

Washington University

**Report on Federal Financial Assistance
Programs in Accordance with**

OMB Uniform Guidance

For the Year Ended June 30, 2016

Employer Identification Number: 430653611

Washington University
Report on Federal Financial Assistance Programs in
Accordance with OMB Uniform Guidance
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June 30, 2016

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Financial Statements and Supplemental Information



Report of Independent Auditors

To the Board of Trustees of Washington University:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Washington University and its subsidiaries (the “university”), which comprise the consolidated statements of financial position as of June 30, 2016 and June 30, 2015, and the related consolidated statement of activities and cash flows for the year then ended, and the related notes to the financial statements.

Management’s Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated 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 consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audit. We conducted our audit 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 consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the university and its subsidiaries as of June 30, 2016 and June 30, 2015, and the changes in its net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.



Other Matters

Other Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance) and is not a required part of the consolidated financial statements. 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 consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated, in all material respects, in relation to the consolidated 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 September 27, 2016 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. The purpose of that report is 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 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

St. Louis, Missouri
September 27, 2016, except for the Schedule of Expenditures of Federal Awards and related notes, as to which the date is February 21, 2017

Washington University
Consolidated Statements of Financial Position
June 30, 2016 and 2015

(thousands of dollars)

	<u>2016</u>	<u>2015</u>
Assets		
Cash	\$ 173,443	\$ 164,234
Investments	7,741,742	8,107,658
Accounts and notes receivable, net	457,327	397,593
Pledges receivable, net	226,876	217,783
Other assets	203,183	188,752
Fixed assets, net	<u>2,278,488</u>	<u>2,140,761</u>
Total assets	<u>\$ 11,081,059</u>	<u>\$ 11,216,781</u>
Liabilities		
Accounts payable and accrued expenses	\$ 393,015	\$ 364,124
Deposits, advances and other	60,655	51,119
Professional liability	79,107	83,379
Deferred revenue	103,223	93,833
Liabilities under split-interest agreements	38,357	40,607
Government supported student loans	45,565	45,600
Notes and bonds payable	<u>1,616,356</u>	<u>1,489,452</u>
Total liabilities	<u>2,336,278</u>	<u>2,168,114</u>
Net Assets		
Unrestricted	4,337,246	4,420,093
Temporarily restricted	2,699,302	3,019,380
Permanently restricted	<u>1,708,233</u>	<u>1,609,194</u>
Total net assets	<u>8,744,781</u>	<u>9,048,667</u>
Total liabilities and net assets	<u>\$ 11,081,059</u>	<u>\$ 11,216,781</u>

The accompanying notes are an integral part of these consolidated financial statements.

Washington University

Consolidated Statement of Activities

Year Ended June 30, 2016

(thousands of dollars)

	Unrestricted	Temporarily Restricted	Permanently Restricted	June 30, 2016 Total
Revenues				
Tuition and fees, gross	\$ 601,888	\$ -	\$ -	\$ 601,888
Less: Scholarships	(221,218)			(221,218)
Tuition and fees, net	380,670	-	-	380,670
Endowment spending distribution	280,914	5,644		286,558
Investment income	8,653	386		9,039
Gifts	52,971	108,080		161,051
Grants and contracts revenues				
Direct costs recovered	379,408			379,408
Facilities and administrative costs recovered	133,786			133,786
Patient services	1,106,349			1,106,349
Auxiliary enterprises - sales and services	106,270			106,270
Educational activities - sales and services	164,232			164,232
Affiliated hospital revenues	112,529			112,529
Other revenue	36,730			36,730
Net assets released	101,500	(101,500)		-
Total revenues and other support	<u>2,864,012</u>	<u>12,610</u>	<u>-</u>	<u>2,876,622</u>
Expenses				
Instruction	1,704,956			1,704,956
Research	474,337			474,337
Academic support	175,261			175,261
Student services	82,444			82,444
Institutional support	139,263			139,263
Auxiliary enterprises expenditures	112,900			112,900
Other deductions	30,416			30,416
Total expenses	<u>2,719,577</u>	<u>-</u>	<u>-</u>	<u>2,719,577</u>
Net operating results	<u>144,435</u>	<u>12,610</u>	<u>-</u>	<u>157,045</u>
Non-operating revenues and (expenses)				
Investment loss net of endowment spending	(214,574)	(335,613)	(1,598)	(551,785)
Permanently restricted gifts			99,976	99,976
Gain (loss) on fixed asset disposals and other	(12,708)	2,925	661	(9,122)
Non-operating, net	<u>(227,282)</u>	<u>(332,688)</u>	<u>99,039</u>	<u>(460,931)</u>
Change in net assets	(82,847)	(320,078)	99,039	(303,886)
Net assets				
Beginning of the year	4,420,093	3,019,380	1,609,194	9,048,667
End of the year	<u>\$ 4,337,246</u>	<u>\$ 2,699,302</u>	<u>\$ 1,708,233</u>	<u>\$ 8,744,781</u>

The accompanying notes are an integral part of these consolidated financial statements.

Washington University

Consolidated Statement of Activities

Year Ended June 30, 2015

(thousands of dollars)

	Unrestricted	Temporarily Restricted	Permanently Restricted	June 30, 2015 Total
Revenues				
Tuition and fees, gross	\$ 562,975	\$ -	\$ -	\$ 562,975
Less: Scholarships	(206,782)			(206,782)
Tuition and fees, net	356,193	-	-	356,193
Endowment spending distribution	261,253	4,964		266,217
Investment income	9,022	465		9,487
Gifts	80,858	105,436		186,294
Grants and contracts revenues				
Direct costs recovered	368,496			368,496
Facilities and administrative costs recovered	129,459			129,459
Patient services	985,432			985,432
Auxiliary enterprises - sales and services	100,133			100,133
Educational activities - sales and services	162,043			162,043
Affiliated hospital revenues	111,176			111,176
Other revenue	32,494			32,494
Net assets released	89,926	(89,926)		-
Total revenues and other support	<u>2,686,485</u>	<u>20,939</u>	<u>-</u>	<u>2,707,424</u>
Expenses				
Instruction	1,537,685			1,537,685
Research	457,573			457,573
Academic support	168,241			168,241
Student services	78,450			78,450
Institutional support	129,800			129,800
Auxiliary enterprises expenditures	109,598			109,598
Other deductions	27,535			27,535
Total expenses	<u>2,508,882</u>	<u>-</u>	<u>-</u>	<u>2,508,882</u>
Net operating results	<u>177,603</u>	<u>20,939</u>	<u>-</u>	<u>198,542</u>
Non-operating revenues and (expenses)				
Investment returns net of endowment spending	38,257	8,796	(134)	46,919
Permanently restricted gifts			28,590	28,590
Gain (loss) on fixed asset disposals and other	(4,354)	747	(172)	(3,779)
Non-operating, net	<u>33,903</u>	<u>9,543</u>	<u>28,284</u>	<u>71,730</u>
Change in net assets	211,506	30,482	28,284	270,272
Net assets				
Beginning of the year	4,208,587	2,988,898	1,580,910	8,778,395
End of the year	<u>\$ 4,420,093</u>	<u>\$ 3,019,380</u>	<u>\$ 1,609,194</u>	<u>\$ 9,048,667</u>

The accompanying notes are an integral part of these consolidated financial statements.

Washington University
Consolidated Statements of Cash Flows
Years Ended June 30, 2016 and 2015

(thousands of dollars)

	2016	2015
Cash flows from operating activities		
Change in net assets	\$ (303,886)	\$ 270,272
Adjustments to reconcile change in net assets to net cash provided by operating activities		
Realized and unrealized net (gains) and losses on investments	266,824	(302,950)
Depreciation expense	170,443	159,546
Permanently restricted gifts	(99,976)	(28,590)
Investments received as gifts - not permanently restricted	(19,554)	(6,521)
Proceeds from sales of investments received as gifts	19,554	6,521
Other non-cash adjustments	(17,270)	(1,776)
Changes in assets and liabilities		
Accounts and notes receivable, net	(43,750)	9,293
Pledges receivable, net	(6,405)	(6,803)
Accounts payable and accrued expenses	25,741	15,626
Deposits and advances	(8,709)	(12,355)
Other assets and liabilities	5,181	2,151
Net cash used and provided by operating activities	<u>(11,807)</u>	<u>104,414</u>
Cash flows from investing activities		
Proceeds from sales and maturities of investments	3,763,089	3,972,311
Purchases of investments	(3,657,852)	(3,923,047)
Purchases of investments with securities lending collateral	(6,523)	(5,994)
Purchases of fixed assets	(316,322)	(288,330)
Student loans disbursed	(22,074)	(21,870)
Student loan payments received	23,936	25,601
Other	29	(222)
Net cash used in investing activities	<u>(215,718)</u>	<u>(241,551)</u>
Cash flows from financing activities		
Principal payments of debt	(282,394)	(165,255)
Proceeds from long-term debt issuance	417,842	305,070
Contributions restricted for long-term investment	40,561	7,779
Proceeds from sales of investments received as gifts	56,302	27,851
Securities lending collateral received, net	6,523	5,994
Other	(2,101)	3,567
Net cash provided by financing activities	<u>236,734</u>	<u>185,006</u>
Net increase in cash	9,209	47,869
Cash		
Beginning of year	<u>164,234</u>	<u>116,365</u>
End of year	<u>\$ 173,443</u>	<u>\$ 164,234</u>
Supplemental data		
Interest paid in cash	\$ 50,432	\$ 51,311
Noncash investing activities		
Contributions of securities and other noncash assets	\$ 91,352	\$ 34,402
Change in accounts payable for fixed assets	5,330	6,100
Change in accounts receivable for investments	(4,516)	(1,254)
Change in accounts payable for investments	(1,894)	(21,308)

The accompanying notes are an integral part of these consolidated financial statements.

Washington University

Notes to the Consolidated Financial Statements

June 30, 2016 and 2015

(All amounts in thousands of dollars)

1. Summary of Significant Accounting Policies

Organization

Washington University in St. Louis (the “university”), is an institution of higher education that, in furtherance of its role as a charitable and educational institution, engages in various activities, including instruction, research and provision of medical care.

Basis of Presentation and Use of Estimates

The consolidated financial statements have been prepared on the accrual basis of accounting. The consolidated financial statements are consolidated to include the accounts of the university and its affiliates.

The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Such estimates include, but are not limited to, the estimated useful lives of buildings and equipment, the fair value of certain investments (see footnote 2), the degree of precision in calculation of self-insurance reserves and adequacy of allowances for doubtful accounts. Actual results could differ from those estimates.

Net Assets

Resources are classified for accounting and reporting purposes according to externally (donor) imposed restrictions. Descriptions of the net asset categories follow:

Unrestricted net assets are free of donor-imposed restrictions.

Temporarily restricted net assets consist of gifts and related earnings that are subject to donor-imposed restrictions or legal stipulations that have not yet been met by actions of the university and/or passage of time.

Permanently restricted net asset balances include gifts and trusts which, by donor restriction, are required to be held in perpetuity.

Revenues from sources other than contributions and investment returns are reported as increases in unrestricted net assets. Contributions are reported as increases in the appropriate category of net assets, except that contributions which impose restrictions that are met in the same fiscal year they are received are included in unrestricted revenues. Gains and investment income that are limited to specific uses by donor-imposed restrictions are reported as increases in unrestricted net assets if the restrictions are met in the same reporting period as the gains and income are recognized, except for gains and investment income earned by investment of donor-restricted endowments. Such amounts are not reported as unrestricted net assets until appropriated for expenditure. When a donor restriction expires, temporarily restricted net assets are reclassified to unrestricted net assets and reported in the Consolidated Statements of Activities as net assets released from restrictions. Permanently restricted gifts received are reported in the non-operating section of the Consolidated Statements of Activities. Gifts of long-lived assets with explicit restrictions that specify how the assets are to be used and gifts of cash or other assets that must be used to acquire long-lived assets are reported as restricted support. Absent explicit donor stipulations about how long those long-lived assets must be maintained, the university reports expirations of donor restrictions when the donated or acquired long-lived assets are placed in service. Expenses are reported as decreases in unrestricted net assets.

Washington University
Notes to the Consolidated Financial Statements
June 30, 2016 and 2015

(All amounts in thousands of dollars)

Temporarily and permanently restricted net assets are for the following purposes.

	2016		2015	
	Temporarily Restricted	Permanent Restricted	Temporarily Restricted	Permanent Restricted
General activities	\$ 1,887,498	\$ 1,156,348	\$ 2,116,596	\$ 1,108,103
Student assistance	406,657	378,457	466,501	331,205
Buildings and renovations	393,738	150,607	422,679	147,416
Life income	11,409	22,821	13,604	22,470
Total	<u>\$ 2,699,302</u>	<u>\$ 1,708,233</u>	<u>\$ 3,019,380</u>	<u>\$ 1,609,194</u>

Investments

Investment gains/ (losses) in excess of endowment spending distribution and the unrealized appreciation (depreciation) on investments are reported in the non-operating section of the Consolidated Statements of Activities. Investments acquired by gift or bequest are initially recorded at market or appraised value at the date so acquired.

At June 30, 2016, investments include \$26,775, purchased with unexpended proceeds from the Series 2016 A, Series 2014 A, and Series 2012 A Missouri Health and Educational Facilities Authority (MOHEFA) revenue bonds issued in February 2016, August 2014 and July 2012, respectively. At June 30, 2015, investments include \$24,082, purchased with unexpended proceeds from the Series 2014 A and Series 2012 A Missouri Health and Educational Facilities Authority (MOHEFA) revenue bonds issued in August 2014 and July 2012, respectively. These funds may only be expended for specific construction project costs and costs of issuance related to the MOHEFA bonds.

Fair Value of Financial Instruments

The carrying amount of accrued investment income, accounts receivable, accounts payable and other various accruals approximate fair value because of the short maturity of these financial instruments. The carrying amount of notes and bonds payable with variable interest rates approximates their fair value because the variable rates reflect current market rates for bonds with similar maturities and credit quality.

Washington University
Notes to the Consolidated Financial Statements
June 30, 2016 and 2015

(All amounts in thousands of dollars)

Fixed Assets

Fixed assets are stated at cost or at fair market values if received as a gift, less accumulated depreciation, computed on a straight-line basis over the estimated useful lives of the assets. Fixed assets include equipment and other assets acquired through sponsored programs during which title is retained by the resource provider. It is probable the university will be permitted to keep the assets when the program terminates. The cost and accumulated depreciation of fixed assets are removed from the records at the time of disposal. Gains and losses on fixed asset disposals are reported in the non-operating section of the Consolidated Statements of Activities. Fixed assets by classification at June 30, 2016 and 2015 consist of the following:

	<u>2016</u>	<u>2015</u>
Construction in progress	\$ 274,644	\$ 286,700
Land and improvements to land	137,906	129,585
Buildings	3,506,817	3,245,223
Equipment	<u>493,997</u>	<u>466,051</u>
Total cost	4,413,364	4,127,559
Accumulated depreciation	<u>(2,134,876)</u>	<u>(1,986,798)</u>
Total, net	<u>\$ 2,278,488</u>	<u>\$ 2,140,761</u>

Collections

In addition to the Mildred Lane Kemper Art Museum, the university archives rare book collections, works of art, literary works, historical treasures and artifacts. These collections are protected and preserved for public exhibition, education, research and the furtherance of public service. They are neither disposed of for financial gain nor encumbered in any manner. Accordingly, such collections are not recognized or capitalized for financial statement purposes.

Financing Receivables

Financing receivables are principally loans made to students or their parents utilizing gifts, endowment payout, and university resources designated for that purpose and from funds provided by the United States government under the Federal Perkins and Health Professional Student Loan programs. Loan funds are reported at estimated realizable value, as it is not practical to determine the fair value of loan fund receivables, which include a large component of federally sponsored student loans. Federally sponsored student loans have significant government restrictions as to marketability, interest rates, and repayment terms. Federal funds are ultimately refundable to the government and are recognized as a liability in the Consolidated Statements of Financial Position (see footnote 5).

The university's loan portfolio includes over 11,100 individual loans and is geographically diverse. Loans that are made are due on the last business day of the month and are considered past due if the minimum payment is not received within forty-five days subsequent to the due date. At June 30, 2016 and 2015, respectively, 91% and 92% of the parent loans and 79% and 78%, of the institutional student loans were considered current. Income earned on financing receivables is recorded on an accrual basis.

Washington University
Notes to the Consolidated Financial Statements
June 30, 2016 and 2015

(All amounts in thousands of dollars)

Tuition and Financial Aid

Demonstrated financial need is the major criteria for undergraduate students to receive financial aid. Graduate students often receive tuition support in connection with research assistant, teaching assistant and fellowship appointments. Total financial aid granted to students by the university, including aid provided to employees and their dependents, was \$311,863 in 2016 and \$294,459 in 2015. The table below identifies student aid by type. Scholarships are reported net against tuition in the Consolidated Statements of Activities. Other amounts are reported as expenses.

	<u>2016</u>	<u>2015</u>
Scholarships from unrestricted sources	\$ 175,468	\$ 161,495
Scholarship support from gifts, endowment and other restricted sources	<u>45,750</u>	<u>45,287</u>
Total scholarships	221,218	206,782
Employee and dependent tuition benefits	31,478	30,379
Stipends	56,480	54,612
Work study	<u>2,687</u>	<u>2,686</u>
Total	<u>\$ 311,863</u>	<u>\$ 294,459</u>

Contributions

Contributions, including unconditional promises to give, are recognized as revenues in the period the contribution or promise is received. Contributions received for permanent endowments or perpetual trusts are reported as non-operating revenues. Contributions of assets other than cash are recorded at their estimated fair value at the date of gift and, unless instructed otherwise by the donor, are liquidated upon receipt or as soon as practical thereafter.

Gifts and conditional promises to give are not recognized until the conditions on which they depend are substantially met. Contributions, in the form of unconditional promises to give, to be received after one year are discounted at credit-adjusted tax exempt borrowing rates in accordance with fair value accounting. Pledges outstanding are discounted with rates ranging from 0.58% to 1.53%. Amortization of the discount is recorded as contribution revenue. An allowance is made for uncollectible unconditional promises to give based upon management's judgment, past collections experience and other relevant factors.

A summary of pledges receivable at June 30 is as follows:

	<u>2016</u>	<u>2015</u>
In one year or less	\$ 101,526	\$ 84,912
Between one year and five years	117,127	118,335
Five or more years	<u>16,910</u>	<u>23,578</u>
	235,563	226,825
Less:		
Discount	(3,350)	(4,129)
Allowance for uncollectible amounts	<u>(5,337)</u>	<u>(4,913)</u>
Total	<u>\$ 226,876</u>	<u>\$ 217,783</u>

Washington University

Notes to the Consolidated Financial Statements

June 30, 2016 and 2015

(All amounts in thousands of dollars)

Patient Services Revenue

The university recognizes revenues in the period in which services are rendered. The university has agreements with third-party payers that provide for payment to the university at amounts that are generally less than its established rates. Accordingly, patient revenue is reported net of contractual allowances, at estimated net realizable amounts from patients, third-party payers and others for services rendered. Also, reported in this caption are cost reimbursements from hospitals for services provided by university personnel in support of the hospital's clinical activities.

