNTY OF SONOMA	C000113778	93	778	38,538	
	SAN JOAQUIN COUNTY	C000113849	93	778	25,016	
	SAN JOAQUIN COUNTY	C000113850	93	778	5,100	
					5,223,562	2,611,920
DEPARTMENT OF HEALTH AND HUMAN SERVICES Total					5,223,562	2,611,920

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			Prefix	Extension	Federal Expenditures	
Medicaid Cluster Total					5,223,562	2,611,920
Fish and Wildlife Cluster						
DEPARTMENT OF INTERIOR						
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1760025	15	611	70,948	
	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1760026	15	611	127,852	109,282
					198,799	109,282
DEPARTMENT OF INTERIOR Total					198,799	109,282
Fish and Wildlife Cluster Total					198,799	109,282
Highway Planning and Construction Cluster						
DEPARTMENT OF TRANSPORTATION						
	Passthrough/Partial Passthrough					
	TEXAS A&M UNIVERSITY - COLLEGE STATION	009196	20	205	70,883	
	CALTRANS CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0697-CYC1	20	205	24,627	
					95,510	
DEPARTMENT OF TRANSPORTATION Total					95,510	
Highway Planning and Construction Cluster Total					95,510	
Economic Development Cluster						
DEPARTMENT OF COMMERCE						
	Direct					
	DEPARTMENT OF COMMERCE	VARIOUS	11	307	176,106	
					176,106	
DEPARTMENT OF COMMERCE Total					176,106	
Economic Development Cluster Total					176,106	
HOPE VI Cluster						
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT						
	Passthrough/Partial Passthrough					
	URBAN STRATEGIES INC.	A19-2689	14	889	5,479	
					5,479	
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Total					5,479	
HOPE VI Cluster Total					5,479	
477 Cluster						
DEPARTMENT OF HEALTH AND HUMAN SERVICES						
	Passthrough/Partial Passthrough					
	ALAMEDA COUNTY	201602383	93	558	231,478	
	ALPINE, COUNTY OF	EW-2017-01	93	558	-3,187	
	ALPINE, COUNTY OF	C000113822	93	558	14,025	
	ALPINE, COUNTY OF	C000113823	93	558	13,898	
	ALPINE, COUNTY OF	WK-2017-01	93	558	5,100	
	AMADOR, COUNTY OF	EW-2017-02	93	558	26	
	AMADOR, COUNTY OF	C000113776	93	558	14,663	
	BUTTE, COUNTY OF	X22738	93	558	2,510	
	BUTTE, COUNTY OF	81A36	93	558	4,266	
	BUTTE, COUNTY OF	C000113700	93	558	11,730	
	CALAVERAS, COUNTY OF	C000113882	93	558	7,650	
	CITY OF LOS ANGELES ECONOMIC AND WORKFORCE DEVELOPMENT DEPARTMENT	C-130396	93	558	-3,076	
	COLUSA, COUNTY OF	72B30	93	558	-5,980	
	COLUSA, COUNTY OF	C17-176	93	558	425	
	COLUSA, COUNTY OF	C000113781	93	558	85,170	
	COLUSA, COUNTY OF	C000113827	93	558	2,550	
	COUNTY OF MARIN	C000113813	93	558	96,064	
	COUNTY OF MARIN	C000113835	93	558	8,283	
	COUNTY OF SOLANO	84A10	93	558	-1,185	
	COUNTY OF SOLANO	C000113715	93	558	63,495	
	COUNTY OF SONOMA	C000113779	93	558	36,968	
	DEL NORTE COUNTY	C000113798	93	558	40,928	
	EL DORADO, COUNTY OF	EW-2015-07	93	558	-12,265	
	EL DORADO, COUNTY OF	C000113751	93	558	70,423	
	GLENN, COUNTY OF	EW-2017-09	93	558	8,798	
	GLENN, COUNTY OF	C000113829	93	558	39,525	
	HUMBOLDT COUNTY	A19-1872	93	558	94,848	
	KERN COUNTY	A19-1468	93	558	105,395	
	KINGS, COUNTY OF	C000113752	93	558	65,760	
	KINGS, COUNTY OF	C000113754	93	558	61,837	
	LAKE, COUNTY OF	EW-2017-14	93	558	-6,375	
	LAKE, COUNTY OF	C000113701	93	558	58,395	
	LAKE, COUNTY OF	C000113866	93	558	12,750	
	MADERA, COUNTY OF	C000113839	93	558	102,637	
	MARIPOSA, COUNTY OF	EW-2018-18	93	558	49,598	
	MERCED, COUNTY OF	C000113757	93	558	41,077	

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			Prefix	Extension	Federal Expenditures		
DEPARTMENT OF HEALTH AND HUMAN SERVICES	MODOC, COUNTY OF	C000113758	93	558	71,273		
	MONO, COUNTY OF	CW-2017-21	93	558	76		
	MONTEREY COUNTY	84A05	93	558	4,840		
	MONTEREY COUNTY	A-13564	93	558	-7,800		
	MONTEREY COUNTY	C000113824	93	558	143,814		
	NAPA, COUNTY OF	81A29	93	558	-944		
	NAPA, COUNTY OF	C000113704	93	558	98,685		
	NEVADA, COUNTY OF	EW-2017-24	93	558	-2,678		
	NEVADA, COUNTY OF	18-266	93	558	59,288		
	PLACER, COUNTY OF	C000113707	93	558	31,800		
	PLUMAS, COUNTY OF	C000113803	93	558	34,425		
	SAN BENITO, COUNTY OF	C000113842	93	558	22,950		
	SAN BENITO, COUNTY OF	C000113843	93	558	38,250		
	SAN BENITO, COUNTY OF	C000113844	93	558	5,100		
	SAN DIEGO COUNTY	88A06	93	558	235,627		
	SAN JOAQUIN COUNTY	EW-2018-28	93	558	-7,650		
	SAN JOAQUIN COUNTY	C000113848	93	558	80,835		
	SAN LUIS OBISPO, COUNTY OF	C000113708	93	558	7,395		
	SAN LUIS OBISPO, COUNTY OF	C000113709	93	558	26,295		
	SAN MATEO COUNTY	EW-2016-43	93	558	7,408		
	SAN MATEO COUNTY	C000113785	93	558	43,378		
	SANTA BARBARA, COUNTY OF	22B56	93	558	-46		
	SANTA CRUZ, COUNTY OF	84A09	93	558	8,296		
	SANTA CRUZ, COUNTY OF	C000113782	93	558	144,940		
	SANTA CRUZ, COUNTY OF	C000113783	93	558	12,750		
	SHASTA, COUNTY OF	CW-2017-29	93	558	3,616		
	SHASTA, COUNTY OF	GENT-2017-29	93	558	358		
	SIERRA, COUNTY OF	C000113845	93	558	12,750		
	SISKIYOU, COUNTY OF	38A55	93	558	-8,529		
	SISKIYOU, COUNTY OF	C000113830	93	558	8,160		
	SISKIYOU, COUNTY OF	C000113831	93	558	11,858		
	SISKIYOU, COUNTY OF	C000113846	93	558	59,322		
	SISKIYOU, COUNTY OF	C000113847	93	558	10,710		
	STANISLAUS, COUNTY OF	C000113775	93	558	74,970		
	STANISLAUS, COUNTY OF	C000113791	93	558	108,904		
	SUTTER COUNTY	17-158	93	558	-518		
	SUTTER COUNTY	38A53	93	558	-3,555		
	SUTTER COUNTY	C000113852	93	558	52,275		
	TEHAMA, COUNTY OF	C000113716	93	558	16,098		
	TEHAMA, COUNTY OF	C000113717	93	558	2,550		
	TEHAMA, COUNTY OF	C000113718	93	558	13,005		
	TEHAMA, COUNTY OF	C000113719	93	558	7,395		
	TRINITY, COUNTY OF	EW201737	93	558	-5,738		
	TRINITY, COUNTY OF	18-112	93	558	27,093		
	TULARE, COUNTY OF	71B83	93	558	2,125		
	TULARE, COUNTY OF	C000113786	93	558	14,025		
	TULARE, COUNTY OF	C000113787	93	558	55,463		
	TUOLUMNE, COUNTY OF	80A15	93	558	1,067		
	TUOLUMNE, COUNTY OF	C000113825	93	558	28,943		
	YOLO COUNTY	C000113853	93	558	94,988		
	YUBA COUNTY	79A16	93	558	3,555		
	YUBA COUNTY	C000113768	93	558	66,480		
	IMPERIAL COUNTY	83B94	93	558	15,300		
						3,049,178	
		Passthrough/Partial Passthrough					
		TEHAMA, COUNTY OF	C000113858	93	569	9,563	
						9,563	
		Passthrough/Partial Passthrough					
		CALIFORNIA CHILD DEVELOPMENT DIVISION	74A38	93	575	-18,536	
		CALIFORNIA DEPARTMENT OF EDUCATION	18855	93	575	-15,588	
		CALIFORNIA DEPARTMENT OF EDUCATION	18893	93	575	-16,973	
		CALIFORNIA DEPARTMENT OF EDUCATION	A18-0149-001	93	575	86,595	
		CALIFORNIA DEPARTMENT OF EDUCATION	CCTR-7164-CYC1	93	575	63	
		CALIFORNIA DEPARTMENT OF EDUCATION	18859	93	575	-1,907	
		CALIFORNIA DEPARTMENT OF EDUCATION	18894	93	575	28,877	
		CALIFORNIA DEPARTMENT OF EDUCATION	18897	93	575	55,468	
						118,000	

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	Passthrough/Partial Passthrough					
	CALIFORNIA CHILD DEVELOPMENT DIVISION	009828	93	596		193,786
	CALIFORNIA CHILD DEVELOPMENT DIVISION	009829	93	596		229,976
	CALIFORNIA DEPARTMENT OF EDUCATION	18861	93	596		-1,367
	CALIFORNIA DEPARTMENT OF EDUCATION	18863	93	596		-10,714
	CALIFORNIA DEPARTMENT OF EDUCATION	A18-0148-001	93	596		253,890
	CALIFORNIA DEPARTMENT OF EDUCATION	18856	93	596		-11,686
	CALIFORNIA DEPARTMENT OF EDUCATION	18895	93	596		59,369
	CALIFORNIA DEPARTMENT OF EDUCATION	18899	93	596		68,691
	CALIFORNIA DEPARTMENT OF EDUCATION	CCTR-8161-CYC1	93	596		206,888
	CALIFORNIA DEPARTMENT OF EDUCATION	CSP-8361-CYC1	93	596		126,225
						1,115,059
DEPARTMENT OF HEALTH AND HUMAN SERVICES Total						4,291,799
477 Cluster Total						4,291,799
WIOA Cluster						
DEPARTMENT OF LABOR	Passthrough/Partial Passthrough					
	CITY OF LOS ANGELES	20700	17	258		620
						620
	Passthrough/Partial Passthrough					
	CITY OF LOS ANGELES	20720	17	259		-17,843
	CITY OF LOS ANGELES	T6244	17	259		-12,504
	CITY OF LOS ANGELES	20784	17	259		-181,144
	YOUTH POLICY INSTITUTE INC.	20184321	17	259		6,983
						-204,508
DEPARTMENT OF LABOR Total						-203,888
WIOA Cluster Total						-203,888
Federal Transit Cluster						
DEPARTMENT OF TRANSPORTATION	Passthrough/Partial Passthrough					
	DAVIS, CITY OF	CA-2016-101-00	20	507		1,163,241
	DAVIS, CITY OF	A170232	20	507		1,056,690
	DAVIS, CITY OF	CA-2017-126-00	20	507		2,796
						2,222,727
DEPARTMENT OF TRANSPORTATION Total						2,222,727
Federal Transit Cluster Total						2,222,727
Highway Safety Cluster						
DEPARTMENT OF TRANSPORTATION	Passthrough/Partial Passthrough					
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	PT18150	20	600		335,900
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	PT18151	20	600		246,619
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS18035	20	600		180,645
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	SUB 20182594(NONE)	20	600		320,306
						1,083,470
	Passthrough/Partial Passthrough					
	CALTRANS CALIFORNIA DEPARTMENT OF TRANSPORTATION	84753	20	610		4,946
						4,946
	Passthrough/Partial Passthrough					
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	DI18030-CYC1	20	616		68,877
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR18011	20	616		33,987
	CALIFORNIA OFFICE OF TRAFFIC SAFETY	84575	20	616		-647
						102,217
DEPARTMENT OF TRANSPORTATION Total						1,190,633
Highway Safety Cluster Total						1,190,633
TRIO Cluster						
DEPARTMENT OF EDUCATION	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	042		1,998,248
						1,998,248
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	044		3,321,080
						3,321,080
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	047		6,447,444
	Passthrough/Partial Passthrough					

