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# **Reports on the Audit of Federal Award Programs in Accordance with OMB Uniform Guidance**

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**The Pennsylvania State University  
Fiscal Year Ended June 30, 2019**

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University Park, Pennsylvania

**THE PENNSYLVANIA STATE UNIVERSITY  
REPORTS ON THE AUDIT OF FEDERAL AWARD PROGRAMS  
IN ACCORDANCE WITH OMB UNIFORM GUIDANCE  
FISCAL YEAR ENDED JUNE 30, 2019**

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**Joseph J. Doncsecz**  
Associate Vice President for Finance  
and Corporate Controller

The Pennsylvania State University  
408 Old Main  
University Park, PA 16802-1505

March 16, 2020

Federal Audit Clearinghouse  
1201 E. 10<sup>th</sup> Street  
Jeffersonville, IN 47132

To Whom It May Concern:

The Pennsylvania State University's financial, internal control and compliance reports for the fiscal year ended June 30, 2019 are presented on the accompanying pages. The reports have been issued in accordance with the Office of Management and Budget (OMB) Title 2 U.S. Code of Federal Regulations (CFR) Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*. Also enclosed is The Pennsylvania State University's schedule of findings and questioned costs.

Sincerely,

Joseph J. Doncsecz  
Associate Vice President for Finance and Corporate Controller

JJD/kjm

Enclosures

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# **Audited Financial Statements**

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The Pennsylvania State University  
Fiscal Year Ended June 30, 2019

## **INDEPENDENT AUDITORS' REPORT**

To the Board of Trustees of  
The Pennsylvania State University  
University Park, Pennsylvania

### **Report on the Financial Statements**

We have audited the accompanying consolidated financial statements of The Pennsylvania State University and its subsidiaries (the "University"), which comprise the consolidated statements of financial position as of June 30, 2019 and 2018, and the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements.

### ***Management's Responsibility for the Consolidated Financial Statements***

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

The consolidated financial statements of the University include various subsidiaries as outlined in Note 1 to the consolidated financial statements. The financial statements of Penn State Health, including subsidiaries Nittany Health, Inc.; Saint Joseph's Medical Group; Saint Joseph's Regional Health Network; Penn State Health Community Medical Group; Central PA Health Network; Hampden Medical Center; and the Milton S. Hershey Medical Center and The Corporation for Penn State subsidiaries, including The Pennsylvania State University Philanthropic Fund; Ben Franklin Technology Center of Central & Northern PA; and Penn State Research Foundation, which were audited by us; and the financial statements of Nittany Insurance Company, which was audited by other auditors, were audited in accordance with generally accepted auditing standards, but were not audited in accordance with *Government Auditing Standards* and, accordingly, are not covered by our reports in accordance with *Government Auditing Standards*.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's 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, the auditor considers 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 financial position of the University as of June 30, 2019 and 2018, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated October 25, 2019 on our consideration of the University's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with the *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

*Deloitte & Touche LLP*

October 25, 2019

**THE PENNSYLVANIA STATE UNIVERSITY**  
**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**  
**ASSETS**  
**JUNE 30, 2019 AND 2018**  
**(in thousands)**

	<u>June 30, 2019</u>	<u>June 30, 2018</u>
<b>Current assets:</b>		
Cash and cash equivalents	\$ 2,178,713	\$ 2,089,105
Short-term investments	407,442	331,421
Deposits held by bond trustees	90,353	87,459
Deposits held for others	40,587	36,845
Accounts receivable, net of allowances of \$116,770 and \$84,647	656,826	568,924
Contributions receivable, net	40,523	62,318
Loans to students, net of allowances of \$603 and \$639	7,767	9,352
Inventories	52,516	48,721
Prepaid expenses and other assets	<u>137,764</u>	<u>109,481</u>
<b>Total current assets</b>	<u>3,612,491</u>	<u>3,343,626</u>
<b>Noncurrent assets:</b>		
Deposits held by bond trustees	28,400	15,200
Contributions receivable, net	139,007	134,167
Loans to students, net of allowances of \$3,091 and \$2,804	46,329	50,015
Total investment in plant, net	5,588,943	5,248,322
Beneficial interest in perpetual trusts	23,898	23,587
Investments	6,304,490	6,065,540
Other assets	<u>177,398</u>	<u>136,815</u>
<b>Total noncurrent assets</b>	<u>12,308,465</u>	<u>11,673,646</u>
<b>Total assets</b>	<u><u>\$15,920,956</u></u>	<u><u>\$15,017,272</u></u>