Tuition and Fee Revenue

Tuition and fee revenue, net of scholarships, is recorded in the fiscal year in which the educational programs are conducted.

Auxiliary Enterprises – Sales and Services

Auxiliary enterprises sales and services revenue is recorded in the fiscal year in which earned. This revenue is composed primarily of on and off campus housing charges, dining services, and parking and transportation fees.

Educational Activities – Sales and Services

Educational activities sales and services revenue is recorded in the fiscal year in which it is earned. This revenue is composed of a number of activities including clinical trial revenues, management services and salary reimbursements from affiliated hospitals, consulting, laboratory fees, conference center revenues and revenues from licensing and royalties.

Affiliated Hospital Revenues

Affiliated hospital revenue is recorded in the fiscal year in which earned. This revenue is composed of amounts received from affiliated hospitals for various services as more fully described in Note 10.

Sponsored Programs

The university receives grant and contract revenue from governmental and private sources. Revenue associated with the direct costs of sponsored programs is generally recognized as the related costs are incurred. The university records revenue in unrestricted net assets upon its recovery of direct and indirect costs applicable to those sponsored programs that provide for the full or partial reimbursement of such costs. The recovery of indirect costs, also referred to as facilities and administrative costs is based on negotiated rates and represents recoveries of facilities and administrative costs incurred under grants and contracts agreements. Recovery of facilities and administrative costs of Federally sponsored programs is at rates negotiated with the university's cognizant agency, the Department of Health and Human Services. The university and the Federal government are currently operating under an agreement that establishes facilities and administrative cost reimbursement rates under Federal grants and contracts through June 30, 2017. The university will submit a proposal for rate negotiation during fiscal year 2017.

Washington University

Notes to the Consolidated Financial Statements

June 30, 2016 and 2015

(All amounts in thousands of dollars)

Operating Results and Allocation of Certain Expenses

The university's measure of operations as presented in the Consolidated Statements of Activities includes income from tuition and fees, grants and contracts, medical services, contributions for operating programs, the endowment spending distribution and other revenues. Operating expenses are reported on the Consolidated Statements of Activities by functional categories, after allocating costs for operation and maintenance of plant, interest on indebtedness and depreciation expense. Operating results exclude investment gains/ (losses) except for the portion of gains utilized for the endowment spending distribution, permanently restricted gifts, and other non-operating amounts. Operation and maintenance of plant and depreciation are allocated to functional categories largely based on square footage. Interest expense is allocated based on specific identification of the uses of debt proceeds. Instruction expenses include instruction, departmental research and patient care costs.

Split-Interest Agreements

The university's split-interest agreements with donors consist primarily of charitable gift annuities and irrevocable charitable remainder trusts for which the university serves as trustee. Assets are invested and payments are made to donors and/or other beneficiaries in accordance with the respective agreements. Contribution revenues for charitable gift annuities and charitable remainder trusts are recognized after recording liabilities for the present value of the estimated future payments to be made to the respective donors and/or other beneficiaries. The discount rate used is a credit-adjusted rate in existence at the date of the gift. The rates used range from 1.26% to 3.13% for 2016 and 1.43% to 3.14% for 2015. Annually, the university records the change in value of split-interest agreements by recording at fair value the assets that are associated with each trust and recalculating the liability for the present value of the estimated future payments to be made to the donors and/or other beneficiaries.

Conditional Asset Retirement Obligation

The asset retirement obligation for the university relates primarily to the removal of asbestos from certain of its buildings. Known asbestos sites are appropriately encapsulated or controlled in accordance with current environmental regulations pending ultimate removal. As of June 30, 2016 and 2015, respectively, \$17,139 and \$16,746 of conditional asset retirement obligations are included within accounts payable and accrued expenses in the Consolidated Statements of Financial Position. Additional obligations recognized, obligations settled, and accretion expense were not material to results reported in the Consolidated Statements of Activities in any year.

Cash and Cash Equivalents

The university considers cash on hand and in banks and all highly liquid financial instruments with an original maturity of 90 days or less, except those amounts assigned to and invested by its investment managers, which amounts are classified as investments, to be cash and cash equivalents.

Income Taxes

The university is exempt from federal income taxes under Section 501 (c) (3) of the Internal Revenue Code except to the extent the university has unrelated business income or consolidated for-profit affiliates incur taxes. There was no significant provision for income taxes in the current year. The university has no uncertain tax positions that result in material unrecognized tax expense/benefits.

Washington University

Notes to the Consolidated Financial Statements

June 30, 2016 and 2015

(All amounts in thousands of dollars)

Recent Accounting Pronouncements

During fiscal 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*, which provides targeted updates to the financial instruments classification and measurement standard (Subtopic 825-10). Changes primarily affect accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. This amendment is effective for fiscal years beginning after December 15, 2018 or the university's fiscal year 2020. A provision of the update, which may be elected early, specifies that a not-for-profit (NFP) entity is not a business entity, and as such ASU 2016-01 eliminates the requirement to disclose the fair value of financial instruments measured at amortized cost. The university chose to early adopt this provision in fiscal 2016. Both fiscal 2015 and fiscal 2016 debt fair value disclosures have been removed from the financial statements.

During fiscal 2016, the FASB issued ASU 2016-02, *Leases*. The ASU requires lessees to recognize in the Statements of Financial Position for leases with a term of greater than one year, a liability to make lease payments and a right-of-use asset representing its right to use the asset for the lease term. Generally, lease payments will be recognized as interest expense and as a reduction of the liability. The asset will be amortized over the life of the lease. Accounting by a lessor will be largely unchanged from that required by current generally accepted accounting principles. Adoption of ASU 2016-02 is required for the university's fiscal year 2020. Management is still evaluating the impact to the consolidated financial statements.

In April 2015, the FASB issued ASU 2015-05, *Intangibles-Goodwill and Other-Internal-Use Software* (Subtopic 350-40), *Customer's Accounting for Fees Paid in a Cloud Computing Arrangement*. The ASU provides criteria for customers in a cloud computing arrangement to use to determine whether the arrangement includes a license for software. The ASU is effective for non-public companies for annual periods beginning after December 15, 2015, or fiscal 2017 for the university, with early adoption permitted. The university will adopt this Update in fiscal 2017. It is not expected to have a material effect on the university's financial statements.

During 2014 the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*. ASU 2014-09, effective in fiscal 2018, affects all contracts entered into with customers that result in a transfer of goods or services or a transfer of non-financial assets. The core principle of the standard is for organizations to recognize revenue in a way that depicts the transfer of goods or services to customers in amounts that reflect the consideration (payment) to which the organization expects to be entitled. Since 2014 the FASB has issued a number of clarifying updates. The university is currently evaluating the impact the adoption of ASU 2014-09 and subsequent updates will have on its consolidated financial statements.

2. Fair Value

The university follows FASB guidance for fair value measurements. This guidance defines fair value, establishes a framework for measuring fair value under generally accepted accounting principles and enhances disclosures about fair value measurements. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

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The FASB guidance establishes a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the university and unobservable inputs reflect the university's assumptions about how market participants would value an asset or liability based on the best information available. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. The fair value hierarchy is based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value.

The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used by the university for financial instruments measured at fair value on a recurring basis. The three levels of inputs are as follows:

- Level 1 Quoted prices in active markets for identical assets or liabilities, such as exchange traded equity securities.
- Level 2 Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the same term of the assets or liabilities. Examples of Level 2 include U.S. Treasury securities and corporate bonds.
- Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

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The following table presents the financial instruments carried at fair value as of June 30, 2016, on the Consolidated Statements of Financial Position by caption and by the valuation hierarchy defined above. Amounts measured at net asset value are reported using the practical expedient under ASC topic 820 and excluded from the fair value hierarchy. Included as Level 2 fixed income are U.S. Treasury securities of approximately \$314,649.

	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Measured at Net Asset Value	Balance June 30, 2016
Investments:					
Public equity					
Domestic	\$ 138,452	\$ 7,429	\$ -	\$ 1,192,353	\$ 1,338,234
International	534,311	-	-	988,217	1,522,528
Fixed income - Nominal	-	422,385	-	411,151	833,536
Hedge strategies	-	-	-	1,695,168	1,695,168
Private equity	-	-	141,249	1,226,752	1,368,001
Short-term investments	182,849	23,644	-	-	206,493
Real assets	-	-	-	572,496	572,496
Other investments	61,068	35,611	62,682	-	159,361
Total investments at fair value	<u>916,680</u>	<u>489,069</u>	<u>203,931</u>	<u>6,086,137</u>	<u>7,695,817</u>
Fixed income assets received from security borrowers	-	43,845	-	-	43,845
Total assets reported at at fair value	<u>\$ 916,680</u>	<u>\$ 532,914</u>	<u>\$ 203,931</u>	<u>\$ 6,086,137</u>	<u>\$ 7,739,662</u>

As of June 30, 2016, it is probable that all of the private equity investments reported as Level 3 above will be sold at an amount different from the net asset value of the university's ownership interest in partners' capital. The fair value of these investments has been estimated at the expected selling price of these investments based on sale negotiations in process at June 30, 2016. Other than the transfer of these positions into Level 3, there were no other material transfers between levels during the periods presented. The university recognizes transfers at the end of the periods presented.

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The following table presents the financial instruments carried at fair value as of June 30, 2015, by caption on the Consolidated Statements of Financial Position and by the valuation hierarchy defined above. Included as Level 2 fixed income are U.S. Treasury securities of approximately \$289,012.

	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Measured at Net Asset Value	Balance June 30, 2015
Investments:					
Public equity					
Domestic	\$ 119,934	\$ 7,566	\$ -	\$ 1,364,269	\$ 1,491,769
International	680,970	-	-	970,739	1,651,709
Fixed income - Nominal	-	412,280	-	391,537	803,817
Hedge strategies	-	-	-	1,894,729	1,894,729
Private equity	-	-	-	1,258,217	1,258,217
Short-term investments	273,532	3,013	-	-	276,545
Other investments	45,746	52,134	57,905	528,809	684,594
Total investments at fair value	<u>1,120,182</u>	<u>474,993</u>	<u>57,905</u>	<u>6,408,300</u>	<u>8,061,380</u>
Fixed income assets received from security borrowers	-	37,089	-	-	37,089
Total assets reported at fair value	<u>\$ 1,120,182</u>	<u>\$ 512,082</u>	<u>\$ 57,905</u>	<u>\$ 6,408,300</u>	<u>\$ 8,098,469</u>

Included as investments on the Consolidated Statements of Financial Position, at June 30, 2016 and 2015, respectively, but not reported in the tables above, are accrued investment income of \$3,935 and \$4,859 and investments in affiliates of \$41,990 and \$41,418, which are recorded on the equity basis of accounting. A portion of equity amounts measured at net asset value above as of June 30, 2016 and 2015 are in hedge-type strategies and a portion of real assets are invested in private equity-type structures. Beneficial interests in perpetual trusts held by third parties are valued at the present value of the future distributions expected to be received over the term of the agreement.

Following is a description of the university's valuation methodologies for assets and liabilities measured at fair value. The methods described below may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the university believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Fair value for Level 1 is based upon quoted prices in active markets that the university has the ability to access for identical assets and liabilities. Market price data is generally obtained from exchange or dealer markets. The university does not adjust the quoted price for such assets and liabilities.

Fair value for Level 2 is based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets. Inputs are obtained from various sources including market participants, dealers, and brokers.

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Fair value for Level 3 is based on valuation techniques that use significant inputs that are unobservable as they trade infrequently or not at all.

Investments measured at net asset value primarily consist of the university's ownership in alternative investments (principally limited partnership interests in hedged strategies, private equity investments, real assets, and other similar funds). The fair values (Net Asset Value ("NAV") or partner's capital per share) of the securities held by limited partnerships that do not have readily determinable fair values are determined by the respective general partners and are based on appraisals or other estimates that require varying degrees of judgment. If no public market exists for the investments, the fair value is determined by the general partners taking into consideration significant unobservable inputs including, among other things, the cost of the investments, prices of recent significant placements of investments of the same issuer, and subsequent developments concerning the companies to which the investments relate. Excluding the cost of the investment, significant increases or decreases in the remainder of those inputs could result in a significantly higher or lower fair value measurement. The university has performed due diligence with respect to these investments to ensure NAV or partner's capital per share is an appropriate measure of fair value as of June 30. NAV calculated by the investee in a manner consistent with generally accepted accounting principles for investment companies is reported as the fair value of the investment.

Valuation and other considerations concerning the major classes of investments are provided in the following paragraphs.

Equity

The equity class of investments is globally diversified across public markets including domestic and international developed and emerging market equities. The majority of equity assets are valued at quoted market price in accordance with Level 1 valuation techniques as described above, unless held in hedge-like strategies which are valued at NAV as described above.

Fixed Income and Short-Term Investments

Investments in this class include domestic and international nominal fixed income instruments. Fixed income investments are held principally as liquid vehicles for operating needs and as a source of diversification. A significant component of non-endowment fixed income investments is held in highly liquid funds. The valuation of these funds is determined using a market approach in accordance with the techniques for Level 2 as described above.

Hedged Strategies

Investments in hedged strategies are made in sub-strategies including event driven, distressed/credit, relative value, long/short equity, and global macro funds. The redemption frequency for these funds varies from monthly to every two years. Similarly, the required redemption notice period varies from three to ninety days. The total fair value of hedged strategies, including equity and fixed income investments with a hedge fund structure, held at June 30, 2016 and 2015 was \$2,481,728 and \$2,669,038, respectively. Of this amount, \$183,796 and \$197,733 at June 30, 2016 and 2015, respectively, were in "side pockets" and other similar restricted investments with indeterminate redemption periods. Another \$67,232 and \$162,537 were subject to initial investment lock-ups that expire over 3 to 13 months and 1 to 19 months as of June 30, 2016 and 2015, respectively. Some funds subject to lock-up permit early redemptions subject to a fee. At June 30, 2016, the university had commitments outstanding of approximately \$52,745 for hedged strategy funds.

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Private Equity

Investments in private equity strategies are made in targeted categories including buyout, venture capital, and corporate finance. Redemptions of such funds are not permitted and distributions are received as underlying investments are liquidated. Generally, the remaining lives of the agreements under which these investments are made vary from 1 to 15 years assuming all extension options under the agreements are exercised and approved. At June 30, 2016, the university had total private equity investment commitments outstanding of \$1,180,687, but only a portion of this amount is expected to be funded in 2017.

Real Assets

Investments in the real assets class are made in targeted categories including natural resources and real estate. Such accounts represent approximately 7% of total investments. The majority of these assets are not held directly but are held in private-equity-type structures that invest primarily in real estate and natural resources. These funds are valued at net asset value as described above. Generally, the remaining lives of the agreements under which these investments are made vary from 1 to 14 years assuming all extension options under the agreements are exercised and approved. At June 30, 2016, the university had total real asset commitments outstanding of \$313,900, but only a portion of this amount is expected to be funded in 2017.

3. Investment Return

The following summarizes the return on investments. Investment income represents earnings on non-endowed funds. Return on investments is presented net of investment management fees. Certain investments, including some but not all of those in the hedged and private equity categories, report investment returns net of fees. Other fees paid directly to investment managers and internal investment management costs were \$54,378 and \$47,317 for 2016 and 2015, respectively.

	<u>2016</u>	<u>2015</u>
Investment income	\$ 9,039	\$ 9,487
Pooled endowment dividends and interest income	1,597	10,186
Pooled endowment distribution in excess of income	<u>284,961</u>	<u>256,031</u>
Pooled endowment spending distribution	<u>286,558</u>	<u>266,217</u>
Investment gains and (losses), net	(266,824)	302,950
Gains distributed as endowment distribution	<u>(284,961)</u>	<u>(256,031)</u>
Investment gains and (losses) net of endowment spending distribution	<u>(551,785)</u>	<u>46,919</u>
Net investment return	<u>\$ (256,188)</u>	<u>\$ 322,623</u>

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At June 30, 2016 and 2015, investments with a fair value of \$42,125 and \$35,484, respectively, were loaned to various brokers on an open-ended basis for average periods varying from several days to several months, depending on the type of loan. The university receives lending fees and continues to earn interest and dividends on the loaned securities. These securities are returnable on demand and are collateralized by cash deposits or U.S. Treasury securities amounting to 104% of the market value of the securities loaned at both June 30, 2016 and 2015. The university is indemnified against borrower default by the financial institution that is acting as its lending agent. The borrowers provided \$43,820 and \$37,068 of collateral in the form of cash or U.S. Treasury securities for the loaned securities at June 30, 2016 and 2015, respectively, and is reported in Deposits, advances and other on the Consolidated Statements of Financial Position. Most, if not all, of the cash is reinvested in other vehicles by the lending agent. Such collateral was invested in fixed income securities and had a fair value of \$43,845 and \$37,089 at June 30, 2016 and 2015, respectively, and is reported in Other assets on the Consolidated Statements of Financial Position.

4. Endowment

The state of Missouri has adopted legislation that incorporates the provisions outlined in the Uniform Prudent Management of Institutional Funds Act (UPMIFA). The statutory guidelines contained in this legislation relate to the prudent management, investment, and expenditure of donor-restricted endowment funds held by charitable organizations. Additionally, the legislation specifies factors for fiduciaries to consider prior to making a decision to appropriate from or accumulate into an institution's endowment funds.

At June 30, 2016, the university's endowment consists of 3,271 individual donor-restricted endowment funds and Board of Trustees or management-designated endowment funds for a variety of purposes plus split interest agreements and other net assets where the assets have been designated for endowment. The net assets associated with endowment funds, including funds designated by the Board of Trustees or management to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The university has interpreted Missouri UPMIFA as requiring the preservation of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, the university classifies as permanently restricted net assets, (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted until the donor-imposed stipulations attached to those amounts have been met by actions of the university and/or passage of time and appropriated for expenditure in a manner consistent with the standard of prudence prescribed by UPMIFA.

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Endowment net asset composition, which includes the effect of changes in endowment investments as well as other endowment-related assets and liabilities, by type of fund as of June 30, 2016:

	<u>Unrestricted</u>	<u>Temporarily Restricted</u>	<u>Permanently Restricted</u>	<u>Total</u>
Donor-restricted endowment funds	\$ (3,990)	\$ 2,341,643	\$ 1,639,696	\$ 3,977,349
Board-designated endowment funds	<u>2,320,261</u>	<u>188,167</u>	-	<u>2,508,428</u>
Total endowment funds	<u>\$ 2,316,271</u>	<u>\$ 2,529,810</u>	<u>\$ 1,639,696</u>	<u>\$ 6,485,777</u>

Changes in endowment net assets for the year ended June 30, 2016:

	<u>Unrestricted</u>	<u>Temporarily Restricted</u>	<u>Permanently Restricted</u>	<u>Total</u>
Endowment net assets, beginning of year	\$ 2,446,786	\$ 2,854,317	\$ 1,543,769	\$ 6,844,872
Investment return				
Net investment income	675	2,440	-	3,115
Net appreciation (realized and unrealized)	<u>(110,103)</u>	<u>(154,518)</u>	<u>(1,890)</u>	<u>(266,511)</u>
Total investment return	(109,428)	(152,078)	(1,890)	(263,396)
Gifts	723	1,797	97,965	100,485
Appropriation of endowment assets for expenditure	(121,186)	(165,373)	-	(286,559)
Net transfers to create board designated funds	61,909	4,525	1,116	67,550
Allocation of endowment return to treasurers investment pool	38,170	(16,854)	-	21,316
Reclassification of deficits in donor-designated funds	(3,833)	3,833	-	-
Other activity	<u>3,130</u>	<u>(357)</u>	<u>(1,264)</u>	<u>1,509</u>
Endowment net assets, end of year	<u>\$ 2,316,271</u>	<u>\$ 2,529,810</u>	<u>\$ 1,639,696</u>	<u>\$ 6,485,777</u>

Of the amount classified as temporarily restricted endowment net assets, \$2,036,733 represents the portion of endowment funds subject to time restrictions under Missouri's enacted version of UPMIFA.