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DEPARTMENT OF EDUCATION	STATE CENTER COMMUNITY COLLEGE DISTRICT	81B91	84	047	219	
	STATE CENTER COMMUNITY COLLEGE DISTRICT	33C98	84	047	2,764	
					6,450,427	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	217	1,226,409	
DEPARTMENT OF EDUCATION Total					1,226,409	
TRIO Cluster Total					12,996,164	
Aging Cluster					12,996,164	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	Passthrough/Partial Passthrough					
	COUNTY OF SONOMA	73B04	93	044	368	
	COUNTY OF SONOMA	C000113780	93	044	36,125	
DEPARTMENT OF HEALTH AND HUMAN SERVICES Total					36,493	
Aging Cluster Total					36,493	
OTHER PROGRAMS						
DEPARTMENT OF AGRICULTURE	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	001	23,365	
					23,365	
	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	025	1,573,408	
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	025	45,327	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17-0760-001-SF	10	025	10,619	
					1,629,354	
	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	167	549	
					549	
	Passthrough/Partial Passthrough					
	CALAVERAS UNIFIED SCHOOL DISTRICT	21B60	10	170	8,464	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	37A80	10	170	-68	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15029	10	170	-618	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16031	10	170	205,502	66,834
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	72B04	10	170	54,509	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	17-0727001-SF	10	170	122,684	
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	27C36	10	170	33,439	
					423,911	66,834
	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	210	34,567	
					34,567	
	Passthrough/Partial Passthrough					
	MONTANA STATE UNIVERSITY	26C93	10	215	2,882	
	UTAH STATE UNIVERSITY	200592-439	10	215	12,284	
	UTAH STATE UNIVERSITY	200592393	10	215	70,644	
	UTAH STATE UNIVERSITY	30B25	10	215	14	
	UTAH STATE UNIVERSITY	75B38	10	215	25,105	
	UTAH STATE UNIVERSITY	82B21	10	215	23,628	
	DAVID CEASER DBA GREEN SKIES VERTICAL FARM	22B90	10	215	30	
					134,586	
	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	217	514	
					514	
	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	223	79,768	
					79,768	
	Direct					
	DEPARTMENT OF AGRICULTURE	VARIOUS	10	250	14,788	
					14,788	

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			Prefix	Extension	Federal Expenditures		
DEPARTMENT OF AGRICULTURE	Direct	DEPARTMENT OF AGRICULTURE	10	304	384,768		
					384,768		
	Direct	DEPARTMENT OF AGRICULTURE	10	309	87,496		
					87,496		
	Direct	DEPARTMENT OF AGRICULTURE	10	310	187,929		
					187,929		
	Direct	DEPARTMENT OF AGRICULTURE	10	328	112,791	7,580	
	Passthrough/Partial Passthrough	AUBURN UNIVERSITY	18-PS-205191-UCDAVIS	10	328	14,036	
					126,827	7,580	
	Direct	DEPARTMENT OF AGRICULTURE	VARIOUS	10	329	234,351	12,790
					234,351	12,790	
	Direct	DEPARTMENT OF AGRICULTURE	VARIOUS	10	460	1,257	
					1,257		
	Direct	DEPARTMENT OF AGRICULTURE	VARIOUS	10	521	5,105	
					5,105		
	Passthrough/Partial Passthrough	CALIFORNIA DEPARTMENT OF EDUCATION	003376	10	558	71,595	
		CALIFORNIA DEPARTMENT OF EDUCATION	301466-1A-CYC36	10	558	13,713	
		CALIFORNIA DEPARTMENT OF EDUCATION	80077	10	558	21,089	
		CALIFORNIA DEPARTMENT OF EDUCATION	301466-1A-CYC37	10	558	25,700	
						132,097	
	Passthrough/Partial Passthrough	ADMINISTRATIVE COMMITTEE FOR PISTACHIOS	29A61	10	604	7,280	
						7,280	
	Direct	DEPARTMENT OF AGRICULTURE	VARIOUS	10	612	2,985	
					2,985		
Passthrough/Partial Passthrough	WATERSHED RESEARCH AND TRAINING CENTER	71A82	10	664	67,123		
					67,123		
Direct	DEPARTMENT OF AGRICULTURE	VARIOUS	10	674	16,549		
					16,549		
Passthrough/Partial Passthrough	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	23820	10	675	95,291		
	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	27C42	10	675	127,921		
	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	8GA17403	10	675	38,989		
					262,201		
Direct	DEPARTMENT OF AGRICULTURE	VARIOUS	10	680	146,991		
Passthrough/Partial Passthrough	CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	31B98	10	680	47,994		
					194,985		
Passthrough/Partial Passthrough	NATIONAL FOREST FOUNDATION	88953	10	682	-775		
	NATIONAL FOREST FOUNDATION	ZJ-504	10	682	29,955		
					29,180		

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			Prefix	Extension	Federal Expenditures		
DEPARTMENT OF AGRICULTURE	Direct	DEPARTMENT OF AGRICULTURE	10	902	73,461		
					73,461		
	Direct	DEPARTMENT OF AGRICULTURE	10	932	68,682	64,244	
	Passthrough/Partial Passthrough	GOLD RIDGE RESOURCE CONSERVATION DISTRICT	29B38	932	-92	64,244	
					68,590		
	Direct	DEPARTMENT OF AGRICULTURE	10	961	11,995		
					11,995		
	Direct	DEPARTMENT OF AGRICULTURE	10	962	218,036		
					218,036		
	Direct	DEPARTMENT OF AGRICULTURE	10	UNKOWN	255,696		
	Passthrough/Partial Passthrough	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0625-001-SF	UNKOWN	605		
		CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	17-10666	UNKOWN	142,087		
		COUNTERPART INTERNATIONAL, INC	A18-1584	UNKOWN	112,740		
		ORGANIC FARMING RESEARCH FOUNDATION	17-0275-026-SC	UNKOWN	40,999		
		CALIFORNIA STATE UNIVERSITY	010193	UNKOWN	10,000		
		COMMUNITY ALLIANCE WITH FAMILY FARMERS FOUNDATION	2016-70020-25799	UNKOWN	8,500		
		PALO VERDE RESOURCE CONSERVATION DISTRICT	29C14	UNKOWN	116,348		
		SONOMA RESOURCE CONSERVATION DISTRICT	87B20	UNKOWN	8,642		
					695,618		
DEPARTMENT OF AGRICULTURE Total					5,149,236	151,448	
DEPARTMENT OF COMMERCE	Direct	DEPARTMENT OF COMMERCE	11	008	95,700		
					95,700		
	Passthrough/Partial Passthrough	NATIONAL MARINE SANCTUARY FOUNDATION	17-05-B-124	011	105		
		NATIONAL MARINE SANCTUARY FOUNDATION	18-08-B-186	011	10,392		
					10,497		
	Direct	DEPARTMENT OF COMMERCE	11	020	193,357		
					193,357		
	Passthrough/Partial Passthrough	INDIANA UNIVERSITY	SUB IN-4336228-UCSD (ED17HDQ31	11	312	91,984	
					91,984		
	Direct	DEPARTMENT OF COMMERCE	11	417	89,321		
					89,321		
	Passthrough/Partial Passthrough	NORTH PACIFIC RESEARCH BOARD	84B37	UNKOWN	4,829		
					4,829		
DEPARTMENT OF COMMERCE Total					485,688		
DEPARTMENT OF DEFENSE	Direct	DEPARTMENT OF ARMY	12	431	23,142		
					23,142		
	Direct	DEPARTMENT OF ARMY	12	630	46,818		
					46,818		
	Direct	DEPARTMENT OF NAVY	12	300	241,885		
					241,885		

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF DEFENSE	Passthrough/Partial Passthrough VYSNOVA PARTNERS, INC.	SC-3032 SEA-05102017-UCSF	12	340	8,194	
					8,194	
	Passthrough/Partial Passthrough AMERICAN BURN ASSOCIATION MASSACHUSETTS EYE AND EAR INFIRMARY	W81XWH-18-2-0030 38037	12	420	213,907	
					156	
					214,063	
	Direct DEPARTMENT OF ARMY	VARIOUS	12	431	16,646	
					16,646	
	Passthrough/Partial Passthrough INSTITUTE OF INTERNATIONAL EDUCATION	0054-UCLA-10-SSR-280-PO5	12	550	19,945	
					19,945	
	Passthrough/Partial Passthrough SAN DIEGO UNIFIED SCHOOL DISTRICT	SUB HE1254-17-1-0003(SV19-0306	12	556	43,403	
					43,403	
	Passthrough/Partial Passthrough ARIZONA STATE UNIVERSITY/TEMPE GEORGE WASHINGTON UNIVERSITY KITWARE, INC.	ASUB00000094 009381 57576	12	800	40,602	
					3,000	
					20,281	
					63,883	
Direct SEPARATE AGENCIES	VARIOUS	12	900	83,602		
				83,602		
Passthrough/Partial Passthrough STANFORD UNIVERSITY	61395568124634	12	910	138,448		
				138,448		
Direct DEPARTMENT OF NAVY DEPARTMENT OF AIR FORCE	VARIOUS VARIOUS	12	UNKOWN	9,235,739	485,062	
				66,908		
Passthrough/Partial Passthrough LOCKHEED MARTIN CORPORATION	4102790434	12	UNKOWN	20,853		
				9,323,500	485,062	
DEPARTMENT OF DEFENSE Total				10,223,529	485,062	
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	Passthrough/Partial Passthrough CITY AND COUNTY OF SAN FRANCISCO	A124764	14	267	157,525	
				157,525		
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Total				157,525		
DEPARTMENT OF INTERIOR	Direct DEPARTMENT OF INTERIOR	VARIOUS	15	512	3,196,429	
				3,196,429		
Direct DEPARTMENT OF INTERIOR	VARIOUS	15	807	105,333		
				105,333		
Passthrough/Partial Passthrough TAHOE RESOURCE CONSERVATION DISTRICT	31C74	15	235	1,573		
				1,573		
Direct DEPARTMENT OF INTERIOR	VARIOUS	15	631	955		
				955		
Direct DEPARTMENT OF INTERIOR	VARIOUS	15	650	31,906		
				31,906		
Direct DEPARTMENT OF INTERIOR	VARIOUS	15	656	-1		