See notes to consolidated financial statements.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**  
**LIABILITIES AND NET ASSETS**  
**JUNE 30, 2019 AND 2018**  
**(in thousands)**

	<u>June 30, 2019</u>	<u>June 30, 2018</u>
<b>Current liabilities:</b>		
Accounts payable and other accrued expenses	\$ 728,510	\$ 712,590
Deferred revenue	364,875	358,004
Long-term debt	60,475	57,164
Present value of annuities payable	6,829	6,781
Accrued postretirement benefits	<u>57,457</u>	<u>61,286</u>
<b>Total current liabilities</b>	<u>1,218,146</u>	<u>1,195,825</u>
<b>Noncurrent liabilities:</b>		
Deposits held in custody for others	25,328	28,031
Deferred revenue	615	783
Long-term debt	1,590,177	1,393,013
Present value of annuities payable	50,220	52,455
Accrued postretirement benefits	2,166,578	2,132,269
Refundable United States Government student loans	47,309	46,708
Other liabilities	<u>285,752</u>	<u>243,794</u>
<b>Total noncurrent liabilities</b>	<u>4,165,979</u>	<u>3,897,053</u>
<b>Total liabilities</b>	<u>5,384,125</u>	<u>5,092,878</u>
<b>Net assets:</b>		
Without donor restrictions -		
Undesignated	-	1,743
Designated for specific purposes	4,108,982	3,880,122
Net investment in plant	<u>3,543,893</u>	<u>3,316,763</u>
Total without donor restrictions - The Pennsylvania State University	7,652,875	7,198,628
Noncontrolling interest	<u>252,217</u>	<u>223,647</u>
Total without donor restrictions	7,905,092	7,422,275
With donor restrictions	<u>2,631,739</u>	<u>2,502,119</u>
<b>Total net assets</b>	<u>10,536,831</u>	<u>9,924,394</u>
<b>Total liabilities and net assets</b>	<u>\$15,920,956</u>	<u>\$15,017,272</u>

See notes to consolidated financial statements.



**THE PENNSYLVANIA STATE UNIVERSITY**  
**CONSOLIDATED STATEMENT OF ACTIVITIES**  
**FOR THE YEAR ENDED JUNE 30, 2019**  
**(in thousands)**

	Without Donor Restrictions	With Donor Restrictions	Total
<b>Operating revenues and other support:</b>			
Tuition and fees, net of discounts of \$230,201	\$ 1,815,212	\$ -	\$ 1,815,212
Commonwealth of Pennsylvania -			
Appropriations	313,967	-	313,967
Special contracts	74,613	-	74,613
Department of General Services projects	15,096	-	15,096
United States Government grants and contracts	518,913	-	518,913
Private grants and contracts	208,207	-	208,207
Gifts and pledges	82,290	24,187	106,477
Endowment spending	117,470	-	117,470
Other investment income	96,898	2,711	99,609
Sales and services of educational activities	108,532	-	108,532
Recovery of indirect costs	190,753	-	190,753
Auxiliary enterprises	487,725	-	487,725
Health System revenue, net of provision for bad debts of \$67,188	2,508,876	-	2,508,876
Other sources	11,087	-	11,087
Net assets released from restrictions	60,326	(60,326)	-
<b>Total operating revenues and other support</b>	<b>6,609,965</b>	<b>(33,428)</b>	<b>6,576,537</b>
<b>Operating expenses:</b>			
Educational and general -			
Instruction	1,382,148	-	1,382,148
Research	891,346	-	891,346
Public service	118,241	-	118,241
Academic support	387,035	-	387,035
Student services	216,357	-	216,357
Institutional support	418,167	-	418,167
Total educational and general	3,413,294	-	3,413,294
Auxiliary enterprises	465,294	-	465,294
Health System expense	2,401,501	-	2,401,501
<b>Total operating expenses</b>	<b>6,280,089</b>	<b>-</b>	<b>6,280,089</b>
<b>Increase (decrease) in net assets from operating activities</b>	<b>329,876</b>	<b>(33,428)</b>	<b>296,448</b>
<b>Nonoperating activities:</b>			
Gifts and pledges	-	88,716	88,716
Current year investment returns	264,188	78,706	342,894
Endowment appreciation utilized	(96,811)	-	(96,811)
Changes in funds held by others in perpetuity	-	287	287
Write-offs and disposals of assets	(7,240)	-	(7,240)
Nonperiodic change in postretirement benefit plan	61,205	-	61,205
Other components of net periodic postretirement benefit cost	(96,972)	-	(96,972)
Actuarial adjustment on annuities payable	-	(4,661)	(4,661)
<b>Increase in net assets from nonoperating activities</b>	<b>124,370</b>	<b>163,048</b>	<b>287,418</b>
<b>Increase in net assets - The Pennsylvania State University</b>	<b>454,246</b>	<b>129,620</b>	<b>583,866</b>
<b>Noncontrolling interest:</b>			
Excess of revenues over expenses	28,571	-	28,571
<b>Increase in net assets - noncontrolling interest</b>	<b>28,571</b>	<b>-</b>	<b>28,571</b>
<b>Increase in total net assets</b>	<b>482,817</b>	<b>129,620</b>	<b>612,437</b>
<b>Net assets at the beginning of the year</b>	<b>7,422,275</b>	<b>2,502,119</b>	<b>9,924,394</b>
<b>Net assets at the end of the year</b>	<b>\$ 7,905,092</b>	<b>\$ 2,631,739</b>	<b>\$ 10,536,831</b>