Endowment net asset composition by type of fund as of June 30, 2015:

	<u>Unrestricted</u>	<u>Temporarily Restricted</u>	<u>Permanently Restricted</u>	<u>Total</u>
Donor-restricted endowment funds	\$ (156)	\$ 2,655,960	\$ 1,543,769	\$ 4,199,573
Board-designated endowment funds	<u>2,446,942</u>	<u>198,357</u>	-	<u>2,645,299</u>
Total endowment funds	<u>\$ 2,446,786</u>	<u>\$ 2,854,317</u>	<u>\$ 1,543,769</u>	<u>\$ 6,844,872</u>

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Changes in endowment net assets for the year ended June 30, 2015:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, beginning of year (as reported)	\$ 2,238,418	\$ 2,901,173	\$ 1,508,445	\$ 6,648,036
Reclassification	44,695	(44,695)	-	-
Endowment net assets, beginning of year (as revised)	2,283,113	2,856,478	1,508,445	6,648,036
Investment return				
Net investment income	4,255	7,496	-	11,751
Net appreciation (realized and unrealized)	127,665	172,238	(169)	299,734
Total investment return	131,920	179,734	(169)	311,485
Gifts	2,521	696	36,476	39,693
Appropriation of endowment assets for expenditure	(110,986)	(155,231)	-	(266,217)
Net transfers to create board designated funds	150,110	(11,201)	180	139,089
Allocation of endowment return to treasurers investment pool (as revised)	(12,304)	(16,050)	-	(28,354)
Reclassification of deficits in donor-designated funds	(124)	124	-	-
Other activity	2,536	(233)	(1,163)	1,140
Endowment net assets, end of year	\$ 2,446,786	\$ 2,854,317	\$ 1,543,769	\$ 6,844,872

During 2016, the university determined that reductions to endowment net assets resulting from the endowment spending distribution component of the Treasurer's Investment Pool allocation were not properly classified as unrestricted and temporarily restricted net assets of the endowment in prior years. As a result, the 2015 beginning unrestricted and temporarily restricted endowment net assets as well as the 2015 allocations of endowment return to the treasurers investment pool have been revised. Management does not believe that the impact of this prior year revision is material. These revisions did not affect the consolidated statements of financial position, activities or cash flows.

Of the amount classified as temporarily restricted endowment net assets, \$2,336,202 represents the portion of endowment funds subject to time restrictions under Missouri's enacted version of UPMIFA.

Permanently Restricted Net Assets

The portion of perpetual endowment funds net assets that is required to be retained permanently by explicit donor stipulation:

	2016	2015
Restricted for general activities	\$ 1,099,457	\$ 1,054,839
Restricted for student assistance	366,811	319,044
Restricted for buildings and renovations	150,607	147,416
Life income	22,821	22,470
Total endowment net assets classified as permanently restricted net assets	\$ 1,639,696	\$ 1,543,769

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Temporarily Restricted Net Assets

Temporarily restricted endowment funds net assets:

	<u>2016</u>	<u>2015</u>
Restricted for general activities	\$ 1,743,601	\$ 1,991,588
Restricted for student assistance	414,282	455,285
Restricted for buildings and renovations	360,460	393,743
Life income	<u>11,467</u>	<u>13,701</u>
Total endowment net assets classified as temporarily restricted net assets	<u>\$ 2,529,810</u>	<u>\$ 2,854,317</u>

Endowment Funds With Deficits

As determined under UPMIFA, the fair value of assets associated with individual donor-restricted endowment funds may fall below the value of the initial and subsequent donor gift amounts (i.e., deficit). When donor endowment deficits exist, they are classified as a reduction of unrestricted net assets. Deficits of this nature reported in unrestricted net assets were immaterial as of June 30, 2016 and 2015, respectively. The deficits resulted largely from unfavorable market fluctuations that occurred shortly after the investment of newly established endowments.

Return Objectives and Risk Parameters

The university has adopted endowment investment and spending policies that attempt to provide a predictable stream of funding to programs supported by its endowment while seeking to maintain the purchasing power of endowment assets. Under this policy, the return objective for the endowment assets, measured over a full market cycle, shall be to meet or exceed the return of its policy benchmark, based on the endowment's target allocation applied to the appropriate individual benchmarks. The university expects its endowment funds over time, to provide an average rate of return that will exceed the sum of inflation and the spending rate. Actual returns in any given year may vary from this amount.

Strategies Employed for Achieving Investment Objectives

To achieve its long-term rate of return objectives, the university relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized gains) and current yield (interest and dividends). The university targets a diversified asset allocation that places greater emphasis on equity-based and alternative investments to achieve its long-term objectives within prudent risk constraints.

Endowment Spending Allocation and Relationship of Spending Policy to Investment Objectives

The university has an endowment spending distribution policy designed to stabilize annual spending levels and preserve the real value of the endowment over time. Under this policy, earnings of the pooled endowment are distributed at a rate set annually to the schools and other units of the university. Consideration is given to the provisions of UPMIFA in determining the amount to appropriate. This spending rate must fall within the range of 3.0% to 5.5% of the five-year average market value of a unit of the pooled endowment. For 2016, the spending rate from the pooled endowment was 4.2% of the beginning market value of the pooled endowment. The spending rate is funded from current earnings and, in years when current earnings are insufficient, from previously accumulated earnings of the endowment.

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The university's endowed assets at June 30 are as follows:

	Fair Market Value at June 30, 2016	Fair Market Value at June 30, 2015
Pooled endowment and other funds	\$ 7,059,916	\$ 7,473,826
Life income trusts and pools	75,397	79,625
Externally administered trusts	34,449	29,149
Separately invested endowment	<u>6,735</u>	<u>6,920</u>
Total	7,176,497	7,589,520
Less: Operating funds invested in pool	<u>(649,771)</u>	<u>(700,290)</u>
Net endowments	<u>\$ 6,526,726</u>	<u>\$ 6,889,230</u>

5. Accounts and Notes Receivable

Accounts and notes receivable at June 30 were as follows:

	2016	2015
Patient services	\$ 340,786	\$ 284,178
Student and parent loans		
Parent loan fund	45,813	47,408
Government student loans	44,148	46,013
Institutional student loans	22,941	22,751
Due from affiliated hospitals	108,579	80,761
Other	<u>100,511</u>	<u>84,861</u>
	662,778	565,972
Less: Allowance for concessions and doubtful accounts	<u>(205,451)</u>	<u>(168,379)</u>
Total	<u>\$ 457,327</u>	<u>\$ 397,593</u>

The university is exposed to credit risk on amounts receivable from student and parent loans. Parent loan funds are offered by the university as a way for parents to finance their children's education at a fixed rate. Institutional student loans are offered by the university based on financial need. Both parent and institutional loans typically have ten year terms and, in the case of parent loans, existing economic conditions are evaluated annually in determining the interest rates for these loans. Government sponsored student loans carry minimal risk for the university.

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The principal credit quality indicator used by the university for the portfolio of non-government student and parent loans is collection experience. In order to reduce its credit risk, the university has adopted credit policies which include a review of credit limits and maintaining an active collections process with the assistance of third party collection agencies as necessary. At June 30, 2016, the allowance for parent and institutional student loans was \$4,571 compared to \$4,480 at June 30, 2015. Accounts are considered past due if a scheduled payment is forty-five days late. The balance in such accounts was \$8,407 and \$8,413 at June 30, 2016 and June 30, 2015, respectively. Allowances are established based on management's best estimate of exposure at June 30 and are influenced by historical losses, existing economic conditions, and the current payment activity on loans. Activity in these allowances was not significant.

Parent loans and institutional student loans are sent to a third party collection agency if the loan is past due for a period of time and the university has been unable to collect payment. As these loans are non-dischargeable in bankruptcy, accounts are not typically considered uncollectible until all collection efforts have been exhausted with no receipt of payment. At this time, a loan will be written off.

6. Notes and Bonds Payable

Outstanding principal on bonds and notes payable at June 30, 2016 and 2015 consists of the following:

	Rates at June 30, 2016	Maturity	2016	2015
Missouri Health and Educational Facilities Authority:				
\$142,400 of 1996A, B, C and D Series Variable Rate Bonds, due in full	.01 % - .42%	September 1, 2030	\$ 142,400	\$ 142,400
\$88,000 of 2000B and C Series Variable Rate Bonds, due in full	.01 % - .43%	March 1, 2040	88,000	88,000
\$25,135 of 2003B Series Variable Rate Bonds, due in full	.01 % - .48%	February 15, 2033	25,135	25,135
\$104,020 of 2007A Series Bonds, due in full	5.00%	January 15, 2037	-	104,020
\$126,975 of 2007B Series Refunding Bonds, due serially from January 15, 2021 to January 15, 2041	4.20% - 4.50%	January 15, 2041	-	126,975
\$193,625 of 2008A Series Educational Facilities Revenue Bonds, due March 15, 2018 (\$44,000) and March 15, 2039 (\$149,625)	5.25% - 5.38%	March 15, 2039	149,625	193,625
\$93,770 of 2009A Series Educational Facilities Revenue Bonds, due November 15, 2030 (\$20,000) and November 15, 2039 (\$73,770)	4.50% - 5.00%	November 15, 2030 and 2039	93,770	93,770
\$22,985 of 2011A Series Revenue Bonds due in full	5.00%	November 15, 2041	22,985	22,985
\$96,350 of 2011B Series Revenue Bonds due in full November 15, 2030 (\$39,050) and November 15, 2037 (\$57,300)	5.00%	November 15, 2030 and 2037	96,350	96,350
\$77,495 of 2011C Series Revenue Bonds due serially from November 15, 2012 to November 15, 2037	.75% - 5.06%	November 15, 2037	64,585	67,885
\$200,785 of 2012A Series Revenue Bonds due serially from February 15, 2023 to February 15, 2047	2.39% - 3.69%	February 15, 2047	200,785	200,785
\$150,000 of 2014A Series Revenue Bonds due in full	4.07%	October 15, 2044	150,000	150,000
\$402,920 of 2016A Series Revenue Bonds due in full January 15, 2036 (\$109,300) and January 15, 2046 (\$293,620)	3.47% - 3.65%	January 15, 2036 and 2046	402,920	-
Other Bonds:				
\$131,435 of 2015A Series Taxable Bonds due in full	3.79%	October 15, 2055	131,435	131,435
Other notes payable			49,231	38,408
Total outstanding notes and bonds payable			1,617,221	1,481,773
Unamortized original issue premiums/discounts and cost of issuance, net			(865)	7,679
Total			\$ 1,616,356	\$ 1,489,452

Washington University

Notes to the Consolidated Financial Statements

June 30, 2016 and 2015

(All amounts in thousands of dollars)

Bonds payable are redeemable at the option of the university at various times from 2016 through 2055. The university is required to maintain certain ratios and comply with other restrictive covenants principally that the university maintain a ratio of expendable financial resources to debt of at least 1.25 times. The university is in compliance with this covenant. During 2016 and 2015, interest, accretion of debt discount and related fees incurred on notes and bonds payable totaled \$55,174 and \$54,693, respectively.

Maturities on notes and bonds payable for the next five fiscal years are as follows:

2017	\$	40,857
2018		15,219
2019		3,380
2020		2,470
2021		2,295
Thereafter		1,553,000

During fiscal 2016, the university issued \$402,920 of taxable Series 2016 bonds. \$274,995 of net proceeds from the issuance and other funds were placed in an irrevocable trust to be used to satisfy all interest and principal payments, including principal to be paid at the first scheduled call date, for \$230,995 of the 2007 Series A and B Missouri Health and Educational Facilities Authority (MOHEFA) Bonds and \$44,000 of the 2008 Series A MOHEFA bonds. In accordance with the terms of the MOHEFA Bond indentures and loan agreements, establishment of the trust results in the legal defeasance of the university's obligation under the bonds. The transaction was accounted for as an extinguishment with a recognized loss of \$6,176 reported on the Other line of the Consolidated Statements of Activities.

During fiscal 2015, the university issued \$131,435 of taxable Series A bonds. \$130,561 of net proceeds from the issuance and other funds were placed in an irrevocable trust to be used to satisfy all interest and principal payments, including principal to be paid at the first scheduled call date, for \$48,250 of the 2001 Series A Missouri Health and Educational Facilities Authority (MOHEFA) Bonds and \$78,500 of the 2004 Series A MOHEFA bonds. In accordance with the terms of the MOHEFA Bond indentures and loan agreements, establishment of the trust results in the legal defeasance of the university's obligation under the bonds. The transaction was accounted for as an extinguishment with a recognized loss of \$2,809 reported on the Other line of the Consolidated Statements of Activities.

The university has other lines of credit, which generally expire annually, aggregating \$264,015, of which \$214,784 is available at June 30, 2016. The university expects that these lines of credit will be renewed but can make no assurances.

Washington University

Notes to the Consolidated Financial Statements

June 30, 2016 and 2015

(All amounts in thousands of dollars)

7. Derivative and Other Financial Instruments

In accordance with the university's investment policies, derivative instruments may be purchased and sold to manage the risk and return of investment market positions. Investment managers purchase and sell derivatives on various fixed income instruments to control the risk of fluctuations in interest rates, relative to portfolio benchmarks, on the university's fixed income investments. Certain equity investment managers purchase derivatives to obtain cost efficient exposure to equity markets or to hedge currency. These contracts are valued at periodic intervals (daily, monthly, quarterly, etc.) as well as at June 30, with the resulting changes in the values of the contracts either added to or deducted from the university's custodial account. In addition, derivative transactions (primarily futures, options and swaps) can be entered into using a derivatives administrator for multiple purposes including hedging, rebalancing or tactical trading. Hedging derivatives are utilized in the event that the university determines that the endowment should hedge market exposures. Rebalancing derivatives are utilized to synthetically adjust the university's investment allocation towards its policy allocation. Tactical trading derivatives are utilized to implement a view that the university may have on a particular market. Derivative activity, when initiated by the university, is executed, settled and managed by the derivatives administrator on a non-discretionary basis. Such instruments are not designated as hedges for accounting purposes. Gains or losses from these derivative instruments are reported as realized and unrealized gains or losses in the Consolidated Statements of Activities. The contracts and gains or losses they generate are not material to the university's consolidated financial statements.

The university has investments in certain funds, generally in the form of limited partnerships that participate directly, or have the option to participate, in derivative instruments. The university regularly reviews the performance of these funds in the context of its overall investment objectives.

In order to reduce exposure to floating interest rates on variable rate debt, the university entered into a thirty-year interest rate swap agreement in 2004. The agreement, which was terminated during 2015 at a gain of \$2,056, had the effect of fixing the rate of interest on borrowings at approximately 4.26% for \$78,500 of debt.

8. Commitments and Contingencies

At June 30, 2016, the university had outstanding commitments under certain construction contracts in the amount of \$71,395, the majority of which will be payable during the year ending June 30, 2017.

The university maintains a self-insurance program for professional liability. This program is supplemented with commercial excess insurance above the university's self-insurance retention. Funding for the program reserves is based on claims made. The assets supporting the funded reserve are reported as investments in the Consolidated Statements of Financial Position. The university also accrues for an estimate of claims incurred but not reported. Reserves, funded and unfunded, are based upon actuarial studies and represent undiscounted estimated claims and related costs. The total self-insurance reserves at June 30, 2016 and 2015, respectively, were \$79,107 and \$83,379. Self-insurance reserves are necessarily estimates based on historical loss experience and other factors, and while management believes that the reserves are adequate, the ultimate liabilities may be in excess of or less than the amounts provided.

Washington University

Notes to the Consolidated Financial Statements

June 30, 2016 and 2015

(All amounts in thousands of dollars)

The university is a party, along with other universities, to an agreement with a reciprocal risk retention group for purposes of obtaining general liability and auto liability insurance coverage in excess of a pre-determined retention level. Under the terms of these agreements, the university can be called upon to make additional capital contributions. In management's view, any such capital calls would not be material.

The university is involved in various legal proceedings arising in the normal course of operations. Although the outcome of any legal proceeding cannot be predicted with certainty, it is the opinion of the university's management that the outcome of these proceedings individually or in the aggregate, will not have a material adverse effect on the business, Consolidated Statements of Activities, financial position or liquidity of the university.

9. Retirement Plan

The university provides its faculty and staff with a defined contribution (403(b)) retirement savings plan in which employee contributions, university contributions and investment earnings accumulate to assist employees at retirement. Participating employees own individual retirement accounts through the Teachers Insurance and Annuity Association (TIAA), College Retirement Equity Fund (CREF), and/or the Vanguard Group, Inc. Under this arrangement, the university and plan participants make monthly contributions to TIAA-CREF and/or Vanguard. During 2016, the university consolidated custody of retirement plan assets and administration of annuity contracts under TIAA-CREF. For employees who were benefits eligible as of August 31, 2006, the amount of contribution made by the university, commencing after two years of eligible service, is based upon the employee's age and salary. For benefits-eligible employees hired or rehired after August 31, 2006, the university contribution commences after two years of eligible service and is based upon the employee's years of eligible service and salary. Vesting provisions are full and immediate. The university's share of the cost of these benefits in 2016 and 2015 was \$72,383 and \$69,716, respectively.

10. Agreements With Affiliated Hospitals

The university has affiliation agreements with Barnes Jewish Hospital (BJH) and St. Louis Children's Hospital (SLCH), collectively the Hospitals. This includes operating activities of Barnes Jewish Hospital at Barnes Jewish West County Hospital (BJWCH), Barnes Jewish Orthopedic Center (OC) in Chesterfield, the Siteman Cancer Center – South County, and the Children's Specialty Care Center in Town and Country.

Washington University

Notes to the Consolidated Financial Statements

June 30, 2016 and 2015

(All amounts in thousands of dollars)

The terms of the affiliation agreements provide for the university to be responsible for providing professional medical staff and direction, supervision of residents and interns, appropriate resources for research and medical education, and participation in joint clinical planning. BJH and SLCH are responsible for the hospitals and health care delivery facilities. BJH and SLCH compensate the university for services provided by the university through a fixed annual base payment (adjusted annually for inflation) and an additional contingent payment equal to a share of the combined BJH and SLCH adjusted net operating income. The combined revenue is reported as affiliated hospital revenue on the Consolidated Statements of Activities. In addition, the university derives revenue from patient services provided at Barnes-Jewish at St. Peters Hospital under an agreement with that hospital and BJH. During 2013, BJH agreed to fund on a cost-reimbursement basis over a period of years, certain expenditures by the university. Payments of \$11,723 and \$39,493 were received or accrued as gifts on the statements of activities under the agreement during 2016 and 2015, respectively.