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			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF INTERIOR					-1	
	Direct					
	DEPARTMENT OF INTERIOR	VARIOUS	15	669	-5,531	
					-5,531	
	Direct					
	DEPARTMENT OF INTERIOR	VARIOUS	15	676	21,000	
					21,000	
	Direct					
	DEPARTMENT OF INTERIOR	VARIOUS	15	805	66,835	66,835
					66,835	66,835
	Direct					
	DEPARTMENT OF INTERIOR	VARIOUS	15	808	27,468	
					27,468	
	Direct					
	DEPARTMENT OF INTERIOR	VARIOUS	15	933	188,403	
					188,403	
	Direct					
	DEPARTMENT OF INTERIOR	VARIOUS	15	945	26,948	
	Passthrough/Partial Passthrough					
	COOPERATIVE ECOSYSTEM STUDIES UNITS	P16AC01594	15	945	71,820	
	COOPERATIVE ECOSYSTEM STUDIES UNITS	P16AC01770	15	945	88,035	
					186,803	
	Direct					
	DEPARTMENT OF INTERIOR	VARIOUS	15	UNKOWN	2,843,881	
					2,843,881	
DEPARTMENT OF INTERIOR Total					6,665,051	66,835
DEPARTMENT OF JUSTICE						
	Direct					
	DEPARTMENT OF JUSTICE	VARIOUS	16	525	141,383	
					141,383	
	Direct					
	DEPARTMENT OF JUSTICE	VARIOUS	16	560	34,157	
					34,157	
	Passthrough/Partial Passthrough					
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY	008613	16	575	228,201	76,103
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY	000-95000	16	575	67,283	
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY	18250	16	575	352,938	
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY	XY16011141	16	575	170,152	
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY	RC17 33 1141	16	575	142,007	
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY	24C76	16	575	241,307	
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY	CS18 11 8556	16	575	85,771	
					1,287,658	76,103
	Passthrough/Partial Passthrough					
	CALIFORNIA SCHOOL-BASED HEALTH ALLIANCE	OVC WCCUSD 17-20	16	582	130	
					130	
	Direct					
	DEPARTMENT OF JUSTICE	VARIOUS	16	734	849	
					849	
	Passthrough/Partial Passthrough					
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY	2016-VA-GX-0057	16	UNKOWN	71,908	
					71,908	
DEPARTMENT OF JUSTICE Total					1,536,085	76,103
DEPARTMENT OF LABOR						
	Passthrough/Partial Passthrough					
	CITY OF LOS ANGELES	20702	17	267	-51,332	
	CITY OF LOS ANGELES	20703	17	267	-76,346	
					-127,678	

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DEPARTMENT OF LABOR	Passthrough/Partial Passthrough CITY OF LOS ANGELES ECONOMIC AND WORKFORCE DEVELOPMENT DEPARTMENT	T5897	17	283	-166	-166
	Direct DEPARTMENT OF LABOR	VARIOUS	17	502	282,902	
	Passthrough/Partial Passthrough YOUTH POLICY INSTITUTE INC.	79499	17	502	70,584	
	COMMUNITY PARTNERS	20183904:1	17	502	21,769	
DEPARTMENT OF LABOR Total					375,255	
DEPARTMENT OF STATE					247,411	
	Passthrough/Partial Passthrough INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	FY18-YALI-PM-UCD-03	19	009	51,316	
	INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	S-ECAGD-18-CA-0022	19	009	101,288	
	PARTNERS OF THE AMERICAS, INC.	CBG2016R208	19	009	1,058	
					153,661	
	Passthrough/Partial Passthrough INSTITUTE OF INTERNATIONAL EDUCATION	28813	19	010	-8,882	-8,882
	Passthrough/Partial Passthrough UNITED STATES-INDIA EDUCATIONAL FOUNDATION	88599	19	014	-19,950	-19,950
	Direct DEPARTMENT OF STATE	VARIOUS	19	021	67,798	
					67,798	
	Direct DEPARTMENT OF STATE	VARIOUS	19	345	492,951	97,663
					492,951	97,663
	Passthrough/Partial Passthrough INSTITUTE OF INTERNATIONAL EDUCATION	81610	19	401	1,915	
	INSTITUTE OF INTERNATIONAL EDUCATION	UCD-10-1-2018	19	401	29,789	
					31,704	
	Passthrough/Partial Passthrough GLOBAL TIES U.S.	CPG-FY19-216	19	402	2,901	
					2,901	
	Passthrough/Partial Passthrough INSTITUTE OF INTERNATIONAL EDUCATION	HHH1801000_UCD_7.1.18	19	UNKOWN	257,126	
	INSTITUTE OF INTERNATIONAL EDUCATION	S-ECAGD-17-CA-1057	19	UNKOWN	4,129	
	INSTITUTE OF INTERNATIONAL EDUCATION	S-ECAGD18-CA-1009	19	UNKOWN	104,165	
	INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	20B51	19	UNKOWN	-971	
					364,448	
DEPARTMENT OF STATE Total					1,084,633	97,663
DEPARTMENT OF TRANSPORTATION						
	Direct FEDERAL AVIATION ADMINISTRATION (FAA)	VARIOUS	20	108	139,180	
					139,180	
	Direct DEPARTMENT OF TRANSPORT	VARIOUS	20	108	37,302	
					37,302	
	Direct DEPARTMENT OF TRANSPORT	VARIOUS	20	215	84,912	
					84,912	
	Direct DEPARTMENT OF TRANSPORT	VARIOUS	20	UNKOWN	22,311	
	Passthrough/Partial Passthrough APPLIED PAVEMENT TECHNOLOGY, INC.	TOPR215001RR02UCD	20	UNKOWN	7,207	
	APPLIED PAVEMENT TECHNOLOGY, INC.	TOPR315001RR03UCD	20	UNKOWN	2,120	
	APPLIED PAVEMENT TECHNOLOGY, INC.	TOPR 5_15-001-RR05-UCD	20	UNKOWN	30,314	
	DAVIS, CITY OF	88294	20	UNKOWN	-442,397	

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DEPARTMENT OF TRANSPORTATION	DAVIS, CITY OF	88297	20	UNKOWN	-11,377	
					-391,823	
DEPARTMENT OF TRANSPORTATION Total					-130,429	
LIBRARY OF CONGRESS	Direct					
	THE LIBRARY OF CONGRESS	VARIOUS	42	UNKOWN	214,940	
					214,940	
LIBRARY OF CONGRESS Total					214,940	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Direct					
	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	VARIOUS	43	001	896,325	
	Passthrough/Partial Passthrough					
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58399	43	001	-2	
	JET PROPULSION LABORATORY	77565	43	001	-2	
	JET PROPULSION LABORATORY	1584449	43	001	234	
					896,556	
	Direct					
	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	VARIOUS	43	008	125,733	
					125,733	
	Direct					
	NATIONAL AERONAUTICS & SPACE ADMINISTRATION	VARIOUS	43	012	361,536	
					361,536	
	Passthrough/Partial Passthrough					
	ANGSTROM DESIGNS ENGRG SERVS	59022	43	UNKOWN	1	
	CRAMER FISH SCIENCES	30B68	43	UNKOWN	140	
	JET PROPULSION LABORATORY	1557778	43	UNKOWN	4,933	
	UNIVERSITIES SPACE RESEARCH ASSOCIATION	SOF 05-0171 RICHTER	43	UNKOWN	19,229	
					24,303	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION Total					1,408,127	
NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES	Direct					
	NATIONAL FOUNDATION ARTS & HUMANITIES	VARIOUS	45	024	105,352	
					105,352	
	Passthrough/Partial Passthrough					
	CALIFORNIA HUMANITIES	57203	45	129	-47	
					-47	
	Direct					
	NATIONAL FOUNDATION ARTS & HUMANITIES	VARIOUS	45	130	1,469	
					1,469	
	Direct					
	NATIONAL FOUNDATION ARTS & HUMANITIES	VARIOUS	45	149	255,639	
	Passthrough/Partial Passthrough					
	ARHOOIE FOUNDATION, THE	20160081	45	149	21,816	
	NFAH HUMANITIES, NATIONAL ENDOWMENT FOR THE	10383SC	45	149	103,633	
					381,088	
	Direct					
	NATIONAL FOUNDATION ARTS & HUMANITIES	VARIOUS	45	163	170,232	
					170,232	
	Direct					
	NATIONAL FOUNDATION ARTS & HUMANITIES	VARIOUS	45	164	44,181	
					44,181	
	Direct					
	NATIONAL FOUNDATION ARTS & HUMANITIES	VARIOUS	45	169	16,504	
					16,504	
	Direct					
	INSTITUTE OF MUSEUM AND LIBRARY SERVICES	VARIOUS	45	301	208,430	
					208,430	
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE LIBRARY	18444	45	310	40,315	

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NATIONAL FOUNDATION ON THE ARTS AND THE HUM	CALIFORNIA STATE LIBRARY	18464	45	310	110,384 150,699	
	Direct					
	INSTITUTE OF MUSEUM AND LIBRARY SERVICES	VARIOUS	45	312	34,937 34,937	
	Direct					
	INSTITUTE OF MUSEUM AND LIBRARY SERVICES	VARIOUS	45	313	227,144 227,144	
NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES Total					1,339,989	
SMALL BUSINESS ADMINISTRATION						
	Direct					
	SMALL BUSINESS ADMINISTRATION (SBA)	VARIOUS	59	037	1,363,638	839,008
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE UNIVERSITY FULLERTON/CSU FULLERTON AUXILIARY SERVICES	S-6464-UCI-CYC1	59	037	30,000	
	CALIFORNIA STATE UNIVERSITY FULLERTON/CSU FULLERTON AUXILIARY SERVICES	S-6683-UCI-CYC1	59	037	84,736 1,478,374	839,008
	Direct					
	SMALL BUSINESS ADMINISTRATION (SBA)	VARIOUS	59	UNKOWN	166,049 166,049	85,656 85,656
SMALL BUSINESS ADMINISTRATION Total					1,644,424	924,665
DEPARTMENT OF VETERANS AFFAIRS						
	Direct					
	DEPARTMENT OF VETERANS AFFAIRS	VARIOUS	64	UNKOWN	1,973,380 1,973,380	
DEPARTMENT OF VETERANS AFFAIRS Total					1,973,380	
ENVIRONMENTAL PROTECTION AGENCY						
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	15-C0052	66	306	45,451 45,451	
	Passthrough/Partial Passthrough					
	ASSOCIATION OF BAY AREA GOVERNMENTS	16477-2019	66	456	39,649 39,649	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10004	66	707	10 10	
	Direct					
	ENVIRONMENTAL PROTECTION AGENCY	VARIOUS	66	716	611,691	111,545
	Passthrough/Partial Passthrough					
	EXTENSION FOUNDATION	75B48	66	716	18,418	
	EXTENSION FOUNDATION	28C94	66	716	9,072 639,182	111,545
	Passthrough/Partial Passthrough					
	NORTH AMERICAN ASSOCIATION FOR ENVIRONMENTAL EDUCATION	32C46	66	951	1,170 1,170	
	Direct					
	ENVIRONMENTAL PROTECTION AGENCY	VARIOUS	66	UNKOWN	3,748,598	2,727,892
	Passthrough/Partial Passthrough					
	TAHOE REGIONAL PLANNING AGENCY (TRPA)	17C00051	66	UNKOWN	40,733 3,789,331	2,727,892
ENVIRONMENTAL PROTECTION AGENCY Total					4,514,792	2,839,437
NUCLEAR REGULATORY COMMISSION						
	Direct					
	NUCLEAR REGULATORY COMMISSION	VARIOUS	77	008	271,397 271,397	
NUCLEAR REGULATORY COMMISSION Total					271,397	
DEPARTMENT OF ENERGY						
	Direct					
	DEPARTMENT OF ENERGY	VARIOUS	81	123	61 61	
	Direct					
	DEPARTMENT OF ENERGY	VARIOUS	81	049	33,410	