See notes to consolidated financial statements.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**CONSOLIDATED STATEMENT OF ACTIVITIES**  
**FOR THE YEAR ENDED JUNE 30, 2018**  
**(in thousands)**

	Without Donor Restrictions	With Donor Restrictions	Total
<b>Operating revenues and other support:</b>			
Tuition and fees, net of discounts of \$214,774	\$ 1,820,971	\$ -	\$ 1,820,971
Commonwealth of Pennsylvania -			
Appropriations	298,312	-	298,312
Special contracts	70,800	-	70,800
Department of General Services projects	47,809	-	47,809
United States Government grants and contracts	495,851	-	495,851
Private grants and contracts	222,350	-	222,350
Gifts and pledges	75,367	12,433	87,800
Endowment spending	105,183	-	105,183
Other investment income	154,092	1,598	155,690
Sales and services of educational activities	100,992	-	100,992
Recovery of indirect costs	179,879	-	179,879
Auxiliary enterprises	482,089	-	482,089
Health System revenue, net of provision for bad debts of \$50,660	2,276,366	-	2,276,366
Other sources	19,648	-	19,648
Net assets released from restrictions	4,318	(4,318)	-
<b>Total operating revenues and other support</b>	<b>6,354,027</b>	<b>9,713</b>	<b>6,363,740</b>
<b>Operating expenses:</b>			
Educational and general -			
Instruction	1,351,915	-	1,351,915
Research	851,662	-	851,662
Public service	96,045	-	96,045
Academic support	376,431	-	376,431
Student services	200,251	-	200,251
Institutional support	357,505	-	357,505
Total educational and general	3,233,809	-	3,233,809
Auxiliary enterprises	443,350	-	443,350
Health System expense	2,121,177	-	2,121,177
<b>Total operating expenses</b>	<b>5,798,336</b>	<b>-</b>	<b>5,798,336</b>
<b>Increase in net assets from operating activities</b>	<b>555,691</b>	<b>9,713</b>	<b>565,404</b>
<b>Nonoperating activities:</b>			
Gifts and pledges	-	99,039	99,039
Current year investment returns	94,620	82,624	177,244
Endowment appreciation utilized	(73,903)	-	(73,903)
Changes in funds held by others in perpetuity	-	3,732	3,732
Write-offs and disposals of assets	(14,887)	-	(14,887)
Nonperiodic change in postretirement benefit plan	243,506	-	243,506
Other components of net periodic postretirement benefit cost	(129,320)	-	(129,320)
Actuarial adjustment on annuities payable	-	(7,957)	(7,957)
<b>Increase in net assets from nonoperating activities</b>	<b>120,016</b>	<b>177,438</b>	<b>297,454</b>
<b>Increase in net assets - The Pennsylvania State University</b>	<b>675,707</b>	<b>187,151</b>	<b>862,858</b>
<b>Noncontrolling interest:</b>			
Capital contributions - Health System	200,000	-	200,000
Excess of revenues over expenses	19,038	-	19,038
<b>Increase in net assets - noncontrolling interest</b>	<b>219,038</b>	<b>-</b>	<b>219,038</b>
<b>Increase in total net assets</b>	<b>894,745</b>	<b>187,151</b>	<b>1,081,896</b>
<b>Net assets at the beginning of the year</b>	<b>6,527,530</b>	<b>2,314,968</b>	<b>8,842,498</b>
<b>Net assets at the end of the year</b>	<b>\$ 7,422,275</b>	<b>\$ 2,502,119</b>	<b>\$ 9,924,394</b>