11. Subsequent Events

The university has performed an evaluation of subsequent events through September 27, 2016, which is the date the consolidated financial statements were issued. In August 2016, the university issued \$272,750 of revenue bonds through Missouri Health and Educational Facilities Authority (MOHEFA). The bonds bear a fixed rate of 3.086% and will mature on September 15, 2051. The proceeds of these bonds will be used to refinance Series 2008A and Series 2009A.

Supplementary Information

Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Research and Development Cluster					
DEPARTMENT OF DEFENSE					
Advanced Research Projects Agency					
Research and Technology Development	12.910			\$ 746,575	\$ -
Air Force Research Lab					
Air Force Research Lab	12	UES, INC.	FA865009D5037	381	-
Defense Advanced Research Projects Agency					
Defense Advanced Research Projects Agency	12			172,483	-
Defense Advanced Research Projects Agency	12	Transient Electronics Inc.	W31P4Q15C0027	88,291	-
Defense Intelligence Agency					
Defense Intelligence Agency	12			63,733	23,829
Defense Threat Reduction Agency					
Basic Scientific Research - Combating Weapons of Mass Destruction	12-351			2,227,954	979,915
Basic Scientific Research - Combating Weapons of Mass Destruction	12-351	Georgia State University	HDTRA11410013	30,066	-
Basic Scientific Research - Combating Weapons of Mass Destruction	12-351	Icahn School of Medicine at Mount Sinai	HDTRA11210051	181,467	-
Basic Scientific Research - Combating Weapons of Mass Destruction	12-351	Icahn School of Medicine at Mount Sinai	HDTRA11410013	193,803	-
Basic Scientific Research - Combating Weapons of Mass Destruction	12-351	Ohio State University	HDTRA1110047	1,021	-
Department of Defense					
Defense Security Cooperation Agency	12	Government of Israel-Ministry of Defense-Mission to the U.S.	4440684813	10,514	-
Department of the Air Force, Material Command					
Air Force Defense Research Sciences Program	12.800			666,316	-
Air Force Defense Research Sciences Program	12.800	Ohio State University	FA95501210059	56,152	-
Air Force Defense Research Sciences Program	12.800	Princeton University	SUB0000057 FA95501210368	846	-
Air Force Defense Research Sciences Program	12.800	University of Maryland, Baltimore	FA95501210321	98,884	-
Department of the Navy, Office of the Chief of Naval Research					
Basic and Applied Scientific Research	12-300			783,376	-
Department of the Navy, Office of the Chief of Naval Research	12			265,092	-
Intelligence Advanced Research Projects Activity (IARPA)					
Intelligence Advanced Research Projects Activity	12	Object Video Inc.	FA865012C7212IARPA	24,707	-
National Security Agency					
Mathematical Sciences Grants Program	12.901			16,351	-
Office of Naval Research					
Office of Naval Research	12	Entegriion, Inc.	N0001413C0260	5,746	-
U.S. Army					
U.S. Army	12			183,838	-
U.S. Army	12	Cherokee Nations Tech Solutions	W81XWH13D00230001	(99,887)	-
U.S. Army Material Command					
Basic Scientific Research	12-431			375,620	-
Basic Scientific Research	12-431	Georgia Institute of Technology	W911NF1310244	43,580	-
Basic Scientific Research	12-431	Georgia Institute of Technology	W911W6-11-2-0010	122,029	-
Basic Scientific Research	12-431	Northwestern University	W911NF-13-1-0485	153,581	-
Basic Scientific Research	12-431	University of Dayton Research Institute	RSC15032 W911NF1510178	44,219	-
U.S. Army Medical Command					
Military Medical Research and Development	12-420			4,173,324	68,685
Military Medical Research and Development	12-420	Brigham and Women's Hospital	W81XWH0820159	16,163	-
Military Medical Research and Development	12-420	Brigham and Women's Hospital	W81XWH1510269	4,500	-
Military Medical Research and Development	12-420	Johns Hopkins University	W81XWH09200108	5,922	-
Military Medical Research and Development	12-420	Johns Hopkins University	W81XWH1020090	14,198	-
Military Medical Research and Development	12-420	Northern California Institute for Research and Education	W81XWH1310259	6,927	-
Military Medical Research and Development	12-420	Stanford University	W81XWH1510131	7,551	-
Military Medical Research and Development	12-420	University of Alabama	W81XWH1210155	26,120	-
Military Medical Research and Development	12-420	University of Pittsburgh	W81XWH1510655	4,336	-
Military Medical Research and Development	12-420	University of Virginia	W81XWH1010818	14,673	-
Military Medical Research and Development	12-420	Virginia Tech	W81XWH120187	11,600	-
Military Medical Research and Development	12-420	Wake Forest University	W81XWH1210550	(33,100)	(1,900)
Military Medical Research and Development	12-420	Yale University	W81XWH14C1392	13,517	-
TOTAL DEPARTMENT OF DEFENSE				10,722,469	1,070,529

The accompanying notes are an integral part of this schedule.

Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
DEPARTMENT OF EDUCATION					
Institute of Education Sciences					
Education Research, Development and Dissemination	84.305			19,723	-
Education Research, Development and Dissemination	84.305	Duke University	R305A130535	145,416	-
Javits Fellowships					
Javits Fellowships	84.170B			3,510	-
National Institute on Disability and Rehabilitation Research					
Switzer Research Fellowship Program	84.133F	Dr. Wong	90SF00030101	34,927	18,352
Office of Innovation and Improvement					
Fund for the Improvement of Education	84.215	St. Louis Board of Education	Q215F120077	16,209	-
Office of Postsecondary Education					
Overseas Programs - Doctoral Dissertation Research Abroad	84.022			48,018	-
Graduate Assistance in Areas of National Need	84.200			102,000	-
Office of Special Education and Rehabilitative Services					
Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	84.325			393,742	-
Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	84.325	Salus University	H325H14000214A	71,300	-
TOTAL DEPARTMENT OF EDUCATION				<u>834,845</u>	<u>18,352</u>
DEPARTMENT OF ENERGY					
Department of Energy					
Office of Science Financial Assistance Program	81.049			8,445,383	2,150,168
Office of Science Financial Assistance Program	81.049	Georgia Tech	DESC0012577	163,249	-
Fossil Energy Research and Development	81.089			1,373,876	141,187
Stewardship Science Grant Program	81.112	Carnegie Institution of Washington	DENA0020006	48,965	-
Defense Nuclear Nonproliferation Research	81.113	University of California, Berkeley	DENA0009979	168,436	-
Long-Term Surveillance and Maintenance	81.136	Danforth Plant Science Center	DEAR0000594	130,099	-
Alliance for Sustainable Energy, LLC National Renewable Energy Laboratory	81		DEAC3609G028308	355,231	-
Sandia National Laboratories	81		1598536	9,664	-
University of California, Lawrence Berkeley National Laboratory	81		DEAC0205CH11231	168,130	-
TOTAL DEPARTMENT OF ENERGY				<u>10,863,033</u>	<u>2,291,355</u>
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Administration for Children and Families					
State Court Improvement Program	93.586			94,804	-
Head Start	93.600			393,448	31,961
Social Services Research and Demonstration	93.647			6,039	-
Child Abuse and Neglect Discretionary Activities	93.670			466,073	8,080
Administration for Community Living					
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433	Gallaudet University	90RE50200200	17,315	-
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433	Rehabilitation Institute Of Chicago	90RT50080100	2,460	-
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433	University Of Kansas Center For Research, Inc.	90RT20150100	31,524	-
Agency for Healthcare Research and Quality					
Research on Healthcare Costs, Quality and Outcomes	93.226			1,864,383	88,635
Centers for Disease Control					
Innovations in Applied Public Health Research	93.061	St. Louis University	5U48DP00190304	(32)	-
Birth Defects and Developmental Disabilities - Prevention and Surveillance	93.073			524,334	-
Prevention of Disease, Disability, and Death by Infectious Diseases	93.084			58,673	-
Centers for Research and Demonstration for Health Promotion and Disease Intervention	93.135	University Of South Florida	1U48DP00502401	41,497	-
Injury Prevention and Control Research and State and Community Based Programs	93.136			26,958	-
Injury Prevention and Control Research and State and Community Based Programs	93.136	University of North Carolina, Chapel Hill	5U01CE00194805	4,419	-
Occupational Safety and Health Program	93.262			235,082	-
Occupational Safety and Health Program	93.262	Center For Construction Research & Training	5U60OH00976207	188,871	-
Occupational Safety and Health Program	93.262	Center For Construction Research & Training	2U60OH00976206	57,668	-
Occupational Safety and Health Program	93.262	University of Iowa	5U19OH00886809	(174)	-
Complex Humanitarian Emergency and War-Related Injury Public Health Activities	93.269			(1,744)	(1,732)
Centers for Disease Control and Prevention, Investigations and Technical Assistance	93.283			953,108	-
Centers for Disease Control and Prevention, Investigations and Technical Assistance	93.283	Harvard Pilgrim Healthcare	3U54CK00017204S1	80,111	-
Centers for Disease Control and Prevention, Investigations and Technical Assistance	93.283	National Association For Chronic Disease Director	5U58DP00275905	17,048	-
Centers for Disease Control and Prevention, Investigations and Technical Assistance	93.283	State of Missouri	5U58DP00147204	49,981	-

The accompanying notes are an integral part of this schedule.

Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
National Organizations for Chronic Disease Prevention and Health Promotion	93.809	National Association For Chronic Disease Director	NU58DP0061280100	87,353	-
HIV Demonstration, Research, Public and Professional Education Projects	93.941			(364)	-
Preventive Health Services	93.977			445,060	5,486
Centers for Disease Control	93	Children's Research Institute	200-2015-M-63022 (CDC)	15,695	-
Centers for Disease Control Division of Reproductive Health	93	Cicatelli Associates, Inc.	CDC DIV OF REPRO HEALTH	20,282	-
Centers for Medicare and Medicaid Services					
Health Care Innovation Awards (HCIA)	93.610			1,039,504	-
Food and Drug Administration					
Food and Drug Administration_Research	93.103			1,037,147	-
Food and Drug Administration_Research	93.103	Duke University	5R18FD00529202	23,036	-
Food and Drug Administration_Research	93.103	New York Medical College	R01FD00409003	(16)	-
Food and Drug Administration_Research	93.103	New York Medical College	4R01FD00409004	28,256	-
Food and Drug Administration_Research	93.103	University of Pennsylvania	5R01FD00351604	1,359	-
Food and Drug Administration_Research	93.103	University of Pennsylvania	4R01FD00351605	1,373	-
Health Resources and Services Administration					
Rural Health Research Centers	93.155	University of Iowa	5U1CRH2041907	95,813	-
Rural Health Research Centers	93.155	University of Iowa	6U1GRH076331002	49,553	-
Rural Health Research Centers	93.155	University of Iowa	5U1GRH0763309	(734)	-
Rural Health Research Centers	93.155	University of Iowa	5UB7RH2501103	1,859	-
Rural Health Research Centers	93.155	University of Iowa	5U1CRH2041906	25,293	-
National Health Service Corps Scholarship Program	93.288	University of Arkansas	5R01EB01656702	37,911	-
Maternal, Infant, and Early Childhood Home Visiting Research Programs	93.615			135,082	9,767
National Institutes of Health					
Environmental Health	93.113			2,408,353	366,519
Oral Diseases and Disorders Research	93.121			1,137,857	-
Human Genome Research	93.172			27,708,820	1,250,223
Human Genome Research	93.172	Brown University	5R01HG00569003	49,651	-
Human Genome Research	93.172	California Institute of Technology	U41HG002223D	43,640	-
Human Genome Research	93.172	Ecog-Acrin Cancer Research Group	5U10CA18082002	9,996	-
Human Genome Research	93.172	Ecog-Acrin Cancer Research Group	5U10CA18082003	3,390	-
Human Genome Research	93.172	Fred Hutchinson Cancer Research Center	5R01HD07658509	143,594	-
Human Genome Research	93.172	Jackson Laboratory	5U41HG00749702	10,256	-
Human Genome Research	93.172	Jackson Laboratory	5U41HG00749703	32,052	-
Human Genome Research	93.172	Navgen, LLC	1R41HG00856701A1	62,850	-
Human Genome Research	93.172	Navgen, LLC	1R41HG00824701A1	49,201	-
Human Genome Research	93.172	University of North Carolina, Chapel Hill	5U01HG00743703	19,762	-
Human Genome Research	93.172	University of North Carolina, Chapel Hill	5U01HG00743702	2,416	-
Research Related to Deafness and Communication Disorders	93.173			4,652,167	66,448
Research Related to Deafness and Communication Disorders	93.173	Barron Associates, Inc.	5R44DC01008003	85,627	-
Research Related to Deafness and Communication Disorders	93.173	Jackson Laboratory	2R01DC00430116A1	63,306	-
Research Related to Deafness and Communication Disorders	93.173	Temple University	5R01DC01306303	1,573	-
Research Related to Deafness and Communication Disorders	93.173	Temple University	5R01DC01306302	32,414	-
Research Related to Deafness and Communication Disorders	93.173	University of Iowa	5R21DC0373302	29,120	-
Research Related to Deafness and Communication Disorders	93.173	University of Iowa	1R21DC0373301A1	1,721	-
Research Related to Deafness and Communication Disorders	93.173	University of Kansas	5R01DC00180321	50,232	-
Research Related to Deafness and Communication Disorders	93.173	University of Kansas	2R01DC00180320	47,603	-
Research Related to Deafness and Communication Disorders	93.173	University of Texas, Dallas	5R01DC00421202	43	-
Research Related to Deafness and Communication Disorders	93.173	University of Utah	5R01DC01131105	24,172	-
Research Related to Deafness and Communication Disorders	93.173	University of Virginia	5R01DC01425402	4,411	-
Research Related to Deafness and Communication Disorders	93.173	Vanderbilt University Medical Center	5T35DC00876309	3,820	-
Mental Health Research Grants	93.242			17,956,530	2,217,120
Mental Health Research Grants	93.242	Duke University	R01MH10638801A1	25,921	-
Mental Health Research Grants	93.242	Electrical Geodesics, Inc.	9R44MH10642103A1	12,256	-
Mental Health Research Grants	93.242	Electrical Geodesics, Inc.	5R44MH10642104	24,237	-
Mental Health Research Grants	93.242	Indiana University	1R01MH10846701	17	-
Mental Health Research Grants	93.242	Rand Corporation	5R01MH10154202	13,350	-
Mental Health Research Grants	93.242	Rutgers University	4U24MH06845714	199,110	-

The accompanying notes are an integral part of this schedule.

Washington University

Schedule of Expenditures of Federal Awards

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Mental Health Research Grants	93.242	Rutgers University	5U24MH06845713	404,261	-
Mental Health Research Grants	93.242	Scripps Research Institute	5R01MH10269802	205,025	-
Mental Health Research Grants	93.242	Scripps Research Institute	1R01MH10269801A1	454	-
Mental Health Research Grants	93.242	Scripps Research Institute	5R01MH10269803A1	43,382	-
Mental Health Research Grants	93.242	St. Louis University	5R21MH10138902	17,680	-
Mental Health Research Grants	93.242	University of California, Davis	5R01MH09904603	23,957	-
Mental Health Research Grants	93.242	University of California, Davis	4R01MH09904604	7,541	-
Mental Health Research Grants	93.242	University of California, Davis	5R01MH09904602	2,742	-
Mental Health Research Grants	93.242	University of California, Los Angeles	4R01MH10002709	114,350	-
Mental Health Research Grants	93.242	University of California, Los Angeles	5R01MH10002708	230,651	-
Mental Health Research Grants	93.242	University of California, San Diego	1R01MH10734501A1	81,137	-
Mental Health Research Grants	93.242	University of South Carolina	7R01MH10638802	32,117	-
Mental Health Research Grants	93.242	University of South Florida	1D43MH10816901A1	6,592	-
Mental Health Research Grants	93.242	Yale University	5R21MH09997902	38,852	-
Alcohol Research Programs	93.273			980,946	138,891
Alcohol Research Programs	93.273	Research Foundation For The State University of New York	2U10AA00840126	218,575	-
Alcohol Research Programs	93.273	Research Foundation For The State University of New York	5U10AA00840127	856,202	-
Alcohol Research Programs	93.273	Rhode Island Hospital	R01AA021900	4,083	-
Alcohol Research Programs	93.273	St. Louis University	5R21AA02206402	13,743	-
Alcohol Research Programs	93.273	Yale University	5R01AA02354902	65,364	-
Drug Abuse and Addiction Research Programs	93.279			7,045,025	202,979
Drug Abuse and Addiction Research Programs	93.279	Dartmouth University	5R01DA02258208	31,399	-
Drug Abuse and Addiction Research Programs	93.279	RTI International	5R01DA03863202	23,228	-
Drug Abuse and Addiction Research Programs	93.279	RTI International	5R01DA03582502	101,649	-
Drug Abuse and Addiction Research Programs	93.279	St. Louis University	5R01DA03341102	6,234	-
Drug Abuse and Addiction Research Programs	93.279	University of Chicago	5R01DA03697803	14,408	-
Drug Abuse and Addiction Research Programs	93.279	University of Iowa	5R01DA03764802	23,125	-
Drug Abuse and Addiction Research Programs	93.279	University of Iowa	1R01DA03764801A1	4	-
Drug Abuse and Addiction Research Programs	93.279	University of Michigan	5U01DA04112002	44,657	-
Drug Abuse and Addiction Research Programs	93.279	University of Michigan	1U01DA04112001	217,770	-
Drug Abuse and Addiction Research Programs	93.279	Virginia Commonwealth University	5R01DA02142107	96,585	-
Mental Health National Research Service Awards for Research Training	93.282			4,475	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286			2,712,185	145,374
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	Ge Global Research	1R21EB01560801A1	39,997	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	Northwestern University	5R21EB01792802	6,306	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	University of Pittsburgh	5R01EB01913502	33,891	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	Worcester Polytechnic Institute	5R01EB00475908	116	-
Minority Health and Health Disparities Research	93.307			487,075	100,134
Minority Health and Health Disparities Research	93.307	University of Texas Health Science Center At San Antonio	U24MD006941	9,681	-
Trans-NIH Research Support	93.310			4,231,136	107,728
Trans-NIH Research Support	93.310	Children's Hospital of Philadelphia	U01AR057956	6,999	-
Trans-NIH Research Support	93.310	The Broad Institute	3U54DK10257703	20,626	-
Trans-NIH Research Support	93.310	The Broad Institute	U54DK102557	73,764	-
National Center for Advancing Translational Sciences	93.350			11,818,357	483,080
Research Infrastructure Programs	93.351			2,289,907	292,142
Research Infrastructure Programs	93.351	University of Oregon	R24OD018555	34,620	-
Nursing Research	93.361			1,863,750	117,098
Nursing Research	93.361	Brightoutcome Inc.	1R44NR016183-01	16,833	-
Nursing Research	93.361	University of California, San Francisco	5R01NR01522302	19,356	-
National Center for Research Resources	93.389			18	-
Cancer Cause and Prevention Research	93.393			3,269,275	208,754
Cancer Cause and Prevention Research	93.393	Brigham & Women's Hospital	5U24CA11473608	2,007	-
Cancer Cause and Prevention Research	93.393	Cardialen, Inc.	1R43HL10685501	45,884	-
Cancer Cause and Prevention Research	93.393	Children's Hospital of Philadelphia	R01CA105312	10	-
Cancer Cause and Prevention Research	93.393	Emory University	U01CA15428204	14,075	-
Cancer Cause and Prevention Research	93.393	Emory University	5U01CA15428205	80,168	-
Cancer Cause and Prevention Research	93.393	Fred Hutchinson Cancer Research Center	5R01CA17038603	12,248	-

The accompanying notes are an integral part of this schedule.