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DEPARTMENT OF ENERGY	Passthrough/Partial Passthrough COLORADO STATE UNIVERSITY SANDIA NATIONAL LABORATORIES	DESC0017975	81	049	34,473	
		79107	81	049	235,438	
					303,321	
	Passthrough/Partial Passthrough KRELL INSTITUTE KRELL INSTITUTE	040010	81	112	25,778	
		040009	81	112	1,000	26,778
	Direct DEPARTMENT OF ENERGY	VARIOUS	81	121	198,754	
					198,754	
	Direct DEPARTMENT OF ENERGY	VARIOUS	81	136	107,409	
					107,409	
	Direct DEPARTMENT OF ENERGY	VARIOUS	81	UNKOWN	3,017,933	
	Passthrough/Partial Passthrough FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO) LAWRENCE LIVERMORE NATIONAL SECURITY, LLC LOS ALAMOS NATIONAL SECURITY, LLC OAK RIDGE NATIONAL LABORATORY SANDIA NATIONAL LABORATORIES	UCD2018P016	81	UNKOWN	16,870	
		B620069	81	UNKOWN	95,548	
		SUB 404673 (NONE)	81	UNKOWN	-1,534	
		4000168234	81	UNKOWN	8,209	
88486		81	UNKOWN	-11,113		
				3,125,912		
DEPARTMENT OF ENERGY Total					3,762,236	
DEPARTMENT OF EDUCATION	Direct DEPARTMENT OF EDUCATION	VARIOUS	84	015	2,915,634	39,260
					2,915,634	
	Passthrough/Partial Passthrough UNIVERSITY OF SOUTHERN CALIFORNIA UNIVERSITY OF SOUTHERN CALIFORNIA	55655151:5	84	015	5,590	
		55655350:5	84	015	20,294	
				2,941,518	39,260	
	Direct DEPARTMENT OF EDUCATION	VARIOUS	84	021	17,301	
					17,301	
	Direct DEPARTMENT OF EDUCATION	VARIOUS	84	022	202,065	
					202,065	
	Direct DEPARTMENT OF EDUCATION	VARIOUS	84	031	2,719,720	
	Passthrough/Partial Passthrough CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS FOUNDATION SAN JOSE CITY COLLEGE SANTA MONICA COLLEGE	F16-439	84	031	134,310	
		A16-0099-003	84	031	293,004	
		A172125SF2	84	031	233,923	
					3,380,957	
Passthrough/Partial Passthrough UNIVERSITY OF MINNESOTA	A15-0201-002	84	116	41,242		
				41,242		
Passthrough/Partial Passthrough SAN MATEO COUNTY	59005	84	120	14,523		
				14,523		
Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF REHABILITATION	29891	84	126	543,173		
				543,173		
Passthrough/Partial Passthrough AMERICAN EDUCATION SOLUTIONS, INC.	AES2017-01	84	165	138,900		
				138,900		
Passthrough/Partial Passthrough OAKLAND UNIFIED SCHOOL DISTRICT	P1509363	84	184	25,734		

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DEPARTMENT OF EDUCATION					25,734	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	200	2,669,644	
					2,669,644	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	229	205,413	
					205,413	
	Passthrough/Partial Passthrough					
	LOS ANGELES UNIFIED SCHOOL DISTRICT	77131	84	287	-1,980	
	LOS ANGELES UNIFIED SCHOOL DISTRICT	20842	84	287	3,676	
	LOS ANGELES UNIFIED SCHOOL DISTRICT	77049	84	287	851,819	
					853,515	
	Passthrough/Partial Passthrough					
	WESTED	S12-173:7	84	293	290,934	
					290,934	
	Passthrough/Partial Passthrough					
	EDUCATION DEVELOPMENT CENTER, INC.	11972:2	84	295	49,542	
	PUBLIC BROADCASTING SERVICE	20154615:3	84	295	372,510	
					422,051	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	305	273,337	
					273,337	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	334	5,278,130	
	Passthrough/Partial Passthrough					
	OFFICE OF POSTSECONDARY EDUCATION	17-GEAR UP-1801-UCM	84	334	21,628	
					5,299,758	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	335	673,588	
					673,588	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	336	1,085,212	286,612
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS FOUNDATION	F18-160	84	336	176,298	
					1,261,509	286,612
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	365	927,057	
					927,057	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	367	150,848	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF EDUCATION	18380	84	367	-40,558	
	CALIFORNIA DEPARTMENT OF EDUCATION	18623	84	367	1,116,179	1,066,770
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB14-CRLP-UCB	84	367	8,934	
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	SUB NCLB14-CRLP-UCSD (CN170224	84	367	7,494	
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	182DF	84	367	4	
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CHSSP-SO	84	367	111,916	
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CHSSP-UCD	84	367	40,500	
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CMP-UCD	84	367	20,626	
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CMP-UCI-CYC1	84	367	20,636	
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CRLP-UCI-CYC1	84	367	43,627	
	CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	23858	84	367	805,912	419,833
	CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	18215	84	367	-660	
	CALIFORNIA STATE UNIVERSITY SACRAMENTO/UNIVERSITY ENTERPRISES, INC.	528781D	84	367	12,016	
	NATIONAL WRITING PROJECT	008930	84	367	5,500	
	NATIONAL WRITING PROJECT	92-CA09-SEED2017-CRWPPD	84	367	10,390	
	NATIONAL WRITING PROJECT	92-CA03-SEED2017-ILI	84	367	9,386	
	NATIONAL WRITING PROJECT	92-CA03-SEED2018-C3WPPD	84	367	16,917	
	NATIONAL WRITING PROJECT	009674	84	367	17,616	

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DEPARTMENT OF EDUCATION					2,357,282	1,486,602
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	382	294,102	17,130
					294,102	17,130
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	407	10	
					10	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	411	411,457	208,567
					411,457	208,567
	Passthrough/Partial Passthrough					
	CALIFORNIA STATE UNIVERSITY, FRESNO	SC330402-17-01	84	422	42,000	
					42,000	
	Direct					
	DEPARTMENT OF EDUCATION	VARIOUS	84	UNKOWN	109,617	
	Passthrough/Partial Passthrough					
	CALIFORNIA CHILD DEVELOPMENT DIVISION	25727	84	UNKOWN	-3,225	
	CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	ESSA18-CWP-UCD	84	UNKOWN	39,082	
	SAN DIEGO COUNTY	20851	84	UNKOWN	973,598	
					1,119,071	
DEPARTMENT OF EDUCATION Total					24,406,142	2,038,171
SCHOLARSHIP FOUNDATIONS						
	Direct					
	VIETNAM EDUCATION FOUNDATION	VARIOUS	85	802	3,521	
					3,521	
SCHOLARSHIP FOUNDATIONS Total					3,521	
NATIONAL ARCHIVES & RECORDS ADMINISTRATION						
	Direct					
	NATIONAL ARCHIVES AND RECORDS ADMINISTRATION	VARIOUS	89	003	75,524	
	NATIONAL HISTORICAL PUBLICATIONS AND RECORDS COMMISSION	VARIOUS	89	003	61,720	
					137,244	
NATIONAL ARCHIVES & RECORDS ADMINISTRATION Total					137,244	
DEPARTMENT OF HEALTH AND HUMAN SERVICES						
	Direct					
	CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	067	8,044,464	1,387,899
	Passthrough/Partial Passthrough					
	AURUM INSTITUTE	A128676	93	067	123,034	
	AURUM INSTITUTE	NU2GGH001981-03	93	067	74,819	
	COLUMBIA UNIVERSITY	A126704	93	067	-190,068	8,660
	TB/HIV CARE ASSOCIATION	A128731	93	067	22,896	
	CENTER FOR INFECTIOUS DISEASE RESEARCH IN ZAMBIA	C0076	93	067	-40,279	
					8,034,867	1,396,559
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-10250	93	074	1,003,906	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	18-10040	93	074	941,062	
	COUNTY OF LOS ANGELES	20614	93	074	102,869	
					2,047,837	
	Passthrough/Partial Passthrough					
	SANTA BARBARA, COUNTY OF	C000113800	93	090	27,555	
					27,555	
	Direct					
	OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	VARIOUS	93	092	720,579	436,547
					720,579	436,547
	Passthrough/Partial Passthrough					
	NATIONAL COUNCIL FOR BEHAVIORAL HEALTH	2390.0005	93	098	37,690	
					37,690	
	Direct					
	FDA PHS FOOD AND DRUG ADMINISTRATION	VARIOUS	93	103	60,441	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0223	93	103	27,397	

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	18-0224	93	103	76,898	
	CHILDREN'S HOSPITAL LOS ANGELES	RGF011721-B	93	103	20,182	
	INTEGRA LIFESCIENCES CORPORATION	A18-2655	93	103	1,485	
					186,402	
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	107	1,591,321	1,289,999
					1,591,321	1,289,999
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	110	3,188,297	95,093
	Passthrough/Partial Passthrough					
	CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	82B68	93	110	47,858	
	CHILDREN'S HOSPITAL OF PHILADELPHIA	UA3MC202180901	93	110	8,584	
	UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY18.609.002	93	110	74,279	
	ASSOCIATION OF UNIVERSITY CENTERS ON DISABILITIES	A19-3052	93	110	7,717	
					3,326,734	95,093
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	117	571,854	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	18-10566	93	117	108,961	
					680,815	
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	127	212,484	18,695
					212,484	18,695
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	145	6,346,449	1,254,225
	Passthrough/Partial Passthrough					
	CITY AND COUNTY OF SAN FRANCISCO	BPHC11000127	93	145	138,962	
	CITY AND COUNTY OF SAN FRANCISCO	A8887	93	145	1,418	
	RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0295	93	145	312,453	
					6,799,282	1,254,225
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	153	1,397,607	477,643
					1,397,607	477,643
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	157	663,066	64,147
					663,066	64,147
	Passthrough/Partial Passthrough					
	CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2011CDC-UCSF-1	93	184	21,830	
					21,830	
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	186	1,360,734	
					1,360,734	
	Passthrough/Partial Passthrough					
	ESSENTIAL ACCESS HEALTH	58501	93	217	-1,595	
	ESSENTIAL ACCESS HEALTH	1324-5320-71209-17-18:03	93	217	143,008	
					141,412	
	Direct					
	PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	VARIOUS	93	225	254,399	
					254,399	
	Direct					
	PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	VARIOUS	93	226	1,084,748	302,138
	Passthrough/Partial Passthrough					
	INTERNATIONAL BUSINESS MACHINES CORPORATION	HCUP-2017-UCD	93	226	17,067	
	SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11678SUB	93	226	43,995	
					1,145,810	302,138
	Direct					
	ADMH PHS (SAMHSA) MENTAL HEALTH - CENTER FOR MENTAL HEALTH SERVICES	VARIOUS	93	243	1,614,026	256,962

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	ADMH PHS (SAMHSA) PREVENTION - CENTER FOR SUBSTANCE ABUSE PREVENTION	VARIOUS	93	243	7,739,885	3,759,107
	ADMH PHS (SAMHSA) TREATMENT - CENTER FOR SUBSTANCE ABUSE TREATMENT	VARIOUS	93	243	1,523,844	6,504
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	243	42,618	
	Passthrough/Partial Passthrough					
	AMERICAN ACADEMY OF ADDICTION PSYCHIATRY INC	PCSSMAT-16-7	93	243	20,305	
	AZUSA PACIFIC UNIVERSITY	S-1H79T1026021-1:3	93	243	-677	
	PUBLIC HEALTH INSTITUTE	01488	93	243	19,324	
	UNIVERSITY OF WISCONSIN-MADISON	747K143	93	243	2,209	
	UNIVERSITY OF WISCONSIN-MADISON	851K314	93	243	577	
	SUNRISE COMMUNITY COUNSELING CENTER	20174448	93	243	31,715	
	ST. JOSEPH CENTER	20183783	93	243	102,829	
					11,096,654	4,022,573
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	247	723,778	297,631
					723,778	297,631
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	253	1,855,912	
					1,855,912	
	Direct					
	CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	262	2,809,894	16,437
					2,809,894	16,437
	Passthrough/Partial Passthrough					
	UNIVERSITY OF WASHINGTON	759280 PRIOR 751195	93	266	276,817	
					276,817	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	20C89	93	283	1,268,463	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	35B00	93	283	46,218	
				1,314,681		
Passthrough/Partial Passthrough						
VANTAGE HUMAN RESOURCE SERVICES, INC	23C46	93	289	4,322		
				4,322		
Passthrough/Partial Passthrough						
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	20183816	93	307	145,998		
HELUNA HEALTH	0350.0102	93	307	-890		
				145,108		
Passthrough/Partial Passthrough						
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S16-0016	93	310	170,464		
JACKSON LABORATORY, THE	3UM10D023222-08S3	93	310	2,338		
				172,801		
Passthrough/Partial Passthrough						
HELUNA HEALTH	201702986	93	323	28,747		
HELUNA HEALTH	5NU50CK000410	93	323	341,464		
HELUNA HEALTH	A132828	93	323	22,451		
				392,663		
Direct						
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	339	41,612		
				41,612		
Passthrough/Partial Passthrough						
HARVARD UNIVERSITY	B9852	93	350	-5,507		
				-5,507		
Passthrough/Partial Passthrough						
FAMILY HEALTH CENTERS OF SAN DIEGO, INC	SUB NONE(HP29857)	93	359	48,256		
				48,256		
Passthrough/Partial Passthrough						
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	007	93	365	191,788		
				191,788		

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	Passthrough/Partial Passthrough					
	ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICIALS	86-29221 (FE-2922-01-00)	93	391	1,292	1,292
	Passthrough/Partial Passthrough					
	NATIONAL ASSOCIATION OF CHRONIC DISEASE DIRECTORS	SUB 0602017	93	424	24,558	24,558
	Direct					
	FDA PHS FOOD AND DRUG ADMINISTRATION	VARIOUS	93	448	422,441	422,441
	Direct					
	CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	456	527,533	
	Passthrough/Partial Passthrough					
	KENNEDY KRIEGER INSTITUTE	NU50MN000004	93	456	43,035	570,568
	Passthrough/Partial Passthrough					
	TEXAS HEALTH AND HUMAN SERVICES COMMISSION	20602	93	505	87,766	96,145
					87,766	96,145
	Passthrough/Partial Passthrough					
	UNIVERSITY OF ARIZONA	226256	93	516	51,808	50,266
	UNIVERSITY OF ARIZONA	455319	93	516	42,532	28,682
					94,340	78,947
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10002	93	521	2,812,342	2,812,342
	Direct					
	OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	VARIOUS	93	551	-8,381	-8,381
					-8,381	-8,381
	Passthrough/Partial Passthrough					
	MONO, COUNTY OF	C000113722	93	556	17,850	
	LOS ANGELES COUNTY, DEPARTMENT OF CHILDREN AND FAMILY SERVICES	2015-01-05	93	556	205,643	
					223,493	
	Passthrough/Partial Passthrough					
	SACRAMENTO, COUNTY OF	A18-2494	93	563	6,375	
	STANISLAUS, COUNTY OF	C000113903	93	563	5,100	
					11,475	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	17-10015	93	566	52,371	
					52,371	
	Direct					
	OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	VARIOUS	93	600	1,458,662	9,925
	Passthrough/Partial Passthrough					
	AMERICAN ACADEMY OF PEDIATRICS	719170 UCLA	93	600	810,912	185,015
	CALIFORNIA MEDICAL CENTER	20111273:10	93	600	152,721	
	UNIVERSITY OF MASSACHUSETTS AMHERST	20160127	93	600	160,827	
	UNIVERSITY OF MASSACHUSETTS AMHERST	80750	93	600	21,287	
	UNIVERSITY OF MASSACHUSETTS AMHERST	90HC0011-03-00	93	600	63,819	
	UNIVERSITY OF MASSACHUSETTS AMHERST	81756	93	600	148,250	
	UNIVERSITY OF MASSACHUSETTS AMHERST	90HC0011-04-00	93	600	198,527	
					3,015,006	194,940
	Direct					
	OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	VARIOUS	93	604	327,197	
					327,197	
	Direct					
	SEC ADMINISTRATION FOR COMMUNITY LIVING	VARIOUS	93	632	1,025,347	7,358
					1,025,347	7,358
	Passthrough/Partial Passthrough					

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DEPARTMENT OF HEALTH AND HUMAN SERVICES	DEL NORTE COUNTY	C000113799	93	645	18,576 18,576	
	Passthrough/Partial Passthrough LOS ANGELES COUNTY, DEPARTMENT OF CHILDREN AND FAMILY SERVICES	16-09-01:1	93	659	249,252 249,252	
	Passthrough/Partial Passthrough LASSEN, COUNTY OF	C000113838	93	667	77,127 77,127	
	Direct HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	732	448,388 448,388	237,264 237,264
	Direct CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	735	923,353	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	17-10613	93	735	984,147 1,907,501	
	Direct CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	738	162,418 162,418	24,201 24,201
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10506	93	758	65,763 65,763	
	Passthrough/Partial Passthrough CITY AND COUNTY OF SAN FRANCISCO	A129735	93	763	37,596 37,596	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES UNIVERSITY OF MISSOURI	17-94653 17-94672 17-94259 0081642/00061663	93 93 93 93	788 788 788 788	635,358 166,626 102,514 727,620 1,632,118	141,771 141,771
	Passthrough/Partial Passthrough COUNTY OF LOS ANGELES	H-705762:5	93	817	191,060 191,060	
	Direct HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	822	207,761 207,761	56,866 56,866
	Direct CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	833	442,161 442,161	7,401 7,401
	Direct HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	884	2,394,594 2,394,594	49,895 49,895
	Passthrough/Partial Passthrough AMERICAN FEDERATION-AGING RESEARCH	A124460	93	886	-6 -6	
	Passthrough/Partial Passthrough COUNTY OF LOS ANGELES COUNTY OF LOS ANGELES	20604 20652	93 93	889 889	11,143 3,418 14,561	
	Passthrough/Partial Passthrough CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	33C31	93	898	2,657 2,657	
	Passthrough/Partial Passthrough					

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Schedule of Expenditures of Federal Awards
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Cluster Programs and Federal Agencies	Federal Direct / Pass-Through and Partial Pass-Through	Agency/PassThrough Identifier or Other Identifier	Federal CFDA #		FY 2019	Passed through to Subrecipients
			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	CITY AND COUNTY OF SAN FRANCISCO	BPHC10000131	93	914	-26,769	
	CITY AND COUNTY OF SAN FRANCISCO	CMS 7886	93	914	60,749	
	CITY AND COUNTY OF SAN FRANCISCO	CMS 7890	93	914	320,826	
	CITY AND COUNTY OF SAN FRANCISCO	DPHC17001025	93	914	280,373	
	CITY AND COUNTY OF SAN FRANCISCO	RFP43-2017	93	914	187,758	
	CITY AND COUNTY OF SAN FRANCISCO	A130897	93	914	2,352,982	
	LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-002389:4	93	914	886,575	
	SAN DIEGO COUNTY	87593	93	914	10	
	AIDS UNITED	SUB 20182427 (U69HA310670100)	93	914	165,309	
					4,227,812	
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	18372	93	917	44,497	
	CITY AND COUNTY OF SAN FRANCISCO	HCHPDHIVSVGR	93	917	1,058,532	
					1,103,029	
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	918	757,020	
					757,020	
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	924	24,634	
					24,634	
	Direct					
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	928	1,546,360	9,738
Passthrough/Partial Passthrough						
BOSTON UNIVERSITY	4500002544	93	928	49,032		
DEMOCRACY COUNCIL OF CALIFORNIA	B6227	93	928	-7,152		
				1,588,240	9,738	
Passthrough/Partial Passthrough						
INDIAN HEALTH COUNCIL, INC.	88022	93	933	16,491		
				16,491		
Direct						
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	939	789,137	25,000	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	939	660,912	106,393	
Passthrough/Partial Passthrough						
AIDS PROJECT LOS ANGELES	C-118200	93	939	165,256		
AIDS PROJECT LOS ANGELES	81348	93	939	-3,116		
				1,612,189	131,393	
Passthrough/Partial Passthrough						
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-10840	93	940	943,653		
CITY AND COUNTY OF SAN FRANCISCO	BPHC12000084	93	940	527,288		
CITY AND COUNTY OF SAN FRANCISCO	CID#1000009855	93	940	197,805		
HELUNA HEALTH	1000008917	93	940	27,478		
				1,696,224		
Direct						
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	947	1,364,370		
				1,364,370		
Passthrough/Partial Passthrough						
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	18325	93	959	130,149		
				130,149		
Direct						
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	969	806,870	129,369	
				806,870	129,369	
Passthrough/Partial Passthrough						
NATIONAL FAMILY PLANNING & REPRODUCTIVE HEALTH ASSOCIATION INC.	B4417	93	974	-1,027		
				-1,027		
Direct						
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	977	1,289,300	317,286	
Passthrough/Partial Passthrough						
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	D4584	93	977	896		

UNIVERSITY OF CALIFORNIA
Schedule of Expenditures of Federal Awards
For the Fiscal Year Ended June 30, 2019

Cluster Programs and Federal Agencies	Federal Direct / Pass-Through and Partial Pass-Through	Agency/PassThrough Identifier or Other Identifier	Federal CFDA #		FY 2019	Passed through to Subrecipients
			Prefix	Extension	Federal Expenditures	
DEPARTMENT OF HEALTH AND HUMAN SERVICES					1,290,196	317,286
	Passthrough/Partial Passthrough					
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1410332	93	991	151,757	
					151,757	
	Direct					
	CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	VARIOUS	93	UNKOWN	198,355	
	HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	VARIOUS	93	UNKOWN	186,890	
	SEC HHS OFFICE OF THE SECRETARY	VARIOUS	93	UNKOWN	4,166	
	Passthrough/Partial Passthrough					
	ASSOCIATION OF MATERNAL AND CHILD HEALTH PROGRAMS	201602918	93	UNKOWN	7,269	
	BATTELLE MEMORIAL INSTITUTE	37A11	93	UNKOWN	23	
	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10190	93	UNKOWN	4,586,043	
	CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2015CDCUCD	93	UNKOWN	42,656	
	CITY AND COUNTY OF SAN FRANCISCO	A7222	93	UNKOWN	-2,188	
	DUKE UNIVERSITY	35B20	93	UNKOWN	6,701	
	ORANGE COUNTY	MA-063-16011090	93	UNKOWN	44,971	
	WASHINGTON UNIVERSITY IN ST. LOUIS	82840	93	UNKOWN	1	
	MOST INVESTMENTS, LLC	HHSP2332-014-00035C	93	UNKOWN	59,586	
	MOST INVESTMENTS, LLC	LOA	93	UNKOWN	14,963	
	SOCIETY FOR ADOLESCENT HEALTH AND MEDICINE	A130236	93	UNKOWN	1,919	
	IMPAQ INTERNATIONAL	2758	93	UNKOWN	196,914	
	MATHEMATICA, INC	50702S05922	93	UNKOWN	171,403	
	POLYNOVO BIOMATERIALS PTY. LTD.	201603858	93	UNKOWN	8,647	
					5,528,319	
DEPARTMENT OF HEALTH AND HUMAN SERVICES Total					84,526,817	11,145,881
CORPORATION FOR NATIONAL AND COMMUNITY SRVC						
	Passthrough/Partial Passthrough					
	CALIFORNIAVOLUNTEERS	009301	94	006	240,253	
	CALIFORNIAVOLUNTEERS	80068	94	006	37,641	
	JUMPSTART FOR YOUNG CHILDREN, INC.	900200	94	006	92,856	
	SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES	20171242	94	006	17,488	
					388,237	
	Direct					
	CORPORATION FOR NATIONAL AND COMMUNITY SERVICE	VARIOUS	94	013	77,568	
					77,568	
	Direct					
	CORPORATION FOR NATIONAL AND COMMUNITY SERVICE	VARIOUS	94	UNKOWN	25,334	
					25,334	
CORPORATION FOR NATIONAL AND COMMUNITY SRVC Total					491,140	
SOCIAL SECURITY ADMINISTRATION						
	Passthrough/Partial Passthrough					
	DEL NORTE COUNTY	CW-2017-06	96	UNKOWN	-2,125	
					-2,125	
SOCIAL SECURITY ADMINISTRATION Total					-2,125	
DEPARTMENT OF HOMELAND SECURITY						
	Passthrough/Partial Passthrough					
	THE CENTER FOR RURAL DEVELOPMENT	FY15001903 UCDAVIS	97	005	139,871	
	THE CENTER FOR RURAL DEVELOPMENT	EMW2016CA00097S01	97	005	7,418	
					147,289	
DEPARTMENT OF HOMELAND SECURITY Total					147,289	
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT						
	Passthrough/Partial Passthrough					
	CORNELL UNIVERSITY	72026319CA00002	98	001	48,749	
	INTERNATIONAL AIDS VACCINE INITIATIVE INC.	2395	98	001	165,027	
	KANSAS STATE UNIVERSITY	S15115	98	001	423,481	583,027
	KANSAS STATE UNIVERSITY	S18113	98	001	375,401	
	MANAGEMENT SCIENCES FOR HEALTH, INC	B0074	98	001	-7,560	
					1,005,098	583,027
	Passthrough/Partial Passthrough					
	INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER	201400223	98	UNKOWN	178,617	64,150
	KNCV TUBERCULOSIS FOUNDATION	1.00.708.1	98	UNKOWN	296,898	
	MICHIGAN STATE UNIVERSITY	RC102095	98	UNKOWN	70,655	
	OREGON STATE UNIVERSITY	EPP-A-00-06-00012	98	UNKOWN	83,428	
	THE NATIONAL ACADEMIES	201702123	98	UNKOWN	1,547	
	UNIVERSITY OF ILLINOIS	20140623001	98	UNKOWN	21,416	