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Cancer Cause and Prevention Research	93-393	Fred Hutchinson Cancer Research Center	5R01CA17038604	109,181	-
Cancer Cause and Prevention Research	93-393	Health Communication Impact	1R44CA19244201	111,667	-
Cancer Cause and Prevention Research	93-393	Mayo Clinic	1U01CA19556801	44,520	-
Cancer Cause and Prevention Research	93-393	Mayo Clinic	1U01CA19556802	5,796	-
Cancer Cause and Prevention Research	93-393	North Carolina State University		26,430	-
Cancer Cause and Prevention Research	93-393	Ohio State University	5P01CA10073012	459,025	-
Cancer Cause and Prevention Research	93-393	Research Foundation For The State University of New York	1R01CA19735101	15,021	-
Cancer Cause and Prevention Research	93-393	St. Louis University	5R01CA13775007	18,843	-
Cancer Cause and Prevention Research	93-393	St. Louis University	5R03CA17273502	440	-
Cancer Cause and Prevention Research	93-393	University of California, Berkeley	5P01CA09258415	71,490	-
Cancer Cause and Prevention Research	93-393	University of California, San Diego	5R01CA16629303	169,562	-
Cancer Cause and Prevention Research	93-393	University of California, San Francisco	1R01CA18568701A1	16,045	-
Cancer Cause and Prevention Research	93-393	University of Iowa	5R01CA14093305	1,964	-
Cancer Cause and Prevention Research	93-393	University of Iowa	1R01CA19324901A1	33,930	-
Cancer Cause and Prevention Research	93-393	University of North Carolina	5U01CA1528105	202,278	-
Cancer Cause and Prevention Research	93-393	University of North Carolina	5U01CA1528104	28,005	-
Cancer Detection and Diagnosis Research	93-394			9,172,104	2,597,533
Cancer Detection and Diagnosis Research	93-394	Brigham & Women's Hospital	5U24CA11473608	276,394	84,476
Cancer Detection and Diagnosis Research	93-394	Brigham & Women's Hospital	5U24CA11472509	5,606	5,607
Cancer Detection and Diagnosis Research	93-394	Brigham & Women's Hospital	3U24CA11473608	41,940	4,513
Cancer Detection and Diagnosis Research	93-394	Case Western Reserve University	5R21CA17932702	8,799	-
Cancer Detection and Diagnosis Research	93-394	John Hopkins University	5U01CA14020404	45,112	-
Cancer Detection and Diagnosis Research	93-394	John Hopkins University	5U01CA14020405	169,804	-
Cancer Detection and Diagnosis Research	93-394	New York University School of Medicine	5U01CA08640215	4,596	-
Cancer Detection and Diagnosis Research	93-394	Queen's University at Kingston	5R01CA16595804	(11,181)	-
Cancer Detection and Diagnosis Research	93-394	Tomowave Laboratories, Inc.	1R01CA1744601	72,976	-
Cancer Detection and Diagnosis Research	93-394	University of Arkansas Health Sciences	7U01CA18701303	102,417	-
Cancer Detection and Diagnosis Research	93-394	University of Colorado, Denver	5U01CA15771504	31,555	-
Cancer Detection and Diagnosis Research	93-394	University of Illinois	5R01CA02583635	52,497	-
Cancer Treatment Research	93-395			5,597,537	218,351
Cancer Treatment Research	93-395	Altor Bioscience Corporation	1R44CA19581201A1	36,449	-
Cancer Treatment Research	93-395	American College of Radiology	5U24CA18080303IROC	60,153	-
Cancer Treatment Research	93-395	American College of Radiology	5U10CA18082002	11,451	-
Cancer Treatment Research	93-395	American College of Radiology	5U24CA18080302	128,722	-
Cancer Treatment Research	93-395	Brigham & Women's Hospital	2UM1AI06863610	8,059	-
Cancer Treatment Research	93-395	Children's Hospital of Philadelphia	UM1CA097452	12,581	-
Cancer Treatment Research	93-395	Children's Hospital of Philadelphia	5U10CA18088603	78,443	-
Cancer Treatment Research	93-395	Children's Hospital of Philadelphia	5UM1CA09745214	(5)	-
Cancer Treatment Research	93-395	Children's Hospital of Philadelphia	1U10CA18088601	43,792	-
Cancer Treatment Research	93-395	Children's Hospital of Philadelphia	5U10CA18088602	34,754	-
Cancer Treatment Research	93-395	Children's Hospital of Philadelphia	5U10CA18088602S7	8,855	-
Cancer Treatment Research	93-395	Children's Hospital of Philadelphia	3U10CA1808860227	14,802	-
Cancer Treatment Research	93-395	Confluence Life Sciences Inc.	1R43CA17694201	53,297	-
Cancer Treatment Research	93-395	Duke University	5UM1CA18670403	41,106	-
Cancer Treatment Research	93-395	Duke University	5UM1CA18670402	63,787	-
Cancer Treatment Research	93-395	Ecog-Acrin Cancer Research Group	5U10CA18082003	3,343	-
Cancer Treatment Research	93-395	Ecog-Acrin Cancer Research Group	5U10CA18082002	6,708	-
Cancer Treatment Research	93-395	Ecog-Acrin Medical Research Foundation	5U10CA18082002	9,534	-
Cancer Treatment Research	93-395	Ecog-Acrin Medical Research Foundation	5U10CA18082003	12,342	-
Cancer Treatment Research	93-395	Fisher Bioservices	HHSN272201200022C	42,957	-
Cancer Treatment Research	93-395	Fred Hutchinson Cancer Research Center	5U01CA15496706	2,011	-
Cancer Treatment Research	93-395	Icahn School of Medicine Mount Sinai	5P01CA10867109	6,715	-
Cancer Treatment Research	93-395	Massachusetts General Hospital	2U19CA02123935	40,694	-
Cancer Treatment Research	93-395	Mayo Clinic	2U10CA03744727	(371)	-
Cancer Treatment Research	93-395	Medical Guidance Systems	1R41CA19241301	59,462	-
Cancer Treatment Research	93-395	Medical Guidance Systems	1R41CA19600201A1	24,699	-
Cancer Treatment Research	93-395	NRG Oncology Foundation	5U10CA18086802	21,522	-

The accompanying notes are an integral part of this schedule.

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Cancer Treatment Research	93.395	NRG Oncology Foundation	5U10CA18086803	9,604	-
Cancer Treatment Research	93.395	Sloan Kettering Institute	1R01CA18255101	204	-
Cancer Treatment Research	93.395	The Emmes Corporation	5U01CA12194708	21,910	-
Cancer Treatment Research	93.395	University of California, Los Angeles	5U01CA12194709	432	-
Cancer Treatment Research	93.395	University of California, Los Angeles	2UM1CA12194709	45,668	-
Cancer Treatment Research	93.395	University of Minnesota	5P01CA11141209	12,671	-
Cancer Treatment Research	93.395	University of Minnesota	5P01CA11141208	312	-
Cancer Treatment Research	93.395	University of Utah	5R01CA17839703	27,330	-
Cancer Treatment Research	93.395	Virginia Commonwealth University	1R01CA14930505	98,079	-
Cancer Biology Research	93.396			7,180,418	431,836
Cancer Biology Research	93.396	Cleveland Clinic Lerner College of Medicine	5U01CA16088203	(163)	-
Cancer Biology Research	93.396	Dana-Farber Cancer Institute	5R01CA1309880607	70,028	-
Cancer Biology Research	93.396	Dana-Farber Cancer Institute	2R01CA13098806A1	16,143	-
Cancer Biology Research	93.396	Emory University	7U01CA16088204	74,264	-
Cancer Biology Research	93.396	North Carolina State University	5R21CA18648103	51,068	-
Cancer Biology Research	93.396	University of Texas M.D Anderson Cancer Center	5R01EY01958715	6,330	-
Cancer Biology Research	93.396	University of Texas M.D Anderson Cancer Center	5R01CA17262203	29,681	-
Cancer Biology Research	93.396	University of Texas M.D Anderson Cancer Center	5R01CA17262204	1,848	-
Cancer Biology Research	93.396	University of Texas M.D Anderson Cancer Center	5R01CA17262202	(783)	-
Cancer Biology Research	93.396	University of Wisconsin, Madison	1R01CA18729901A1	8,152	-
Cancer Center Support Grants	93.397			10,086,097	207,022
Cancer Center Support Grants	93.397	University of Alabama, Birmingham	5P50CA10195510	53,433	-
Cancer Center Support Grants	93.397	University of California, Los Angeles	5P50CA08630613	(38)	-
Cancer Research Manpower	93.398			4,537,074	-
Cancer Control	93.399			1,846,696	439,398
Cancer Control	93.399	Case Western Reserve University	5U54CA16306004	19,815	-
Cancer Control	93.399	Case Western Reserve University	5U54CA16306005	23,566	-
Cardiovascular Diseases Research	93.837			27,244,055	2,803,389
Cardiovascular Diseases Research	93.837	Brigham & Women's Hospital	5P50HL11234903	9,828	-
Cardiovascular Diseases Research	93.837	Brigham & Women's Hospital	5U01HL10142203	815	-
Cardiovascular Diseases Research	93.837	Brigham & Women's Hospital	5R01HL11771302	9,775	-
Cardiovascular Diseases Research	93.837	Children's Hospital Medical Center	5R24HL10533303	9,230	-
Cardiovascular Diseases Research	93.837	Children's Hospital Medical Center	5R24HL10533305	502	-
Cardiovascular Diseases Research	93.837	Com Affiliation Inc.	5R01HL12807103	52,961	-
Cardiovascular Diseases Research	93.837	Com Affiliation Inc.	1R01HL12807101	203,293	-
Cardiovascular Diseases Research	93.837	Cornell University	5R01HL1114103	63,329	-
Cardiovascular Diseases Research	93.837	Duke University	4U10HL084904010	25,160	-
Cardiovascular Diseases Research	93.837	Duke University	5U10HL08490408	21,855	-
Cardiovascular Diseases Research	93.837	Duke University	U01HL084804	28,985	-
Cardiovascular Diseases Research	93.837	Duke University	4R01HL09823703	(4,818)	-
Cardiovascular Diseases Research	93.837	Duke University	R01HL105448	28,740	-
Cardiovascular Diseases Research	93.837	Emory University	1R34HL12255701A1	680	-
Cardiovascular Diseases Research	93.837	Etiometry	2R44HL11734003A1	63,344	-
Cardiovascular Diseases Research	93.837	Etiometry	5R44HL11734004	20,908	-
Cardiovascular Diseases Research	93.837	George Washington University	7R01HL11439504	102,146	-
Cardiovascular Diseases Research	93.837	George Washington University	7R01HL11541503	124,160	-
Cardiovascular Diseases Research	93.837	Harvard Pilgrim Healthcare	5R01HL11548504	40,824	-
Cardiovascular Diseases Research	93.837	John Hopkins University	3R34HL10875602S1	13,761	-
Cardiovascular Diseases Research	93.837	Massachusetts General Hospital	5U01HL12333603	2,975	-
Cardiovascular Diseases Research	93.837	Massachusetts General Hospital	5R01HL12217703	9,434	-
Cardiovascular Diseases Research	93.837	Medical College of Wisconsin	5U01HL10743705	109,662	-
Cardiovascular Diseases Research	93.837	Miami	7R01HL11459	(156)	-
Cardiovascular Diseases Research	93.837	National Marrow Donor Program	5U10HL10913702	430	-
Cardiovascular Diseases Research	93.837	National Marrow Donor Program	5U01HL10913702	32,164	-
Cardiovascular Diseases Research	93.837	New York University School of Medicine	5R01HL04509525A1	3,496	-
Cardiovascular Diseases Research	93.837	Pennsylvania State University	5U10HL09811507	686,473	-
Cardiovascular Diseases Research	93.837	Pennsylvania State University	5U10HL09811506	117,161	-

The accompanying notes are an integral part of this schedule.

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Schedule of Expenditures of Federal Awards

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Cardiovascular Diseases Research	93.837	University of Alabama	5U01HL12033802	862	-
Cardiovascular Diseases Research	93.837	University of Alabama	5R01HL05567318	40,719	-
Cardiovascular Diseases Research	93.837	University of Alabama	5R01HL05567317A1	(178)	-
Cardiovascular Diseases Research	93.837	University of Alabama	5U01HL12033802	24,142	-
Cardiovascular Diseases Research	93.837	University of Colorado	5R34HL10936902	13,105	-
Cardiovascular Diseases Research	93.837	University of Kentucky	5R01HL05567318	56,212	-
Cardiovascular Diseases Research	93.837	University of Kentucky	7R01HL09135706	22,824	-
Cardiovascular Diseases Research	93.837	University of Kentucky	5R01HL05567319	24,479	-
Cardiovascular Diseases Research	93.837	University of Michigan	4U01HL09434506	20,822	-
Cardiovascular Diseases Research	93.837	University of North Carolina, Chapel Hill	5U54HL09645812	53,919	-
Cardiovascular Diseases Research	93.837	University of North Carolina, Chapel Hill	2U54HL09645811	5,206	-
Cardiovascular Diseases Research	93.837	University of Virginia	5R01HL12100802	7,348	-
Cardiovascular Diseases Research	93.837	Vanderbilt University	5U19HL06596214	161,854	-
Cardiovascular Diseases Research	93.837	Wayne State University	5R01HL1145905	3,333	-
Cardiovascular Diseases Research	93.837	Wayne State University	7R01HL10909004	47,199	-
Lung Diseases Research	93.838			7,461,624	436,871
Lung Diseases Research	93.838	Boston Children's Hospital	5U01HL10768103	720	-
Lung Diseases Research	93.838	Brigham & Women's Hospital	5U01HL10222503	(4,470)	-
Lung Diseases Research	93.838	Case Western Reserve University	5P01HL10187106	29,654	-
Lung Diseases Research	93.838	Indiana University	5R01HL11621103	262,409	-
Lung Diseases Research	93.838	Palo Alto Medical Foundation	5R01HL11084502	38,846	-
Lung Diseases Research	93.838	Palo Alto Medical Foundation	5R01HL11084503	2,984	-
Lung Diseases Research	93.838	Pennsylvania State University	5U10HL10908606	204,727	-
Lung Diseases Research	93.838	Seattle Children's Hospital	1U01HL11462301A1	3,543	-
Lung Diseases Research	93.838	University of Colorado	7R01HL12338502	2,014	-
Lung Diseases Research	93.838	University of Pennsylvania	5U01HL10179405	10,186	-
Lung Diseases Research	93.838	University of Pennsylvania	U01HL101794	141,396	-
Lung Diseases Research	93.838	University of Pittsburgh	1R01HL12512801A1	8,165	-
Lung Diseases Research	93.838	University of Wisconsin, Madison	5U10HL10916803	45,330	-
Lung Diseases Research	93.838	Vanderbilt University	5R01HL07993708	21,377	-
Lung Diseases Research	93.838	Xemed LLC	5R44HL11239704	135,196	-
Blood Diseases and Resources Research	93.839			5,491,196	1,061,473
Blood Diseases and Resources Research	93.839	Biomedica Management Corporation	5R44HL08629305	44,094	-
Blood Diseases and Resources Research	93.839	Children's Hospital Medical Center	5R01HL10374506	9,410	-
Blood Diseases and Resources Research	93.839	Children's Hospital of Philadelphia	U10HL069294	5,610	-
Blood Diseases and Resources Research	93.839	Dana-Farber Cancer Institute	5P50HL11079003	623	-
Blood Diseases and Resources Research	93.839	Dana-Farber Cancer Institute	5P50HL11079002	(5,994)	-
Blood Diseases and Resources Research	93.839	Dana-Farber Cancer Institute	5P50HL11079004	89,724	-
Blood Diseases and Resources Research	93.839	Evas Therapeutics Llc	5R44HL09384803	956	-
Blood Diseases and Resources Research	93.839	Weill Cornell Medicine	5R01A07495308	108,178	-
Blood Diseases and Resources Research	93.839	Weill Cornell Medicine	7R01CA1775903	163,661	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846			10,754,035	483,133
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Beth Israel Deaconess Medical Center	5R01AR06085004	1,808	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Brigham & Women's Hospital	1U34AR06742601	2,633	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Brigham & Women's Hospital	5R01AR0555709	21,533	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Children's Hospital of Chicago	5R21AR06684602	12,733	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Children's Research Institute	1R01AR061875	1,750	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Children's Research Institute	1P50AR06083601	2,326	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Children's Research Institute	1R01AR062380	45	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Confluence Life Sciences Inc.	1R43AR06581701A1	5,488	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Forsyth Institute	5R01AR06479302	46,817	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Georgia Institute of Technology	5R01AR06082005	38,199	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Georgia Institute of Technology	5R01AR06082004	3,670	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Northwestern University	1UH2AR06768701	11,621	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	St. Louis University	5R01AR06482102	23,772	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Rochester	5P50AR05404108	125,301	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Rochester	5P50AR05404109	250,863	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Vanderbilt University	5R01AR05368409	7,391	-

The accompanying notes are an integral part of this schedule.

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Schedule of Expenditures of Federal Awards

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847			34,599,354	2,230,590
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Boston University	1R01DK10150101A1	11,463	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Brigham & Women's Hospital	5U01DK104308	66,373	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	5U01DK09415704	(2,296)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	5DP3DK10443802	16,864	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	1DP3DK10107401	5,115	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	1DP3DK10443801	3,875	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	5U01DK09415705	159,091	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Children's Mercy Hospital	U01DK066143	1,197	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	2U01DK06123012	209,838	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	5U01DK09824603	21,462	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	5U01DK09824602	(38)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	5U01DK06123011	77,121	55,011
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	5U01DK09824604	290,777	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Georgia Regents University	5U24DK07616909	95,872	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Henry M Jackson Foundation For The Advancement of Military Medicine	1R01DK10411501	12,047	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Icahn School of Medicine Mount Sinai	5U01DK06242916	56,188	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Icahn School of Medicine Mount Sinai	5U01DK06242915	48,192	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Joslin Diabetes Center, Inc.	1UC4DK10110801	395,834	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Massachusetts General Hospital	5R01DK10135403	345,764	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Massachusetts General Hospital	5R01DK10135402	13,113	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Mcgill University	R01DK092977	75,174	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Medical College of Wisconsin	5R01DK08883103	71,315	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Medical College of Wisconsin	5R01DK08883102	26,585	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Medical University of South Carolina	1U01DK10483301	20,817	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Medical University of South Carolina	5U01DK10483302	10,200	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Nationwide Children's Hospital	5UM1DK10086602	16,032	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Nationwide Children's Hospital	5UM1DK10086604	2,458	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Nationwide Children's Institute	3UM1DK10086603A1	11,915	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	New York University School of Medicine	2R01HL04509525A1	22,706	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	St. Louis University	2U01DK06171814	13,229	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of California, San Diego	1UC4DK10420201	157,413	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of Michigan	5U54DK08391207	51,436	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of Michigan	1R01DK10662101	27,528	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of Pennsylvania	2R01DK05448118A1	62,171	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of Pittsburgh	5R01DK09016603	4,745	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of Pittsburgh	5U01DK07214610	39,189	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of Pittsburgh	5U01HD04244414	(88)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of Pittsburgh	5U01HD04244415	185,605	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	University of Southern California	1U01DK10735001	12,109	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Vanderbilt University	5R01DK08506405	(216)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Vanderbilt University	5R01DK09865902	(216)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Vanderbilt University	5R01DK09174805	17,985	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Vanderbilt University	5R01DK09174804	8,166	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Vasculox, Inc.	5R44DK09207803	17,701	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Virginia Commonwealth University	5R01DK09481803	8,232	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Virginia Commonwealth University	5R01DK09481802	92,940	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853			33,360,754	1,800,796
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Bio Rankings, LLC	1R44AG054405001	3,506	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Boston University	5U01NS08665902	142,548	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Boston University	1U01NS09333401	23,569	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Boston University	5U01NS08665903	131,770	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Brain Plasticity Institute	5R44NS07178004	115,724	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Cincinnati Children's Hospital Medical Center	R01NS06693205	2,796	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Cincinnati Children's Hospital Medical Center	5U01NS04591109	(6,529)	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Emory University	2U54NS06570106	36,073	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Emory University	9U54TR00145607	169,555	-

The accompanying notes are an integral part of this schedule.

Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	John Hopkins University	5U01NS08082402	(8,926)	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	John Hopkins University	5U01NS08082403	45,511	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Massachusetts General Hospital	1U01NS09025901A1	381	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Massachusetts General Hospital	5U01NS07916303	5,915	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Massachusetts General Hospital	1U01NS07916301	103,537	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Northwestern University	5U01NS08081803	12,504	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Pulse Therapeutics Inc.	4R44NS080908202	25,402	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Pulse Therapeutics Inc.	1R44NS080908201A1	970	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Rutgers University	1U24NS09591401	100,341	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Skulpt Inc.	2R44NS07318803	69,763	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Skulpt Inc.	5R44NS07318804	95,017	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Alabama, Birmingham	5P20NS08019903	18,549	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of California, Los Angeles	1R01NS08876601A1	7,484	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of California, Los Angeles	5R01NS07387105	15,657	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of California, San Francisco	5R01NS07146305	162	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Cincinnati	5U01NS08687202	1,342	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Cincinnati	4U01NS06283503	8,873	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Michigan	4R01NS07794605	23,699	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Pittsburgh	1U01NS08104101A1	6,251	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Southern California	5R01NS03446718	156,317	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Virginia	5U01NS08803402	14,501	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Virginia	1U01NS08803401	9,916	-
Allergy and Infectious Diseases Research	93.855			38,269,581	7,947,745
Allergy and Infectious Diseases Research	93.855	Arizona State University	5R33AI10132904	205,586	-
Allergy and Infectious Diseases Research	93.855	Arizona State University	5R33AI10132905	20,169	-
Allergy and Infectious Diseases Research	93.855	Arizona State University	4R33AI10132903	8,357	-
Allergy and Infectious Diseases Research	93.855	Baylor College of Medicine	5R01A109871505	86,813	-
Allergy and Infectious Diseases Research	93.855	Baylor College of Medicine	5U01A109505050	70,297	-
Allergy and Infectious Diseases Research	93.855	Baylor College of Medicine	5U01A109505003	32,152	-
Allergy and Infectious Diseases Research	93.855	Brigham & Women's Hospital	5UM1A106863609	224,898	-
Allergy and Infectious Diseases Research	93.855	Brigham & Women's Hospital	5UM1A106863610	323,747	-
Allergy and Infectious Diseases Research	93.855	Case Western Reserve University	1R01A12520201	1,833	-
Allergy and Infectious Diseases Research	93.855	Children's Hospital Boston	5R01A108401104	7,452	-
Allergy and Infectious Diseases Research	93.855	Cincinnati Children's Hospital Medical Center	5R01A11262602	67,165	-
Allergy and Infectious Diseases Research	93.855	Emory University	1R56A110338201A1	13,910	-
Allergy and Infectious Diseases Research	93.855	Emory University	1R21A111745901A1	9,741	-
Allergy and Infectious Diseases Research	93.855	Fimbrion	5R43A110611202	157,112	-
Allergy and Infectious Diseases Research	93.855	Fred Hutchinson Cancer Research Center	5U54CA16343805	3,155	-
Allergy and Infectious Diseases Research	93.855	Fred Hutchinson Cancer Research Center	5U54A108302805	47	-
Allergy and Infectious Diseases Research	93.855	George Washington University	1R01A12343301	39,416	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	7U19A110944504	166,611	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	7U19A110966404	95,918	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	5R01A111465402	48,998	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	5U19A11099445	46,104	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	1R01A111465401A1	145,911	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	5U19A110966402	137,720	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	2U01A106359411	26,397	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	5U01A106359412	68,749	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	5U19A110994502	267,856	-
Allergy and Infectious Diseases Research	93.855	John Hopkins University	5U01A10965702	8,565	-
Allergy and Infectious Diseases Research	93.855	John Hopkins University	5R03A111716902	2,479	-
Allergy and Infectious Diseases Research	93.855	MacroGenics Inc.	5R01A108958804	30,620	-
Allergy and Infectious Diseases Research	93.855	Massachusetts General Hospital	1R01A11191803	263,287	-
Allergy and Infectious Diseases Research	93.855	Northern Illinois University	1R15I11365301	21,729	-
Allergy and Infectious Diseases Research	93.855	Ohio State University	2R01A106252010A1	13,559	-
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	5U01A109577603	6,252	-
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	5R01A109872304	144,543	-

The accompanying notes are an integral part of this schedule.

Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	John Hopkins University	5U01NS08082402	(8,926)	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	John Hopkins University	5U01NS08082403	45,511	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Massachusetts General Hospital	1U01NS09025901A1	381	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Massachusetts General Hospital	5U01NS07916303	5,915	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Massachusetts General Hospital	1U01NS07916301	103,537	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Northwestern University	5U01NS08081803	12,504	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Pulse Therapeutics Inc.	4R44NS080908202	25,402	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Pulse Therapeutics Inc.	1R44NS080908201A1	970	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Rutgers University	1U24NS09591401	100,341	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Skulpt Inc.	2R44NS07318803	69,763	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	Skulpt Inc.	5R44NS07318804	95,017	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Alabama, Birmingham	5P20NS08019903	18,549	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of California, Los Angeles	1R01NS08876601A1	7,484	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of California, Los Angeles	5R01NS07387105	15,657	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of California, San Francisco	5R01NS07146305	162	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Cincinnati	5U01NS08687202	1,342	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Cincinnati	4U01NS06283503	8,873	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Michigan	4R01NS07794605	23,699	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Pittsburgh	1U01NS08104101A1	6,251	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Southern California	5R01NS03446718	156,317	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Virginia	5U01NS08803402	14,501	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	University of Virginia	1U01NS08803401	9,916	-
Allergy and Infectious Diseases Research	93.855			38,269,581	7,947,745
Allergy and Infectious Diseases Research	93.855	Arizona State University	5R33AI10132904	205,586	-
Allergy and Infectious Diseases Research	93.855	Arizona State University	5R33AI10132905	20,169	-
Allergy and Infectious Diseases Research	93.855	Arizona State University	4R33AI10132903	8,357	-
Allergy and Infectious Diseases Research	93.855	Baylor College of Medicine	5R01A109871505	86,813	-
Allergy and Infectious Diseases Research	93.855	Baylor College of Medicine	5U01A109505050	70,297	-
Allergy and Infectious Diseases Research	93.855	Baylor College of Medicine	5U01A109505003	32,152	-
Allergy and Infectious Diseases Research	93.855	Brigham & Women's Hospital	5UM1A106863609	224,898	-
Allergy and Infectious Diseases Research	93.855	Brigham & Women's Hospital	5UM1A106863610	323,747	-
Allergy and Infectious Diseases Research	93.855	Case Western Reserve University	1R01A12520201	1,833	-
Allergy and Infectious Diseases Research	93.855	Children's Hospital Boston	5R01A108401104	7,452	-
Allergy and Infectious Diseases Research	93.855	Cincinnati Children's Hospital Medical Center	5R01A11262602	67,165	-
Allergy and Infectious Diseases Research	93.855	Emory University	1R56A110338201A1	13,910	-
Allergy and Infectious Diseases Research	93.855	Emory University	1R21A111745901A1	9,741	-
Allergy and Infectious Diseases Research	93.855	Fimbrion	5R43A110611202	157,112	-
Allergy and Infectious Diseases Research	93.855	Fred Hutchinson Cancer Research Center	5U54CA16343805	3,155	-
Allergy and Infectious Diseases Research	93.855	Fred Hutchinson Cancer Research Center	5U54A108302805	47	-
Allergy and Infectious Diseases Research	93.855	George Washington University	1R01A12343301	39,416	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	7U19A110944504	166,611	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	7U19A110966404	95,918	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	5R01A111465402	48,998	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	5U19A11099445	46,104	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	1R01A111465401A1	145,911	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	5U19A110966402	137,720	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	2U01A106359411	26,397	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	5U01A106359412	68,749	-
Allergy and Infectious Diseases Research	93.855	Icahn School of Medicine Mount Sinai	5U19A110994502	267,856	-
Allergy and Infectious Diseases Research	93.855	John Hopkins University	5U01A10965702	8,565	-
Allergy and Infectious Diseases Research	93.855	John Hopkins University	5R03A111716902	2,479	-
Allergy and Infectious Diseases Research	93.855	MacroGenics Inc.	5R01A108958804	30,620	-
Allergy and Infectious Diseases Research	93.855	Massachusetts General Hospital	1R01A11191803	263,287	-
Allergy and Infectious Diseases Research	93.855	Northern Illinois University	1R15I11365301	21,729	-
Allergy and Infectious Diseases Research	93.855	Ohio State University	2R01A106252010A1	13,559	-
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	5U01A109577603	6,252	-
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	5R01A109872304	144,543	-

The accompanying notes are an integral part of this schedule.

Washington University Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	5U01A109577605	124,934	-
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	5U01A109377604	59,048	-
Allergy and Infectious Diseases Research	93.855	Salk Institute	5R01A10140004	99,373	-
Allergy and Infectious Diseases Research	93.855	Salk Institute	5R01A10140003	17,090	-
Allergy and Infectious Diseases Research	93.855	The Benaroya Research Institute	5UM1A1109565	19,452	-
Allergy and Infectious Diseases Research	93.855	University of Alabama	1U19A10968001	(219)	-
Allergy and Infectious Diseases Research	93.855	University of Alabama	5U19A10968003	81,302	-
Allergy and Infectious Diseases Research	93.855	University of Alabama	5U19A10968002	191,043	-
Allergy and Infectious Diseases Research	93.855	University of Arizona	1R01HL3004501	9,764	-
Allergy and Infectious Diseases Research	93.855	University of California, Berkeley	1P01A110669501A1	105,432	-
Allergy and Infectious Diseases Research	93.855	University of California, San Francisco	5U01A110434702	1,910	-
Allergy and Infectious Diseases Research	93.855	University of California, San Francisco	5U01A110080703	1,346	-
Allergy and Infectious Diseases Research	93.855	University of California, San Francisco	5U01A110080704	52,481	-
Allergy and Infectious Diseases Research	93.855	University of Montana	1R21A112049001	79,539	-
Allergy and Infectious Diseases Research	93.855	University of Montana	5R21A112049002	5,060	-
Allergy and Infectious Diseases Research	93.855	University of North Carolina, Chapel Hill	1U19A1109965	93,575	-
Allergy and Infectious Diseases Research	93.855	University of North Carolina, Chapel Hill	5U19A110996502	8,323	-
Allergy and Infectious Diseases Research	93.855	University of Pittsburgh		10	-
Allergy and Infectious Diseases Research	93.855	University of South Florida	5R01A106447809	102,984	-
Allergy and Infectious Diseases Research	93.855	University of Texas Health Science Center At San Antonio	5U19A107041210	60,151	-
Allergy and Infectious Diseases Research	93.855	University of Texas Health Science Center At San Antonio	5U19A107041209	1,181	-
Allergy and Infectious Diseases Research	93.855	University of Washington	2U19A108301906	(351)	-
Allergy and Infectious Diseases Research	93.855	University of Washington	5R01A110400203	304,066	-
Allergy and Infectious Diseases Research	93.855	University of Washington	5U19A108301908	78,920	-
Allergy and Infectious Diseases Research	93.855	University of Washington	5U19A108301907	383,933	-
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	5U19A110672202	(622)	-
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	5UM1A11427102	321,488	-
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	1UM1A11427101	48,150	-
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	5U19A110677203	526,556	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University	4U01A110433604	15,724	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University	5R01A11481602	199,608	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University	5UM1A106943909	185,617	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University	5UM1A106943910	212,635	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University	5U01A110433603	55,362	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University	1R01A11481601A1	214,841	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University Medical Center	6R01A11481603	10	-
Microbiology and Infectious Diseases Research	93.856			63,816	5,609
Biomedical Research and Research Training	93.859			24,324,104	895,129
Biomedical Research and Research Training	93.859	California Institute of Technology	R01GM084211	150,707	-
Biomedical Research and Research Training	93.859	North Carolina State University	5R01GM11323903	3,564	-
Biomedical Research and Research Training	93.859	Opencell Technologies	9R44GM11239804	45,524	-
Biomedical Research and Research Training	93.859	Stanford University	1R01GM10607803	176,871	-
Biomedical Research and Research Training	93.859	University of Michigan	P50GM103297	107,203	-
Biomedical Research and Research Training	93.859	University of Pittsburgh	2R01GM10038704	2,915	-
Biomedical Research and Research Training	93.859	University of Pittsburgh	1R34GM10765001A1	8,278	-
Biomedical Research and Research Training	93.859	University of Texas, Austin	1R01GM11423701	43,629	-
Biomedical Research and Research Training	93.859	University of Utah	5R21GM10789403	20,239	-
Biomedical Research and Research Training	93.859	University of Wisconsin, Madison	7R01GM09583905	55,726	-
Child Health and Human Development Extramural Research	93.865			15,204,593	5,139,848
Child Health and Human Development Extramural Research	93.865	Boston University	5R24HD06568805	25,102	-
Child Health and Human Development Extramural Research	93.865	Cincinnati Children's Hospital Medical Center	5K12HD00085031	182,899	-
Child Health and Human Development Extramural Research	93.865	Cincinnati Children's Hospital Medical Center	5K12HD00085030	7,788	-
Child Health and Human Development Extramural Research	93.865	Inquisit Health, Inc.	4R44HD08183002	18,444	-
Child Health and Human Development Extramural Research	93.865	Nationwide Children's Hospital	7R21HD07610803	8,166	-
Child Health and Human Development Extramural Research	93.865	Nemours Children's Clinic	5R01HD0784632	33,363	-
Child Health and Human Development Extramural Research	93.865	Nemours Children's Clinic	5R01HD07846303	152,974	-
Child Health and Human Development Extramural Research	93.865	Research Foundation For The State University of New York	5R01HD08029202	23,951	-

The accompanying notes are an integral part of this schedule.

Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Child Health and Human Development Extramural Research	93.865	University of California, Davis	U01HDO62417	(4,848)	-
Child Health and Human Development Extramural Research	93.865	University of North Carolina, Chapel Hill	5R01HD05574110	33,824	-
Child Health and Human Development Extramural Research	93.865	University of North Carolina, Chapel Hill	5R01HD05574108	7,448	-
Child Health and Human Development Extramural Research	93.865	University of North Carolina, Chapel Hill	5R01HD05574109	445,950	-
Child Health and Human Development Extramural Research	93.865	University of Oklahoma	5R01HD07457904	10,246	-
Child Health and Human Development Extramural Research	93.865	University of Pennsylvania	5T32HD04013512	(665)	-
Child Health and Human Development Extramural Research	93.865	University of Pennsylvania	5T32HD04013515	9,096	-
Child Health and Human Development Extramural Research	93.865	University of Pennsylvania	5T32HD04013514	51,880	-
Child Health and Human Development Extramural Research	93.865	University of Pittsburgh	5K12HD00109720	31,289	-
Child Health and Human Development Extramural Research	93.865	University of Pittsburgh	5K12HD00109719	75,608	-
Child Health and Human Development Extramural Research	93.865	University of Utah	5K12HD04743913	117,749	-
Child Health and Human Development Extramural Research	93.865	University of Utah	5K12HD04734912	(2,142)	-
Child Health and Human Development Extramural Research	93.865	University of Utah	2U01HD04993411	1,092	-
Child Health and Human Development Extramural Research	93.865	University of Wisconsin, Madison	1R01HD08300101A1	58,941	-
Child Health and Human Development Extramural Research	93.865	Wayne State University	5R01HD08523302	7,624	-
Child Health and Human Development Extramural Research	93.865	Zietchick Research Institute	1R41HD07920101A1	15,584	-
Aging Research	93.866			28,021,646	3,433,156
Aging Research	93.866	Beckman Research Institute of The City of Hope	5R01AG03703705	5,613	-
Aging Research	93.866	Brigham & Women's Hospital	U01AG051421	4,970	-
Aging Research	93.866	Columbia University	5R01AG04179704	17,875	-
Aging Research	93.866	Columbia University	5R01AG04179705	5,890	-
Aging Research	93.866	Mayo Clinic	5U01AG04539002	151,160	-
Aging Research	93.866	Mayo Clinic	5U01AG04539003	8,602	-
Aging Research	93.866	Northern California Institute For Research & Education	5U01AG02490409	24,084	-
Aging Research	93.866	Northern California Institute For Research & Education	5U01AG02490410	113,515	-
Aging Research	93.866	Northwestern University	1R01AG04741601A1	9,689	-
Aging Research	93.866	Sanford Burnham Medical Institute	5P01AG03356105	188,761	-
Aging Research	93.866	St. Louis University	7K01AG03130106	3,214	-
Aging Research	93.866	St. Louis University	1R56AG04950301A1	61,511	-
Aging Research	93.866	University of California, San Diego	5U01AG01048324	10,221	-
Aging Research	93.866	University of California, San Diego	5U19AG01048324	56,912	-
Aging Research	93.866	University of California, San Diego	5U01AG01048325	14,557	-
Aging Research	93.866	University of California, San Diego	7RF1AG04184502	5,875	-
Aging Research	93.866	University of California, San Francisco	5R01AG04561103	27,072	-
Aging Research	93.866	University of Kentucky	5R01AG03865104	10,436	-
Aging Research	93.866	University of Kentucky	5R01AG03865105	62,492	-
Aging Research	93.866	University of Maryland	5R01AG03500904	4,398	-
Aging Research	93.866	University of Nebraska Medical Center	5R01AG03712004	15,348	-
Aging Research	93.866	University of Nebraska Medical Center	5R01AG03712003	14,180	-
Aging Research	93.866	University of Nebraska Medical Center	4R01AG03712004	1,216	-
Aging Research	93.866	University of Pennsylvania	5R01AG04150204	152	-
Aging Research	93.866	University of Pennsylvania	5R01AG03849004	44,541	-
Aging Research	93.866	University of Pennsylvania	5R01AG04150205	136,864	-
Aging Research	93.866	University of Southern California	RF1AG041845	10,652	-
Aging Research	93.866	University of Southern California	5U01AG02490410	14,012	-
Aging Research	93.866	University of Texas Southwestern Medical Center	1R01AG0497401	9,332	-
Aging Research	93.866	University of Texas Southwestern Medical Center	5R01AG04867802	164,216	-
Aging Research	93.866	University of Washington	U01AG016976	26,663	-
Aging Research	93.866	University of Washington	2U01AG01697616	20,676	-
Vision Research	93.867			12,128,913	1,267,647
Vision Research	93.867	Baylor College of Medicine	Ro1EY017866	56,906	-
Vision Research	93.867	Case Western Reserve University	5U01EY02545102	15,481	-
Vision Research	93.867	Case Western Reserve University	5R24EY0212605	37,710	-
Vision Research	93.867	Case Western Reserve University	1U01EY02545101	72,000	-
Vision Research	93.867	Eyenuk LLC	1R43EY02484801	23,929	-
Vision Research	93.867	John Hopkins University	5U10EY01466009	41,811	-
Vision Research	93.867	John Hopkins University	5R01EY01701509	87,242	-