UNIVERSITY OF CALIFORNIA
Schedule of Expenditures of Federal Awards
For the Fiscal Year Ended June 30, 2019

Cluster Programs and Federal Agencies	Federal Direct / Pass-Through and Partial Pass-Through	Agency/PassThrough Identifier or Other Identifier	Federal CFDA #		FY 2019	
			Prefix	Extension	Federal Expenditures	Passed through to Subrecipients
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT	CARDNO LTD	PO 2019-13	98	UNKOWN	15,491	
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT Total					668,052	64,150
OTHER FEDERAL AGENCIES					1,673,150	647,177
	Direct					
	PEACE CORPS	VARIOUS	99	UNKOWN	51,560	
	Passthrough/Partial Passthrough					
	AMERICAN EDUCATION SOLUTIONS, INC.	AES2018-06	99	UNKOWN	69,468	
	ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-15436-003-A	99	UNKOWN	21,692	
	BROAD INSTITUTE INC.	63432	99	UNKOWN	-6,020	
	CALIFORNIA DEPARTMENT OF EDUCATION	18616	99	UNKOWN	839,279	802,687
	CALIFORNIA DEPARTMENT OF EDUCATION	18753	99	UNKOWN	-717	
	CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	14-90487	99	UNKOWN	755,945	
	CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	18-95380	99	UNKOWN	822,758	
	CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT	M7105788	99	UNKOWN	16,332	
	CITY OF LOS ANGELES	20701	99	UNKOWN	-4,600	
	JET PROPULSION LABORATORY	1587974	99	UNKOWN	25,004	
	LEIDOS, INC.	SUB P010219944 (HT0011-18-C-00	99	UNKOWN	83,499	
	LEIDOS, INC.	3	99	UNKOWN	24,564	
	LEIDOS, INC.	4	99	UNKOWN	83,359	
	LOS ANGELES UNIFIED SCHOOL DISTRICT	77104	99	UNKOWN	2,285	
	NEAR EAST SOUTH ASIA CENTER FOR STRATEGIC STUDIES	20190301	99	UNKOWN	249,113	
	NEAR EAST SOUTH ASIA CENTER FOR STRATEGIC STUDIES	20192787	99	UNKOWN	225,532	
	SAN DIEGO COUNTY	SUB 554608 (NONE)	99	UNKOWN	72,814	
	SAN DIEGO COUNTY	SUB 554626 (NONE)	99	UNKOWN	272,909	
	WESTAT	79127	99	UNKOWN	-1,750	
	CALIFORNIA STATE UNIVERSITY FULLERTON/CSU FULLERTON AUXILIARY SERVICES	009823	99	UNKOWN	152,705	
	CALIFORNIA STATE UNIVERSITY FULLERTON/CSU FULLERTON AUXILIARY SERVICES	87249	99	UNKOWN	74,668	
	AMERICAN INSTITUTES FOR RESEARCH IN THE BEHAVIORAL SCIENCES	0283200708	99	UNKOWN	14,565	
	AMERICAN INSTITUTES FOR RESEARCH IN THE BEHAVIORAL SCIENCES	0470300001	99	UNKOWN	8,962	
	AMERICAN INSTITUTES FOR RESEARCH IN THE BEHAVIORAL SCIENCES	57549	99	UNKOWN	-16,655	
	LOS ANGELES COUNTY, DEPARTMENT OF CHILDREN AND FAMILY SERVICES	78135:3	99	UNKOWN	2,709,810	1,594,643
	YOUTH POLICY INSTITUTE INC.	79399	99	UNKOWN	118,275	
	GREEN DOT PUBLIC SCHOOLS	77829	99	UNKOWN	39,261	
	LOS ANGELES COUNTY OFFICE OF EDUCATION	C-17860:1	99	UNKOWN	171,189	
	NEW VISION MIDDLE SCHOOL	77836	99	UNKOWN	-2,477	
	SOCIAL JUSTICE LEARNING INSTITUTE INC.	17VSPCA010:1	99	UNKOWN	17,240	
	AMERICAN PSYCHIATRIC ASSOCIATION	20191794	99	UNKOWN	50	
	AMERICAN PSYCHIATRIC ASSOCIATION	20191795	99	UNKOWN	2,469	
	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC (ARRA)	84232 - 01 - 404958	99	UNKOWN	90,466	
	AMERICAN HEART ASSOCIATION	19CDA34700007	99	UNKOWN	5,320	
	SCALE-FREE UNTETHERED NETWORK SYSTEMS TECHNOLOGY	63924	99	UNKOWN	257	
OTHER FEDERAL AGENCIES Total					6,989,131	2,397,330
OTHER PROGRAMS Total					6,989,131	2,397,330
Grand Total					158,920,323	20,869,772
					\$5,867,841,847	\$510,256,415

UNIVERSITY OF CALIFORNIA

Notes to Schedules of Expenditures of Federal Awards Year Ended June 30, 2019

1. General

The accompanying Summary Schedule of Expenditures of Federal Awards and Schedule of Expenditures of Federal Awards (SEFA) (collectively the “Schedules”) present the activity of all federal financial assistance programs of the University of California (the University), a component unit of the State of California, except for the University’s Benioff Children’s Hospital Oakland, which is separately reported.

Consistent with the provisions of Title 2 *U.S. Code of Federal Regulations* Part 200, *Uniform Administrative Requirements for Federal Awards* (Uniform Guidance), the accompanying Schedules of Expenditures of Federal Awards do not include the expenditures of the Lawrence Berkeley National Laboratory – a major Department of Energy (DOE) national laboratory operated and managed by the University under contracts with DOE, as it represents a government-owned, contractor operated facility.

2. Basis of Accounting

The accompanying SEFA is presented on a cash basis as year-end accruals for financial statement purposes are performed in aggregate and not allocated to individual awards. Amounts expended for loan programs are reflected at the value of new loans made or received during the fiscal year plus the beginning balance of loans from previous years for which the federal government imposes continuing compliance requirements.

The information in these schedules is presented in accordance with the requirements of the Uniform Guidance. Negative amounts represent adjustments in the normal course of business to amounts reported in a prior year.

3. CFDA Numbers

Research and Development (R&D) direct awards are presented on the SEFA by federal agency and major subdivision within the federal agency, when applicable. Since Catalog of Federal Domestic Assistance (CFDA) numbers for federal programs are numerous, expenditures have been grouped by federal agency followed by the “RD” designation.

Pass-through and partial pass-through awards have been presented by pass-through entity, CFDA number, sponsor’s award number, when available, or by the University assigned identifier. When the CFDA number is not available, the federal award is presented by agency number and the suffix “RD” for R&D awards, and “UNKNOWN” for non R&D awards. When the federal agency and the CFDA number are not available, “99 RD” is used for R&D awards and “99 UNKNOWN” is used for non R&D awards.

4. Commingled Assistance

The University has included, within the SEFA, amounts received from pass-through entities, which include funds from federal and non-federal sources because the pass through entity is unable to determine the federal portion. Those funds are referred to as partial pass-through funds on the SEFA.

UNIVERSITY OF CALIFORNIA

Notes to Schedules of Expenditures of Federal Awards

Year Ended June 30, 2019

The 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 56% of the total funding for these Cal Grant awards.

In fiscal year 2019, the University paid Cal Grant A and B funds in the amount of \$955,170,759; however, CSAC is unable to determine the exact amount of TANF funds, if any, represented in those awards. Therefore, the Schedules of Expenditures of Federal Awards do not include State Grant A and B awards.

5. Outstanding Balances on Loan Programs

Outstanding balances on federal loans programs as of June 30, 2019 are as follows:

	<u>CFDA</u>	<u>Principal Outstanding</u>
Federal Perkins Loan Program	84.038	\$156,707,601
Health Professions Student Loans, Loans for Disadvantaged Students, Primary Care Loans	93.342	\$62,308,213
Nursing Student Loans	93.364	\$1,391,282
Nursing Student Faculty Loans	93.264	\$769,121
ARRA - Nursing Faculty Loans	93.408	\$90,885

6. Facilities and Administrative Costs

The University uses its negotiated indirect costs rates instead of the 10% de minimis rate allowed by the Uniform Guidance.



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 Regents of the University of California

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 the University of California (the "University"), a component unit of the State of California, its aggregate discretely presented component units, the University of California Retirement System, and the University of California Retiree Health Benefit Trust as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents, and have issued our report thereon dated October 8, 2019. The financial statements of the University's discretely presented component units were not audited in accordance with *Government Auditing Standards*, and accordingly, this report does not include reporting on internal control over financial reporting or instances of reportable noncompliance associated with the University's discretely presented component units.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the University's internal control over financial reporting ("internal control") to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of University'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 and therefore, material weaknesses or significant deficiencies may exist that have not been identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify a certain deficiency in internal control, described in the accompanying Schedule of Findings and Questioned Costs as item 2019-001 that we consider to be a significant deficiency.



Compliance and Other Matters

As part of obtaining reasonable assurance about whether the University'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 determination of financial statement amounts. 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*.

The University's Response to Finding

The University's response to the finding identified in our audit is described in the accompanying schedule of findings and questioned costs. The University's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

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.

PricewaterhouseCoopers LLP

San Francisco, California
October 8, 2019



**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 Regents of the University of California

Report on Compliance for Each Major Federal Program

We have audited the University of California’s (the “University”), a component unit of the State of California, 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 University’s major federal programs for the year ended June 30, 2019. The University’s major federal programs are identified in the summary of auditor’s results section of the accompanying schedule of findings and questioned costs.

The University’s basic financial statements include the operations of the University’s Benioff Children’s Hospital & Research Center Oakland, which expended \$14,532,575 in federal awards that is not included in the University’s schedules of expenditures of federal awards during the year ended June 30, 2019. Our audit, described below, did not include the federal expenditures of University’s Benioff Children’s Hospital & Research Center Oakland because a discrete report in *accordance with Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)* is issued for this entity.

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 University’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 University’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 University’s compliance.



Opinion on Each Major Federal Program

In our opinion, the University of California 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 June 30, 2019.

Other Matters

As indicated in Part I to the accompanying Schedule of Findings and Questioned Costs, we have audited the Student Financial Assistance cluster as a major program. Also, as indicated in the first paragraph of this report, we performed our audit of compliance using the compliance requirements contained in the OMB Compliance Supplement, including those contained in Part V 5.3, Compliance Requirement N, Special Tests and Provisions, Section 10 “Gramm-Leach-Bliley Act-Student Information Security.” This section includes three suggested audit procedures with respect to verification that the institution (1) designated an individual to coordinate the information security program, (2) performed a risk assessment that addresses the three required areas in 16 CFR 314.4(b), and (3) documented a safeguard for each risk identified. Our procedures in relation to these three items were limited to inquiry of and obtaining written representation from management and obtaining and reading management’s documentation related to these three items. Our procedures did not include an analysis of the adequacy or completeness of the risk assessment performed or the safeguards for each risk identified by management.