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Washington University

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Vision Research	93,867	John Hopkins University	3U01EY02452701S1	5,323	-
Vision Research	93,867	University of Iowa	5R01EY02318703	22,970	-
Medical Library Assistance	93,879			60,716	-
National Cancer Institute (NCI)	93			260,139	207,410
National Cancer Institute (NCI)	93	Akrivis Technologies, LLC	HHSN261201500054C	2,880	-
National Cancer Institute (NCI)	93	American College of Radiology	ACRIN6682	93	-
National Cancer Institute (NCI)	93	American College of Radiology	ACRIN6685	112	-
National Cancer Institute (NCI)	93	American College of Radiology	ACRIN6690	2,303	-
National Cancer Institute (NCI)	93	American College of Radiology	ACRIN6697	824	-
National Cancer Institute (NCI)	93	American College of Radiology	ACRIN7151	8,670	-
National Cancer Institute (NCI)	93	American College of Surgeons Oncology Group	Z1031	(17,795)	-
National Cancer Institute (NCI)	93	American College of Surgeons Oncology Group	Z1041	(61,797)	-
National Cancer Institute (NCI)	93	Brigham & Women's Hospital	TMP4802	253,926	-
National Cancer Institute (NCI)	93	Emmes	AMC045	(13)	-
National Cancer Institute (NCI)	93	Emmes	AMC075	500	-
National Cancer Institute (NCI)	93	Emory University	HHSN26120080001E	5,561	-
National Cancer Institute (NCI)	93	Leidos Biomedical Research, Inc.	HHSN261200800001E	661,230	28,212
National Cancer Institute (NCI)	93	Massachusetts General Hospital	5U19CA02123936	84,701	-
National Cancer Institute (NCI)	93	Mayo Clinic	HHSN261201100099C	61,984	-
National Cancer Institute (NCI)	93	Queen's University at Kingston	TMP2763	1,259	-
National Cancer Institute (NCI)	93	Saic Frederick	HHSN261200800001E	1,890	-
National Cancer Institute (NCI)	93	Saic Frederick	HHSN261200800001E	27,390	-
National Cancer Institute (NCI)	93	University of South Alabama	R01CA164940	3,000	-
National Cancer Institute (NCI)	93	Westat	HHSN261201100008C	13,504	-
National Cancer Institute (NCI)	93	Westat	HHSN261201600007I	3,697	-
National Eye Institute (NEI)	93	Jaeb Center for Health Research Inc	ATS15	389	-
National Eye Institute (NEI)	93	Jaeb Center for Health Research Inc	ATS16	96	-
National Eye Institute (NEI)	93	Johns Hopkins University	TMP3410	30	-
National Eye Institute (NEI)	93	St. Luke's NEI	NORDIC01	7	-
National Heart, Lung and Blood Institute (NHLBI)	93			957,780	260,191
National Heart, Lung and Blood Institute (NHLBI)	93	Duke University	scd-heft	583	-
National Heart, Lung and Blood Institute (NHLBI)	93	National Marrow Donor Program	RDSafe	1,524	-
National Heart, Lung and Blood Institute (NHLBI)	93	New England Research Institute	U01HL072268	(14,863)	-
National Heart, Lung and Blood Institute (NHLBI)	93	Ocean Nanotech, LLC	HHSN268201400042C	214,045	-
National Heart, Lung and Blood Institute (NHLBI)	93	Radiological Society of North America	HHSN268201200078C	190,386	-
National Heart, Lung and Blood Institute (NHLBI)	93	University of Michigan	HHSN268201100026C	10,550	-
National Institute of Allergy and Infectious Diseases (NIAID)	93			2,238,181	431,949
National Institute of Allergy and Infectious Diseases (NIAID)	93	Duke University	HHSN272201100025C	723	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	Emory University	HHSN272201200031C	115,157	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	Integral Molecular	HHSN272201400058C	455	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	Northwestern University	HHSN272201200026C	163,184	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	Social Scientific Systems	HHSN2722013000141	74,961	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Alabama, Birmingham	HHSN272201100034C	55,970	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Alabama, Birmingham	HHSN272201100035C	30,476	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Alabama, Birmingham	HHSN272201100036C	16,663	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Alabama, Birmingham	HHSN272201100037C	5,566	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Alabama, Birmingham	HHSN272201100038C	28,095	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Arizona	HHSN27220110017C	237,044	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of California, San Francisco	HHSN272200700031C	39,953	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Florida	HHSN272201000043C	(1,828)	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Rochester	HHSN272201200005C	40,271	-
National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)	93	John Hopkins University	1R01AR06406601	231	-
National Institute of Child Health and Human Development (NICHD)	93	Jaeb Center for Health Research Inc	U01HD41890-6	1,268	-
National Institute of Child Health and Human Development (NICHD)	93	University of North Carolina, Chapel Hill	5R01HD05985405	49,376	-
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	93	Children's Mercy Hospital	5U01DK06614302	11,001	-
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	93	George Washington University	TRIALNET	9,983	-
National Institute of Neurological Disorders and Stroke (NINDS)	93	Massachusetts General Hospital	2CARE	8,468	-

The accompanying notes are an integral part of this schedule.

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
National Institute of Neurological Disorders and Stroke (NINDS)	93	University of California, San Francisco	TMP4509	7,460	-
National Institute of Neurological Disorders and Stroke (NINDS)	93	Yale University	5R01NS04487602S06113-IRIS	79,091	-
National Institute on Aging (NIA)	93	University of California, San Diego	ADC039	98,981	-
National Institute on Drug Abuse (NIDA)	93	American Academy of Child And Adolescent Psychiatry	K12DA000357	(326)	-
National Institute on Drug Abuse (NIDA)	93	Rutgers University	HHSN271201400020C	265,342	-
National Institute on Drug Abuse (NIDA)	93	University of California, San Diego	HHSN271201000036C	35,079	-
National Institute of General Medical Sciences (NIGMS)	93	Lucigen Corporation	1R43GM10655501A1	18,516	-
National Institutes of Health (NIH)	93	Adaptimmune Limited	TMP4637	29,710	-
National Institutes of Health (NIH)	93	American College of Radiology	ACRIN6664	20	-
National Institutes of Health (NIH)	93	American College of Radiology	ACRIN6688	6,567	-
National Institutes of Health (NIH)	93	Brigham & Women's Hospital	HHSNN26100800001E	201,246	-
National Institutes of Health (NIH)	93	Case Western Reserve University	CTN0201	821	-
National Institutes of Health (NIH)	93	Case Western Reserve University	CTN0801	759	-
National Institutes of Health (NIH)	93	Case Western Reserve University	CTN0802	14	-
National Institutes of Health (NIH)	93	Case Western Reserve University	CTN0803	143	-
National Institutes of Health (NIH)	93	Cellerant Therapeutics	100201000051C	17,111	-
National Institutes of Health (NIH)	93	Childrens Hospital Los Angeles	TMP3199	1,345	-
National Institutes of Health (NIH)	93	Children's Hospital Research Foundation	TMP3207	8,421	-
National Institutes of Health (NIH)	93	Cincinnati Children's Hospital	20101353AS	850	-
National Institutes of Health (NIH)	93	Cornell University	QE3	3,063	-
National Institutes of Health (NIH)	93	Ecog-Acrin Cancer Research Group		78,175	-
National Institutes of Health (NIH)	93	Healthcore, Inc.	2.00201E+11	107,350	-
National Institutes of Health (NIH)	93	Healthcore, Inc.	2.00201E+14	200,874	-
National Institutes of Health (NIH)	93	Jaeb Center for Health Research Inc	HTS1	2,144	-
National Institutes of Health (NIH)	93	Massachusetts General Hospital	CREST-E	5,512	-
National Institutes of Health (NIH)	93	Massachusetts General Hospital	220778	84,483	-
National Institutes of Health (NIH)	93	Massachusetts General Hospital	217756	2,150	-
National Institutes of Health (NIH)	93	Mathmatica	HHSP233201500035I/HHSP233	48,055	-
National Institutes of Health (NIH)	93	National Childhood Cancer Foundation	PBMTCO601	5,511	-
National Institutes of Health (NIH)	93	NRG Oncology Foundation	LPMO011	166,397	76,310
National Institutes of Health (NIH)	93	University Of Alabama, Birmingham		52,306	-
National Institutes of Health (NIH)	93	University of British Columbia	SPS3	4,066	-
National Institutes of Health (NIH)	93	University of California, San Francisco	TMP3689	159	-
National Institutes of Health (NIH)	93	University of Iowa	4000508191	15,378	-
National Institutes of Health (NIH)	93	University of Texas Southwestern Medical Center	tmp1637	1,937	-
National Institutes of Health (NIH)	93	Vanderbilt University		15,609	-
National Library of Medicine	93	University Of Utah	No1LM10055	73,262	-
Office of the Secretary					
Research on Research Integrity	93.085			240,263	17,781
Public Health Services					
Geriatric Academic Career Awards	93.250			13,949	-
Digestive Diseases and Nutrition Research	93.848			282,409	-
Digestive Diseases and Nutrition Research	93.848	St. Louis University	5U01DK08287107	17,709	-
Digestive Diseases and Nutrition Research	93.848	St. Louis University	5U01DK08287109	9,391	-
Digestive Diseases and Nutrition Research	93.848	St. Louis University	2U01DK08287108	105,901	-
Health Care and Other Facilities	93.887	Ocean Nanotech, LLC	5R42HL11251804	229,251	-
Health Care and Other Facilities	93.887	Ocean Nanotech, LLC	4R42HL11251803	34,019	-
Substance Abuse and Mental Health Services Administration					
Projects of Regional and National Significance	93.243			148,859	-
Projects of Regional and National Significance	93.243	University of California, Los Angeles	5R01MH10002707	60	-
TOTAL DEPARTMENT OF HEALTH AND HUMAN SERVICES				<u>406,785,056</u>	<u>38,409,673</u>

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION					
National Aeronautics and Space Administration					
Science	43.001			5,300,974	69,092
Science	43.001	California Institute of Technology	NNX13AH66G	104,893	-
Science	43.001	California Institute of Technology	NNX15AH53G	9,805	-
Science	43.001	Cornell University	393616452	71,830	-
Science	43.001	Cornell University	JPL1536058	136,037	-
Science	43.001	Missouri University of Science and Technology	NNX10AI92H (NASA)	72,018	-
Science	43.001	Seti Institute	NNX09AE80A	3,483	-
Science	43.001	Seti Institute	NNX13AJ18G	48,557	-
Science	43.001	University of Washington	NNA13AA39A	84,152	-
Aeronautics	43.002			77,300	-
Space Operations	43.007			436,912	20,506
Education	43.008	Missouri State University	NNX13AE52A	29,072	-
Education	43.008	Missouri University of Science and Technology	NNX13AB32A	(416)	-
Education	43.008	Missouri University of Science and Technology	NNX14AN17A	158,842	18,175
Education	43.008	Missouri University of Science and Technology	NNX15AK03H (NASA)	15,672	-
NASA	43	Arizona State University	NNG07EK00C	112,144	-
NASA	43	Carnegie Institute of Washington	NASANASW00002	17,476	-
NASA	43	Cornell University	393616444	33,005	-
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NM0710630	54,899	-
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NM0710846	178,829	-
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NM0710805	86,180	-
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NNN12A01C	20,293	-
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NNN12AA01C	35,497	-
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NASANN12AA01C	1,625	-
NASA	43	Johns Hopkins University	JPL1277793	69,071	-
NASA	43	National Space Biomedical Research Institute	NCC9-58-176	18,323	-
NASA	43	Southwest Research Institute		2,000	-
NASA	43	Southwest Research Institute	NASW02008	193,227	-
TOTAL NATIONAL AERONAUTICS AND SPACE ADMINISTRATION				<u>7,371,700</u>	<u>107,773</u>
NATIONAL SCIENCE FOUNDATION					
National Science Foundation					
Engineering Grants	47.041			2,488,371	8,208
Engineering Grants	47.041	Applied Particle Technology LLC	IIP1549666	15,517	-
Engineering Grants	47.041	Bridge 12 Technologies	1521315NSF	89,064	-
Engineering Grants	47.041	Cornell University	NSF0335765	165,930	-
Engineering Grants	47.041	Rensselaer Polytechnic Institute	EFRI1433311	81,731	-
Engineering Grants	47.041	University of Illinois	1412043	36,994	-
Engineering Grants	47.041	Yale University	1542815	42,951	-
Mathematic and Physical Sciences	47.049			2,508,669	73,531
Mathematic and Physical Sciences	47.049	Oregon State University	S1412AA CHE112637	148,212	-
Mathematic and Physical Sciences	47.049	University of California, Los Angeles	PHY1229792	(861)	-
Mathematic and Physical Sciences	47.049	University of California, Santa Barbara	CHE1240194	13,077	-
Geosciences	47.050			1,251,350	116
Computer and Information Science and Engineering	47.070			2,769,661	-
Computer and Information Science and Engineering	47.070	Missouri University of Science and Technology	0005469601 NSF1641021	4,194	-
Computer and Information Science and Engineering	47.070	Rensselaer Polytechnic Institute	IIS1124827	74,548	-
Biological Sciences	47.074			4,184,152	120,784
Biological Sciences	47.074	Kansas State University	ISO1388187	15,165	-
Biological Sciences	47.074	Louisiana State University	DEB1144084	3,435	-
Biological Sciences	47.074	Michigan State University	CNS1405273	34,975	-

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Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Biological Sciences	47.074	Michigan State University	IOS1455405 NSF	3,144	-
Biological Sciences	47.074	The Research Foundation for the State University of New York	DEB1258062	10,984	-
Biological Sciences	47.074	University of Maryland	IOS1257685 NSF	37,403	-
Biological Sciences	47.074	University of Massachusetts	IOS1032023	63,206	-
Biological Sciences	47.074	University of Michigan	MCB1157800	(6,093)	-
Biological Sciences	47.074	University of Minnesota	IOS1339393	79,145	-
Biological Sciences	47.074	University of Wisconsin, Madison	IOS-1339325	167,142	-
Social, Behavioral, and Economic Sciences	47.075			787,367	23,770
Social, Behavioral, and Economic Sciences	47.075	Colorado State University	SMA1519987	35,159	-
Education and Human Resources	47.076			2,274,970	-
Education and Human Resources	47.076	Business-Higher Education Forum	DUE1331063	56,832	-
Education and Human Resources	47.076	Carleton College	DUE-1022844	6,251	-
Education and Human Resources	47.076	Indiana University	DUE1534014	65,710	-
Education and Human Resources	47.076	University of Wisconsin, Madison	DUE1231286	64,715	-
Polar Programs	47.078			44,124	-
Office of International Science and Engineering	47.079	Arkansas Science and Technology Authority	IIA-1430427(NSF)	21,267	-
Office of International Science and Engineering	47.079	University of Missouri	IIA1355406	109,473	-
Office of International Science and Engineering	47.079	University of Missouri	IIA1430428NSF	334,457	-
Office of Cyberinfrastructure	47.080	Rensselaer Polytechnic Institute	OCl249473	20,974	-
Office of Integrative Activities	47.083	University of Missouri	OIA-1355406	302,980	-
National Science Foundation	47			292,309	-
National Science Foundation	47	Tufts University	CEBT1236653	3,074	-
TOTAL NATIONAL SCIENCE FOUNDATION				18,701,728	226,409
AGENCY FOR INTERNATIONAL DEVELOPMENT					
Agency for International Development					
USAID Foreign Assistance for Programs Overseas	98.001	Tufts University	AID0AAA1200005	35,435	-
USAID Development Partnerships for University Cooperation and Development	98.012	University of Georgia	AIDECGA000700001	110,512	37,620
Agency for International Development	98	FHI 360	AID0AAA012000005	290,328	58,905
Agency for International Development	98	Michigan State University	EDHA00070000500	949,714	180,000
Agency for International Development	98	National Academy of Sciences	ESPA00050000100	56,306	-
Agency for International Development	98	Tufts University	AID0AAC1600020	31,301	-
DEPARTMENT OF AGRICULTURE					
National Institute of Food and Agriculture					
Agriculture and Food Research Initiative (AFRI)	10.310			259,289	132,044
Agriculture and Food Research Initiative (AFRI)	10.310	University of Rhode Island	2.01587E+13	48,667	-
DEPARTMENT OF COMMERCE					
National Institute of Standards and Technology					
Measurement and Engineering Research and Standards	11.609			57,588	-
Science, Technology, Business and/or Education Outreach	11.620			3,465	-
DEPARTMENT OF HOMELAND SECURITY					
Department of Homeland Security	97	Duke University	HSHQDC11C00083	125,672	-
Department of Homeland Security	97	Surescan	HSHQDC14CB011	63,913	-
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT					
Department of Housing and Urban Development					
Office of Healthy Homes and Lead Hazard Control	14			238,043	-
DEPARTMENT OF JUSTICE					
National Institute of Justice					
Criminal Justice Research and Development Graduate Research Fellowships	16.562			1,618	-

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Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
DEPARTMENT OF TRANSPORTATION					
Federal Aviation Administration					
Federal Aviation Administration	20	Sierra Research Inc.	DTFAWA12180008	39,449	-
Federal Highway Administration					
Highway Research and Development Program	20.200	Michigan State University	DTFH6113H00009	20,299	-
National Highway Traffic Safety Administration (NHTSA)					
State and Community Highway Safety	20.600	Missouri Department of Transportation	FEDERAL PROGRAM 402	44,627	-
DEPARTMENT OF THE TREASURY					
Department of the Treasury	21			234,883	-
DEPARTMENT OF VETERANS AFFAIRS					
Department of Veterans Affairs	64			8,121	-
ENVIRONMENTAL PROTECTION AGENCY					
Office of Research and Development					
Science To Achieve Results (STAR) Research Program	66.509			196,363	-
Science To Achieve Results (STAR) Research Program	66.509	Missouri University of Science and Technology	83575101	119,499	128,461
Science To Achieve Results (STAR) Fellowship Program	66.514			1,219	-
Environmental Protection Agency	66	CB&I Federal Services LLC	CPC1402WA009 (EPA)	32,397	-
Total R&D Programs from Other Federal Agencies				<u>2,968,708</u>	<u>537,030</u>
Total Research & Development Cluster				<u>458,247,539</u>	<u>42,661,121</u>
Other Sponsored Programs					
DEPARTMENT OF DEFENSE					
Defense Threat Reduction Agency					
Defense Threat Reduction Agency	12	PPD Development LLC	HDTRA112C0031	2,380	-
U.S. Army Material Command					
Basic Scientific Research	12.431			24,999	-
U.S. Army Medical Command					
Military Medical Research and Development	12.420	Children's Research Institute	W81XWH1210417	1,224	-
Military Medical Research and Development	12.420	Neumedicines Inc.		4,622	-
Military Medical Research and Development	12.420	Sarcoma Alliance	W81XWH1310072	2,502	-
Military Medical Research and Development	12.420	University of Alabama, Birmingham	W81XWH1210155	945	-
Military Medical Research and Development	12.420	University of Colorado	W81XWH1510504	561	-
Military Medical Research and Development	12.420	University of Washington	W81XWH1320095	39,652	-
TOTAL MILITARY MEDICAL RESEARCH AND DEVELOPMENT				<u>49,506</u>	-
U.S. Army					
U.S. Army	12	Banyan Biomarkers	W911QV15C0019	48	-
U.S. Army	12	Brainscope Company, Inc.	W81XWH14C1405	60,700	-
U.S. Army	12	Brainscope Company, Inc.	W911QY14C0097	55,104	-
U.S. Army	12	John Hopkins University	W81XWH1020134	2,763	-
U.S. Army	12	Terumo BCT	W81XWH13C0160	151,761	-
TOTAL U.S. ARMY				<u>270,376</u>	-
				<u>347,261</u>	-
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Administration for Children and Families					
Healthy Marriage Promotion and Responsible Fatherhood Grants	93.086	Fathers Support Center St. Louis	HHS2015ACFOFAFK0993	130,684	-
Centers for Disease Control					
Blood Disorder Program: Prevention, Surveillance, and Research	93.080	University of Texas Health Science Center	1NU27DD0011550100	13,532	-
Disabilities Prevention	93.184	University of Texas Health Science Center	5U27DD00086204	9,669	-
CBA to Strengthen Public Health Infrastructure and Performance	93.524	National Association for Chronic Disease Director	U380T000225	47,770	-
HIV Prevention Activities_Non-Governmental Organization Based	93.939	University of Missouri, Kansas City	5U65PS00448103	8,960	-
HIV Prevention Activities_Non-Governmental Organization Based	93.939	University of Missouri, Kansas City	5U65PS00448102	35,107	-
TOTAL HIV PREVENTION ACTIVITIES_NON-GOVERNMENTAL ORGANIZATION BASED				<u>44,067</u>	-

The accompanying notes are an integral part of this schedule.

Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
HIV Prevention Activities_Health Department Based	93.940	City of St. Louis Department of Health	HRSA1166	81,176	-
HIV Prevention Activities_Health Department Based	93.940	State of Missouri	C315959001	39,397	-
HIV Prevention Activities_Health Department Based	93.940	State of Missouri	CDCRFAP8151506	80,294	-
HIV Prevention Activities_Health Department Based	93.940	State of Missouri	C314074001	146,963	-
TOTAL HIV PREVENTION ACTIVITIES_HEALTH DEPARTMENT BASED				<u>347,830</u>	<u>-</u>
Epidemiologic Research Studies of AIDS and HIV Centers for Disease Control and Prevention	93.943	State of Missouri	C312090002	120,255	-
	93			505,754	-
Department of Health and Human Services					
Department of Health and Human Services	93	Duke University	HHSO100201300009C	5,319	-
Department of Health and Human Services	93	Health Research Inc.	1.50696E+13	7,112	-
Department of Health and Human Services	93	Healthcare, Inc.	2.00201E+14	51,900	-
Department of Health and Human Services	93	Icon Clinical Research	HHSO100201000002C	3,704	-
Department of Health and Human Services	93	State of Missouri	43065361183	25,778	-
TOTAL DEPARTMENT OF HEALTH AND HUMAN SERVICES				<u>93,813</u>	<u>-</u>
Food and Drug Administration					
Food and Drug Administration_Research	93.103	John Hopkins University	5R01FD00481903	23,123	-
Health Resources and Services Administration					
Trans-NIH Research Support	93.110	University of Texas Health Science Center At San Antonio	5H30MC240510400	1,000	-
Emergency Medical Services for Children	93.127	Cincinnati Children's Hospital Medical Center	U03MC226840300	37,227	-
Emergency Medical Services for Children	93.127	Cincinnati Children's Hospital Medical Center	2U03MC226840500	96,939	-
TOTAL EMERGENCY MEDICAL SERVICES FOR CHILDREN				<u>134,166</u>	<u>-</u>
Grants to Increase Organ Donations	93.134	University of Michigan	5U13HS07689070010	6,907	-
Grants to Increase Organ Donations	93.134	University of Michigan	5U13HS076890700	11,280	-
TOTAL GRANTS TO INCREASE ORGAN DONATIONS				<u>18,187</u>	<u>-</u>
Coordinated Services and Access to Research for Women, Infants, Children, and Youth	93.153			1,317,722	126,930
Research on Healthcare Costs, Quality and Outcomes	93.226			34,041	-
Sickle Cell Treatment Demonstration Program	93.365			694,253	342,114
HIV Emergency Relief Project Grants	93.914	City of St. Louis Department of Health	HRSA1166CTR711344	(173)	-
HIV Emergency Relief Project Grants	93.914	City of St. Louis Department of Health	HRSA1166CTR7113549	505,637	-
HIV Emergency Relief Project Grants	93.914	City of St. Louis Department of Health	HRSA1166CTR7113444	587,004	-
TOTAL HIV EMERGENCY RELIEF PROJECT GRANTS				<u>1,092,468</u>	<u>-</u>
HIV Care Formula Grants	93.917	City of St. Louis Department of Health	HRSA1166CTR7119148	199,146	-
HIV Care Formula Grants	93.917	St. Clair County	14604	(144)	-
HIV Care Formula Grants	93.917	St. Clair County	RYAN WHITE HIV/AIDS	15,479	-
HIV Care Formula Grants	93.917	St. Clair County	55780068C4	45,525	-
TOTAL HIV CARE FORMULA GRANTS				<u>260,006</u>	<u>-</u>
Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease	93.918			600,038	40,095
Special Projects of National Significance	93.928			141,967	-
Office of Population Affairs					
Family Planning Services	93.217	Missouri Family Health Council		58,970	-
Family Planning Services	93.217	Missouri Family Health Council	PDS150269	10,050	-
TOTAL FAMILY PLANNING SERVICES				<u>69,020</u>	<u>-</u>
Office of the Secretary					
Teenage Pregnancy Prevention Program	93.297			100,220	-
Substance Abuse and Mental Health Services Administration					
Substance Abuse and Mental Health Services_Projects of Regional and National Significance	93.243			182,630	11,593
				<u>5,981,215</u>	<u>520,732</u>

The accompanying notes are an integral part of this schedule.

Washington University

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2016

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
OTHER FEDERAL PROGRAMS					
DEPARTMENT OF JUSTICE					
Office of Juvenile Justice and Delinquency Prevention					
Children of Incarcerated Parents	16.831	Fathers Support Center	2014IGBX0005	33,275	-
DEPARTMENT OF THE TREASURY					
Internal Revenue Service					
Low Income Taxpayer Clinics	21.008			76,037	-
DEPARTMENT OF VETERANS AFFAIRS					
Department of Veterans Affairs	64			119,440	-
INSTITUTE OF MUSEUM AND LIBRARY SERVICES					
Institute of Museum and Library Services					
Museums for America	45.301			79,105	-
NATIONAL ARCHIVES AND RECORDS ADMINISTRATION					
National Archives and Records Administration					
National Historical Publications and Records Grants	89.003			106,519	-
PEACE CORPS					
Peace Corps	45			11,355	-
Total Other Sponsored Programs from Other Federal Agencies				<u>425,731</u>	<u>-</u>
Total Other Sponsored Programs				<u>6,755,207</u>	<u>520,732</u>
Student Financial Assistance Cluster					
DEPARTMENT OF EDUCATION					
Federal Supplemental Educational Opportunity Grant	84.007			938,576	-
Federal Work-Study Program	84.033			1,385,995	-
Federal Pell Grant Program	84.063			2,549,979	-
Federal Direct Student Loans					
New Loans Issued during 2016	84.268			74,735,473	-
Federal Perkins Loans					
Outstanding Loans as of July 1, 2015	84.038			45,264,298	-
New Loans Issued during 2016	84.038			6,642,687	-
Administrative Cost Allowance	84.038			400,000	-
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Health Professions Student Loans including Primary Care Loans/Loans for Disadvantaged Students					
Outstanding Loans as of July 1, 2015	93.242			276,525	-
New Loans Issued during 2016	93.242			-	-
Administrative Cost Allowance	93.242			-	-
Total Student Financial Assistance Cluster				<u>132,193,533</u>	<u>-</u>
TRIO Cluster					
DEPARTMENT OF EDUCATION					
TRIO - Student Support Services	84.042			334,146	-
Total Federal Award Expenditures				<u>\$ 597,530,425</u>	<u>\$ 43,181,853</u>

The accompanying notes are an integral part of this schedule.

Washington University
Notes to Schedule of Expenditures of Federal Awards
For the Year Ended June 30, 2016

1. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying Schedule of Expenditures of Federal Awards (the “Schedule”) summarizes the expenditures of Washington University (the “university”) under programs of the Federal Government for the year ended June 30, 2016. Expenditures of direct awards to the university are reported in total by program. The information in this schedule is presented in accordance with the requirements of Title 2 U.S. Code of Federal Regulation Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Therefore, some amounts presented in this schedule may differ from amounts presented in, or used in the preparation of, the basic financial statements. The university includes the amounts in the Schedule in the unrestricted net assets of the university’s Consolidated Statement of Activities for the year ended June 30, 2016.

The Schedule is prepared on the accrual basis of accounting. Expenditures are recognized following the cost accounting principles contained in the Uniform Guidance wherein certain types of expenditures are not allowable or are limited to reimbursement. Moreover, expenditures include a portion of costs associated with general university activities which are allocated to awards under negotiated formulas commonly referred to as facilities and administrative cost rates.

Federal Awards

For purposes of the Schedule, federal awards include all grants, contracts and similar agreements entered into directly by the university with agencies and departments of the Federal Government and all awards received as a subrecipient from nonfederal organizations pursuant to federal grants, contracts and similar agreements.

2. Facilities and Administrative Costs

The university recovers facilities and administrative costs under federal financial assistance programs using predetermined rates ranging from 25.5% to 54%. The university does not use the 10% de minimis cost rate but instead has negotiated the rates above with the Department of Health and Human Services through June 30, 2017. The university will submit a proposal for rate negotiation during fiscal year 2017.

3. Federal Student Loan Programs

The following schedule includes the SFA loan balances outstanding as of June 30, 2016:

	Federal CFDA Number	Outstanding Balance
Student Financial Aid		
US Department of Education		
Federal Perkins Loan Program	84.038	43,406,556
U.S. Department of Health and Human Service		
Health Profession Student Loans, Primary Care Loans	93.342	243,224

The university had an Administrative Cost Allowance (ACA) of \$400,000 for fiscal year 2016.

Reports on Compliance and on Internal Controls



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

To the Board of Trustees of Washington University

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to the financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of Washington University (the "University") which comprise the consolidated statements of financial position as of June 30, 2016 and June 30, 2015, and the related consolidated changes in its net assets and its cash flows for the years then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated September 27, 2016.

Internal Control Over Financial Reporting

In planning and performing our audits of the consolidated 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 opinion on the consolidated 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 the 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 university's consolidated financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

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

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the university's consolidated 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*.



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 university'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 university's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Parsons Brinckerhoff LLP

St. Louis, Missouri
September 27, 2016



**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 OMB Uniform Guidance**

To the Board of Trustees of Washington University

Report on Compliance for Each Major Federal Program

We have audited Washington University's (the "university") 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, 2016. 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.

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.

Auditor's 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 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 20, 2016.

Other Matters

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 2016-001 and 2016-002. 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 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

St. Louis, Missouri
February 21, 2017

**Schedule of Independent Auditors'
Findings and Questioned Cost**

Washington University
EIN# 43-0653611
Schedule of Independent Auditors' Findings and Questioned Costs
Year Ended June 30, 2016

Part I - Summary of Auditor's Results

Financial Statements

Type of auditor's report issued: Unmodified

Internal control over financial reporting:

Material weakness (es) identified? _____ Yes X No

Significant deficiency (ies) identified not considered to be material weaknesses? _____ Yes X None reported

Noncompliance material to financial statements noted? _____ Yes X No

Federal Awards

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

Internal control over major programs:

Material weakness (es) identified? _____ Yes X No

Significant deficiency (ies) identified not considered to be material weaknesses? _____ Yes X None reported

Any audit findings disclosed that are required to be reported in accordance with Uniform Guidance Section 200.516(a)? X Yes _____ No

Identification of Major Programs:

<u>CFDA Number(s)</u>	<u>Name of Federal Program or Cluster</u>
Various	Student Financial Aid Cluster
Various	Research and Development and Research Training Cluster
93.153	Coordinated Services and Access to Research for Women, Infants, Children, and Youth

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

Auditee qualified as low-risk auditee? X Yes _____ No

Part II – Financial Statement Findings

There are no financial statement findings to report.

Washington University

EIN# 43-0653611

Schedule of Independent Auditors' Findings and Questioned Costs Year Ended June 30, 2016

Part III – Federal Award Findings and Questioned Cost

Finding 2016 – 001

R&D Program

CFDA Number, Award Name, Agency and Award Number

93.172, Human Genome Research, NIH, 5U54HG003079-12

Award Year

2015

Condition/Context

Within our sample of 65 cost transfers (40 payroll cost transfers (PCT) and 25 non-payroll cost transfers), we noted one transaction that was not completed in a timely manner. The transfer was a payroll cost transfer for \$2,057 and was processed eleven days late.

Criteria or Specific Requirement

NIH Grants Policy Statement, Part II: Subpart A - entitled, "Cost Transfers, Overruns and Accelerated and Delayed Expenditures." Cost transfers to NIH grants by grantees, consortium participants, or contractors under grants that represent corrections of clerical or bookkeeping errors should be accomplished within 90 days of when the error was discovered. The transfers must be supported by documentation that fully explains how the error occurred and a certification of the correctness of the new charge by a responsible organizational official of the grantee, consortium participant, or contractor. An explanation merely stating that the transfer was made "to correct error" or "to transfer to correct project" is not sufficient. Transfers of costs from one project to another or from one competitive segment to the next solely to cover cost overruns are not allowable. The above statement is also incorporated in the documented "Cost Transfer Policy" of the University.

Cause

A cost transfer journal entry was prepared by the department and given to the Principal Investigator (PI) for approval. This occurred within the 90 day required period. The PI was out of the office and unable to approve the PCT within the 90 day window. The total time between the error discovery date and the cost transfer was 101 days. Within this specific academic department, the issue was caused by a lack of procedures in place for approval of PCTs in the case the PI is unavailable.

Effect

The delayed transfer resulted in a charge to an award later than is prescribed by the NIH and University policy. As a result of the lag in processing the payroll cost transfer, the amount noted above was not reported to the Department of Health and Human Services in the quarter that it was incurred.

Recommendation

We recommend that this academic department more closely monitor cost transfer approval requests for PIs that are out of the office and implement new processes to allow for alternative review of cost transfers when PIs are unavailable.

Management's View and Corrective Action Plan

Following the Federal Award Findings and Questioned Costs are management's views and corrective action plan.

Washington University
EIN# 43-0653611
Schedule of Independent Auditors' Findings and Questioned Costs
Year Ended June 30, 2016

Finding 2016 – 002

SFA Cluster

CFDA Number and Award Name

84.038, Federal Perkins Loan Program
82.268, Federal Direct Student Loans

Award Year

2015 / 2016

Condition/Context

Within our sample of 25 loan distributions, we noted two instances where the student failed to receive a notification of a loan/grant disbursement.

Criteria or Specific Requirement

Per paragraph (a) within 34 CF §668.165 of the Code of Federal Regulations, for all Federal Perkins Loan Funds, Teach Grants and Direct Loans that are disbursed to or on behalf of a student, an institution is required to notify the student, or parent in writing of (1) the date, and amount of the disbursement; (2) the student's right, or parent's right, to cancel all or a portion of that loan or loan disbursement and have the loan proceeds returned to the holder of that loan or the TEACH Grant payments returned to ED; and (3) the procedure and time by which the student or parent must notify the institution that he or she wishes to cancel the loan, TEACH Grant or TEACH Grant disbursement. Institutions must make the notification outlined above to the student or parent no earlier than 30 days before, and 30 days after, crediting the student's account at the institution with Direct Loan, FPL Funds or TEACH Grants.

Cause

When disbursements occur, the student accounting system identifies students needing a notification and a listing of these students is transmitted via a File Transfer Protocol (FTP) to a server from which notification emails are then sent. In the two instances noted above, the system correctly identified the students, but there was a failure in the FTP process, so emails were not sent within the 30 day timeframe.

Effect

Not receiving the email could have caused the student to not be aware that their student loans had been disbursed, if they did not review their student account.

Recommendation

We recommend that management work to ensure compliance with loan disbursement notifications by maintaining appropriate oversight and monitoring of the system which generates the loan disbursement notifications.

Management's View and Corrective Action Plan

Following the Federal Award Findings and Questioned Costs are management's views and corrective action plan.

Corrective Action Plan

Washington University
EIN# 43-0653611
Corrective Action Plan
Year Ended June 30, 2016

Accountant's Finding 2016 – 001

Management concurs with this finding. Payroll cost transfers are initiated and coordinated within each academic unit. In this instance, the PI's travel schedule caused an unexpected delay in obtaining his signature on the cost transfer form. Sponsored Projects Accounting (SPA) has contacted the unit involved and they have created a formal procedure to ensure the timeliness of payroll cost transfers. We consider this finding an isolated incident. SPA continues to emphasize the importance of timely payroll cost transfer preparation and submission in research administration training programs and materials.

Completion Date: February 2017

University Contact: Joseph M. Gindhart, (314) 935-7089

Accountant's Finding 2016 – 002

Corrective action: Management concurs with this finding. A systems project is being implemented to create a new process that will ensure all students receiving a disbursement receive a notification email. This new mechanism will also provide oversight and monitoring of the notification process. In the interim, a manual review of the output from the current notification process is being conducted to ensure all students receiving a disbursement receive a notification email.

Completion Date: April 2017

University Contact: Michael J. Runiewicz, (314) 935-8976

Summary of Status of Prior Audit Findings

Washington University
Summary of Status of Prior Audit Findings
Year Ended June 30, 2016

There were no federal award findings and questioned costs in the prior year.