The results of our auditing procedures disclosed instances of noncompliance, which are required to be reported in accordance with the Uniform Guidance and which are described in the accompanying schedule of findings and questioned costs as items 2019-002, 2019-003, and 2019-004. Our opinion on each major federal program is not modified with respect to these matters.

The University’s response to the noncompliance findings identified in our audit is described in the accompanying management’s views and corrective action plan. The University’s response was not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

Report on Internal Control Over Compliance

Management of the University 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 University’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 University’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.

PricewaterhouseCoopers LLP

San Francisco, California
March 2, 2020

University of California
Schedule of Findings and Questioned Costs
Year Ended June 30, 2019

SECTION I – SUMMARY OF AUDITOR’S RESULTS

Financial Statements

Type of auditor’s report issued: Unmodified opinion

Internal control over financial reporting:

- Material weakness(es) identified? No
- Significant deficiency(ies) identified that are not considered to be material weaknesses Yes

Noncompliance material to the financial statements noted? No

Federal Awards

Internal control over major programs:

- Material weakness(es) identified? No
- Significant deficiency(ies) identified that are not considered to be material weaknesses None reported

Type of auditor’s report issued on compliance for major programs Unmodified opinion

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

Identification of major programs:

Program Name	CFDA Number
Student Financial Assistance Cluster	84.Variou s & 93.Variou s
SNAP Cluster	10.551 and 10.561

Dollar threshold used to distinguish between type A and type B programs: \$17,603,526

Auditee qualified as a low-risk auditee? Yes

University of California

Schedule of Findings and Questioned Costs

Year Ended June 30, 2019

SECTION II – FINANCIAL REPORTING FINDINGS

2019-001: IT General Controls for Retirement System (Significant Deficiency)

Criteria

As part of our audit, we are required to obtain an understanding of internal controls relevant to the audit, which includes the end to end process around key financial reporting cycles and evidence the implementation of relevant controls and the related IT dependencies. (AU-C section 315)

Condition

In March 2019, a new retirement system was implemented that replaced the legacy system. The University outsources to a third-party vendor the following IT responsibilities over the new retirement system:

- Provisioning/revoking database level access including database administrator privileged access;
- Developing changes, testing changes and migrating changes into production as well as ensuring separation of duties between developers and migrators, and
- Restricting access to the job scheduler used to run the new retirement system jobs.

Management identified that the vendor does not have an AICPA Systems & Organization Controls report over the design and operating effectiveness of internal controls (SOC 1 Type 2 report). The vendor also does not have any formalized/written policies and procedures related to the aforementioned IT controls. The result is the absence of key IT controls in Change Management, Access to Programs & Data, and Computer Operations at the University.

This system is a consolidated system encompassing all components of the University of California, except for Benioff Children's Hospital of Oakland.

Cause

While the University has in place processes over those IT activities within its control, the University relies on the outsourced vendor for the aforementioned execution of key IT general controls, and did not do any monitoring of the controls. They did not realize additional monitoring was required given the nature of the relationship, including inquiring about the availability of a SOC1.

Effect

The absence of key IT controls over the making and migrating changes, granting/revoking database level access, and restricting access to the job scheduler results in no IT controls over on the ongoing validity, completeness, or accuracy of the data processed in the retirement system or in the reports generated from the retirement system.

Recommendation

The University should undertake actions to have the aforementioned missing IT general controls related to the retirement system designed and implemented during the 2020 fiscal year.

Management's Views and Corrective Action Plan

Management's response is reported in "Management's Views and Corrective Action Plan" included at the end of this report.

**University of California
Schedule of Findings and Questioned Costs
Year Ended June 30, 2019**

SECTION III – FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

2019-002: Return of Title IV Funds - Refund to the Department of Education

Program: Student Financial Assistance Cluster

CFDA Title: Federal Pell Program; Federal Direct Loans

CFDA Number: 84.063 - Federal Pell Grants, 84.268 - Federal Direct Loans

Sponsoring Agency: Department of Education

Award Year: 2018 - 2019

Condition:

We selected 100 students across four campuses who received Title IV assistance but then dropped out, withdrew or never began attendance to test the University's conformity with the compliance requirements around the return of Title IV funds. Through our testing, we noted the following:

- We identified 5 students whose return to the Department of Education ("ED") was not completed timely. These selections ranged from 1 to 27 days late.
- We identified 1 student in which the calculation of the refund was inaccurate causing the ED to be underfunded by \$149.
- We identified 1 student whose funds were not returned correctly causing the ED to be underfunded by \$9.

Citation:

34 CFR 668.21; 34 CFR 668.22

Criteria:

When a recipient of title IV grant or loan assistance withdraws from a University before or during a payment period or period of enrollment in which the recipient began attendance, the University must determine the amount of title IV grant or loan assistance that the student earned as of the student's withdrawal date. For students that did not begin attendance in a payment period or period of enrollment, the institution must return the funds no later than 30 days after the date that the institution becomes aware that the student will not or has not begun attendance. For students that began attendance in a payment period or period of enrollment, the institution must return the funds no later than 45 days after the date of the institution's determination that the student withdrew.

Questioned Cost: \$158

Cause:

Financial Aid advisors perform the return of Title IV calculations. As the calculations are done manually, both errors to the refund amounts were clerical errors, resulting from lack of secondary review.

Effect:

The receipt of inaccurately calculated or late Title IV refunds can impact the ED's ability to completely and accurately manage federal student financial assistance funds.

Recommendation:

We recommend management implement policies and procedures that require a secondary review of Title IV refund calculations to ensure they are complete and accurate. In addition, we recommend management provide further training to the financial aid advisors completing the calculations and reemphasize the importance of completing the returns both accurately and timely.

University of California
Schedule of Findings and Questioned Costs
Year Ended June 30, 2019

Management's Views and Corrective Action Plan:

Management's response is reported in "Management's Views and Corrective Action Plan" included at the end of this report.

University of California

Schedule of Findings and Questioned Costs

Year Ended June 30, 2019

2019-003 Enrollment Reporting

Program: Student Financial Assistance Cluster

CFDA Title: Federal Pell Program; Federal Direct Loans, Federal Perkins Loans

CFDA Number: 84.063 - Federal Pell Grants, 84.268 - Federal Direct Loans, 84.038 - Federal Perkins Loans

Sponsoring Agency: Department of Education

Award Year: 2018 - 2019

Condition:

In testing the University's conformity with the compliance requirements for enrollment reporting, we sampled 100 students across four campuses. Through our testing, we noted the following:

- 5 of the students were not reported timely to the National Student Loan Data Systems (NSLDS). These selections ranged from 4 to 96 to days late and pertained to one campus.
- For 8 out of the 100 students sampled (including the 5 above), their change in status was not reported to the National Student Loan Data Systems (NSLDS) correctly or at all. The additional 3 selections related to two campuses.

Citation:

34 CFR 690.83(b)(2); 34 CFR 674.19(f); 34 CFR 685.309(b)

Criteria:

An institution shall submit, in accordance with deadline dates established by the Secretary, through publication in the Federal Register, other reports and information the Secretary requires and shall comply with the procedures the Secretary finds necessary to ensure that the reports are correct.

Enrollment reporting process. (1) Upon receipt of an enrollment report from the Secretary, an institution must update all information included in the report and return the report to the Secretary— (i) In the manner and format prescribed by the Secretary; and (ii) Within the timeframe specified by the Secretary.

Questioned Cost: None

Cause:

At the first campus, the Registrar's Office electronically submitted the five incorrect status changes to National Student Clearinghouse (NSC), as the students had multiple degrees and the campus incorrectly reflected that enrollment status. Once updated to the correct enrollment status, they were submitted untimely due to the amount of time lapsed.

While the enrollment and degree information was reported timely to NSC at the second campus, NSLDS did not receive the update for two instances because these students completed multiple majors and minors. This combination prevented these student from having their NSC enrollment status updated through the automated processes.

Typically all graduated students, regardless of their enrollment status, would be updated as graduated once the Registrar sends a Degree Verify file students to NSC. This file lists all graduated students that NSC uses to update the enrollment status from their current state to graduated. However, in this one unreported instance at the third campus the status of this student didn't change to graduated.

Effect:

The effective administration of Title IV loans could be impacted when changes in student status

University of California
Schedule of Findings and Questioned Costs
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are not reported timely and accurately. The accuracy of enrollment information is important as a student's enrollment status determines eligibility for in-school status, deferment, grace periods, and repayments, as well as the Government's payment of interest subsidies.

Recommendation:

We recommend that the campuses review the data included on the NSLDS website periodically to confirm that the information is both accurate. Correct these students to make sure proper status is redflected.

Management's Views and Corrective Action Plan:

Management's response is reported in "Management's Views and Corrective Action Plan" included at the end of this report.

University of California

Schedule of Findings and Questioned Costs

Year Ended June 30, 2019

2019-004 – Disbursements to and on Behalf of Students - Notifications

Program: Student Financial Assistance Cluster
CFDA Title: Federal Direct Loans, TEACH Grant Program
CFDA Number: 84.268- Federal Direct Loans; 84.379 - TEACH Grant Program
Sponsoring Agency: Department of Education
Award Period: 2018 – 2019

Condition:

In testing the University's conformity with the compliance requirements for Federal Loan disbursements, we selected 100 students across four campuses who received Federal Loan disbursements during the year. For each student we tested that the student received the notification of the loan and the borrower's right to cancel all or part of the disbursement for each disbursement made during the year. While reviewing the notifications sent at one of the campuses, it was determined that no notifications were sent for any student for the summer term at that one campus. All students received the notification in a timely manner for other terms.

Citation:

34 CFR 668.165 (a)

Criteria:

The institution must notify the parent or student of the student's or parent's right to cancel all or a portion of that loan, loan disbursement, TEACH Grant, or TEACH Grant disbursement and have the loan proceeds or TEACH Grant proceeds returned to the Secretary. The institution must provide the notice described 1) no earlier than 30 days before, and no later than 30 days after, crediting the student's ledger account at the institution, if the institution obtains affirmative confirmation from the student; or 2) no earlier than 30 days before, and no later than seven days after, crediting the student's ledger account at the institution, if the institution does not obtain affirmative confirmation from the student.

Questioned Cost:

None

Cause:

A system implementation occurred in the current year at the campus in which the notifications were not sent for the summer term. During this system implementation, the financial aid types were not correctly linked to the batches that send out the right to cancel notifications, and consequently, the notices were not sent for summer.

Effect:

Students were not notified of the borrower's right to cancel all or part of the disbursement in the time required.

Recommendation:

We recommend the University implement a secondary review on the setup of batch notifications during a system implementation to ensure they are configured to send out all required information/notifications. Additionally, during the first year of implementation, the University should review to ensure notifications were sent as expected after each batch is released.

Management's Views and Corrective Action Plan:

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.

University of California

Summary Schedule of Prior Audit Findings and Status

Year Ended June 30, 2019

2018-001 – Reporting Perkins Loan Disbursements to NSLDS

Program: Student Financial Assistance Cluster
CFDA Title: Federal Perkins Loans
CFDA Number: 84.038
Sponsoring Agency: Department of Education
Award Year: 2017 – 2018

During the audit period evaluated the affected campus transitioned to a new loan servicing vendor and did not complete all the conversion steps necessary to accurately report the Federal Perkins Loan data to the U.S. Department of Education's National Student Loan Data System (NSLDS). The issue with the vendor has been corrected and all appropriate data has been reported to NSLDS. The Loan Coordinator in Student Financial Solutions will review the NSLDS error report on a monthly basis to verify updated Perkins data between the loan servicer ECSI and NSLDS and to ensure all data is reported accurately and in a timely manner.

PwC Recommendation:

We should review our procedures to ensure timely and accurate reporting to the NSLDS. PwC also recommended that we review the data included on the NSLDS site to confirm the information is accurate and complete. Additionally, PwC recommended that we perform an integration review between the old and new systems to ensure all student loan information is being appropriately reported to the NSLDS.

Action Taken:

The following corrective actions were completed by the affected campus:

- The vendor issue was fixed by reviewing the NSLDS error report and submitting corrections to the vendor.
- All appropriate data has been provided to NSLDS
- The Loan Coordinator in Student Financial Solutions is reviewing the NSLDS error report on a monthly basis to verify updated Perkins data between the loan servicer ECSI and NSLDS and to ensure all data is reported accurately and in a timely manner

University of California

Summary Schedule of Prior Audit Findings and Status

Year Ended June 30, 2019

2018-002 – The Return of Title IV funds – Refund to the ED

Program: Student Financial Assistance Cluster

CFDA Title: Federal Pell Program; Federal Direct Loans

CFDA Number: 84.268 - Federal Direct Loans; 84.063 – Federal Pell Grants

Sponsoring Agency: Department of Education

Award Year: 2017 – 2018

At the affected campus, the Return of Title IV calculations (R2T4's) were performed by the counselors in the Financial Aid and Scholarships Office. The R2T4 process has now been moved under a single Assistant Director for closer oversight, and all R2T4's are being reviewed by the Assistant Director. Additional R2T4 training will be provided to all counselors by the end of March 2019. Thereafter, R2T4 training will continue on a regular basis. The campus will assign the R2T4 process to a specialty team of counselors and hire a Compliance Office who will take up an active role to ensure (1) federal guidelines are adhered to, (2) thorough training is conducted on a regular basis, and (3) all calculations are reviewed for accuracy. The campus anticipates completing these steps by June 2019. The under-refunded amount is in route to the Department of Education.

PwC Recommendation:

We should implement a policy to have secondary review of Title IV refunds, to ensure correct amounts of Title IV funds are returned to the ED. In addition, we should look to perform further training to the financial aid advisors over the calculations and the effect of not calculating the refunds accurately.

Action Taken:

The following corrective actions were completed by the affected campus:

A full additional R2T4 training was given to all counselors. Regular R2T4 training will continue on a regular basis, annually at minimum. A smaller, intensive specialty team of counselors are assigned R2T4's processing. A Compliance Officer position was approved and the recruitment process is underway. The Compliance Officer will play an active role to ensure federal guidelines are adhered to, thorough training is conducted on a regular basis, and all calculations are reviewed for accuracy

University of California

Summary Schedule of Prior Audit Findings and Status

Year Ended June 30, 2019

2018-003 – Enrollment Reporting

Program: Student Financial Assistance Cluster

CFDA Title: Federal Perkins Loans; Federal Direct Loans; Federal Pell Grants

CFDA Number: 84.038 - Federal Perkins Loans; 84.268 - Federal Direct Loans; 84.063 – Federal Pell Grants

Sponsoring Agency: Department of Education

Award Year: 2017 – 2018

There were three campuses affected by this finding. Two of the affected campuses the enrollment reporting finding was primarily miscoding related to degree program length, student receiving multiple degrees from separate colleges and manual updating. While the reporting was done timely from these campuses to the National Student Clearinghouse (NSC), the NSC ultimately did not report the status changes to the NSLDS accurately due to coding issues. The non-compliant records from the third affected campus were from the summer 2017 and fall 2017 terms which were during the stabilization period of its new student information system. All the identified records have been corrected.

The appropriate staff from the Registrar's Office and Financial Aid and Scholarship Office at one affected campus will have NSC/NSLDS training by June 2019. In addition, a quality check process will be implemented by June 2019 for records requiring manual updates which will include confirming NSC data by the Registrar's staff and NSLDS data by the Financial Aid and Scholarships' staff.

The Registrar's office of another affected campus has begun reviewing vendor coding requirements and NSLDS information to evaluate transmissions from the NSC to NSLDS. In addition, the campus plans to integrate in the existing error transmission process additional review of NSC graduation reporting anomalies. Campus expects to finalize the review by June 2019.

When the third affected campus was informed of the error in fall 2017 during the prior year audit, procedures were immediately reviewed, adjusted, and implemented for the winter 2018 term and spring 2018 term, and no new enrollment reporting exceptions were identified by the auditor.

In addition, to re-emphasize the importance of timeliness in their processing, the University will re-issue the internally developed enrollment reporting best practices to campuses to follow to assure enrollment changes are reported appropriately through the NSC to the NSLDS.

PwC Recommendation:

PwC recommended that the campuses review the data included on the NSLDS website to confirm that the information is both accurate and timely. PwC also recommended that the affected campuses perform an integration review to ensure all students are being appropriately reported to the NSLDS.

Action taken:

The following corrective actions were completed by the affected campuses:

Staff at one affected campus have had National Student Clearinghouse/NSLDS training. In addition, a quality check system has been implemented for records requiring manual updates.

The University Registrar's office of another affected campus implemented recent DegreeVerify coding requirements to incorporate newly implemented changes made by the NSC. The University Registrar's office at this campus introduced various level of reviews and reconciliations and now manually updates graduation statuses on the NSC site in response to NSC graduation error reports.

The situation was resolved in 2018 at the third affected campus.

University of California

Summary Schedule of Prior Audit Findings and Status

Year Ended June 30, 2019

2018-004 – Disbursements

Program: Student Financial Assistance Cluster
CFDA Title: Federal Perkins Loans
CFDA Number: 84.038
Sponsoring Agency: Department of Education
Award Year: 2017 – 2018

Due to a staff turnover at the affected campus, appropriate personnel were not properly notified to withhold the release of federal funds. Effective fall 2018 all federal aid is scheduled to disburse directly to students' accounts on or after 10 days prior to the start of the term. An Associate Director is responsible for developing the Quarterly Calendar which includes the initial disbursement date for each quarter. To ensure the initial disbursement date is within the 10-day requirement, a second sign-off of the established calendar will be reviewed by another Associate Director or the Director. The Associate Director of Business Systems will ensure staff schedules the systematic disbursements according to the Quarterly Calendar.

PwC Recommendation:

We should review our procedures to ensure that federal funds are not released more than ten days before the start of each term.

Action Taken:

The following corrective actions were completed by the affected campus:

The responsibility for developing the Quarterly Calendar which includes the initial disbursement date for each quarter is assigned to one of the Associate Director. To ensure the initial disbursement date does not exceed the 10-day requirement, a second sign-off of the established calendar is being reviewed by another Associate Director or the Director. The Associate Director of Business Systems ensures staff schedule the systematic disbursements according to the Quarterly Calendar.



OFFICE OF THE EXECUTIVE VICE PRESIDENT—
CHIEF FINANCIAL OFFICER

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February 28, 2020

MANAGEMENT'S RESPONSE AND CORRECTIVE ACTION PLAN

REPORT ON AUDIT OF FINANCIAL STATEMENTS AND ON FEDERAL AWARD PROGRAMS IN ACCORDANCE WITH 2 CFR 200, UNIFORM GUIDANCE, FOR THE YEAR ENDED JUNE 30, 2019

2019-001 – IT General Controls for Retirement System (Significant Deficiency)

The University was aware of these issues and brought them to the attention of the external auditors. Additionally, activities to correct the finding above are already underway. Access to the system is approved by the University, and changes to the system follow the software development life cycle with involvement and approvals by the University before a change is made to the production system. The vendor has agreed to obtain a SOC 1 Type 2 report during the current fiscal year. As a compensating control for the period outside of the SOC 1 Type 2 report period, UC will perform periodic access reviews and periodic release reviews. These periodic reviews will include checking changes made by users having production write access for data fixes and for code changes to verify that the changes released to production were approved by University. The corrective action is underway and is expected to be completed by the end of fiscal year 2021. For inquiries regarding this finding, please contact Cheryl Lloyd at (510) 987-9289 who is responsible for the corrective actions.

2019-002 – Return of Title IV funds – Refund to the Department of Education

Three campuses were affected by this finding. At the first campus, the one untimely return of the funds was due to the Common Origination and Disbursement (COD) report being rejected by the National Student Loan Data Systems (NSLDS) for unmatched data, and the campus discovered the rejection after the specified timeframe. This campus Financial Aid and Scholarship Office will implement a process to review COD reject reports bi-weekly for completion of refund and reporting within the required time period. The campus anticipates completing the implementation by March 31, 2020. For inquiries regarding this finding, please contact Nickolaus Lekovish at (858) 534-4951 who is responsible for the corrective actions.

The automated reporting system at the second campus did not report the one untimely return to the COD system. Financial Aid and Scholarships did not review the exception report used to identify records which failed automated reporting to COD. In response to this finding, this campus has

completed the following actions as of 12/31/2019: This campus has now developed automated file download for the month end exceptions and implemented procedures to review exceptions monthly to ensure that exception reports are handled timely and for multiple academic years. The fiscal unit of Financial Aid and Scholarships does the monthly reconciliation/exception review. For inquiries regarding this finding, please contact Ina Sotomayor at (310) 206-9324 who is responsible for the corrective actions.

There was significant staff turnover during the 2018-2019 academic year at the third campus resulting in procedures being misunderstood and not consistently followed causing the three untimely and two incorrect calculations. In response to this finding, this campus has completed the following actions: In August of 2019 additional resources have been added to provide training and support to the processing staff. Procedures have now been updated as of 12/19/2019 to include additional regulatory information regarding the processing deadlines for the various student populations. In addition, the Compliance Officer at this campus has implemented additional quality review. The under-refunded amounts were returned to the Department of Education. For inquiries regarding this finding, please contact Patrick Register at (831) 459-4404 who is responsible for the corrective actions.

2019-003 – Enrollment Reporting

Three campuses are affected by this finding. At the first campus, the Registrar's Office electronically submitted the five untimely status changes to National Student Clearinghouse (NSC) before the required timeframe but after the original reporting of student status to NSC. However, in order to have these status changes made properly, NSC would need to be contacted directly and asked that the changes be made to manually update the NSLDS data. The Financial Aid and Scholarship Office will implement a process to start reviewing NSLDS data on a monthly basis by sampling a set of students with status changes to ensure timely corrections. The campus anticipates completing the implementation steps by March 31, 2020. For inquiries regarding this finding, please contact Nickolaus Lekovish at (858) 534-4951 who is responsible for the corrective actions.

While the enrollment and degree information was reported timely to NSC at the second campus, NSLDS did not receive the update for two instances because these students completed multiple majors and minors. This combination prevented these student from having their NSC enrollment status updated through the automated processes. Both students were updated manually on NSLDS. In response to this finding, this campus has completed the following actions: Beginning with January 2020 degree verify submissions, this campus has instated a process to determine the students whose degree completion status has been updated to NSC but have not had their enrollment history status updated in NSLDS. These records will be manually updated to ensure timely reporting. For inquiries regarding this finding, please contact Kate Jakway Kelly at (310) 206-4028 who is responsible for the corrective actions.

Typically all graduated students, regardless of their enrollment status, would be updated as graduated once the Registrar sends a Degree Verify file students to NSC. This file lists all graduated students that NSC uses to update the enrollment status from their current state to graduated. However, in this one unreported instance at the third campus the status of this student didn't change to graduated. In response to this finding, this campus has completed the following actions: To ensure all students with graduated status are reported to NSLDS, this campus has added a step to review the exception list in NSC for cases that did not receive the correct status and create a Graduates Only file to correct any exceptions beginning with March 2020 reporting. For inquiries regarding this finding, please contact Luke Lindquist at (805) 893-4174 who is responsible for the corrective actions.

2019-004 – Disbursements to and on Behalf of Students - Notifications

The affected campus implemented a new Student Aid Management system during the Fall 2018 quarter. During this system implementation, the right to cancel notifications for a batch of students' financial aid types were not correctly linked preventing these notices from going out for the summer. The program was corrected in December 2019. To ensure those notifications are sent within the required period of time beginning with the Summer 2020 quarter the Financial Aid and Scholarships Office will implement a process where a review of setup of batch notifications will be completed. This office will complete the review process for that batch by July 31, 2020. For inquiries regarding this finding, please contact Nickolaus Lekovish at (858) 534-4951 who is responsible for the corrective actions.



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