See notes to consolidated financial statements.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**FOR THE YEARS ENDED JUNE 30, 2019 AND 2018**  
**(in thousands)**

	<u>June 30, 2019</u>	<u>June 30, 2018</u>
<b>Cash flows from operating activities:</b>		
Increase in net assets	\$ 612,437	\$ 1,081,896
Adjustments to reconcile change in net assets to net cash provided by operating activities -		
Actuarial adjustment on annuities payable	4,661	7,957
Contributions restricted for long-term investment	(115,551)	(93,274)
Interest and dividends restricted for long-term investment	(75,444)	(89,759)
Net realized and unrealized gains on long-term investments	(366,667)	(258,722)
Capital contributions - Health System	-	(200,000)
Depreciation expense	412,577	371,570
Amortization expense	1,171	(194)
Write-offs and disposals of assets	7,240	15,905
Contributions of land, buildings and equipment	(44,452)	(6,625)
Provision for bad debts	84,410	62,616
(Increase) decrease in deposits held for others	(3,743)	186
Increase in receivables	(137,644)	(121,554)
Increase in inventories	(3,794)	(622)
Increase in prepaid expenses and other assets	(22,077)	(41,911)
Increase (decrease) in accounts payable and other accrued expenses	44,667	(7,423)
Increase in deferred revenue	6,742	16,309
Increase (decrease) in accrued postretirement benefits	30,479	(124,909)
<b>Net cash provided by operating activities</b>	<u>435,012</u>	<u>611,446</u>
<b>Cash flows from investing activities:</b>		
Purchase of land, buildings and equipment	(715,582)	(681,899)
(Increase) decrease in deposits held by bond trustees	(16,094)	76,295
Advances on student loans	(3,059)	(10,121)
Collections on student loans	7,503	8,490
Purchase of investments	(2,886,333)	(3,184,549)
Proceeds from sale of investments	2,891,401	3,156,165
<b>Net cash used in investing activities</b>	<u>(722,164)</u>	<u>(635,619)</u>
<b>Cash flows from financing activities:</b>		
Contributions restricted for long-term investment	115,551	93,274
Interest and dividends restricted for long-term investment	75,444	89,759
Capital contributions - Health System	-	200,000
Payments of annuity obligations	(6,858)	(6,810)
Proceeds from long-term debt	250,158	74,607
Principal payments on long-term debt	(58,369)	(99,675)
Proceeds related to government student loan funds, net of collection costs	834	420
<b>Net cash provided by financing activities</b>	<u>376,760</u>	<u>351,575</u>
<b>Net increase in cash and cash equivalents</b>	89,608	327,402
<b>Cash and cash equivalents at the beginning of the year</b>	<u>2,089,105</u>	<u>1,761,703</u>
<b>Cash and cash equivalents at the end of the year</b>	<u>\$ 2,178,713</u>	<u>\$ 2,089,105</u>

Supplemental disclosures of cash flow information (Note 2)

See notes to consolidated financial statements.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**FOR THE YEARS ENDED JUNE 30, 2019 AND 2018**

**1. THE UNIVERSITY AND RELATED ENTITIES**

The Pennsylvania State University (“the University”), which was created as an instrumentality of the Commonwealth of Pennsylvania (“the Commonwealth” or “Pennsylvania”), is organized as a non-profit corporation under the laws of the Commonwealth. As Pennsylvania’s land grant university, the University is committed to improving the lives of the people of Pennsylvania, the nation and the world through its integrated, tri-part mission of high-quality teaching, research and outreach.

Basis of Presentation

The financial statements of the University include, on a consolidated basis, the consolidated financial statements of Penn State Health (“the Health System”), a Pennsylvania non-profit corporation, and its wholly owned subsidiaries (see Note 13 for additional information), and the financial statements of The Corporation for Penn State and its subsidiaries (“the Corporation”). The Corporation is a non-profit member corporation organized in 1985 for the exclusive purpose of benefiting and promoting the interests of the University, the Corporation’s sole member. The Corporation’s financial statements consist primarily of the assets and revenues of The Pennsylvania College of Technology (“Penn College”), a wholly owned subsidiary of the Corporation. All transactions among the University, the Health System, and the Corporation have been eliminated.

**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

Basis of Accounting

The University’s consolidated financial statements are prepared on the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America (GAAP). The Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) is the source of authoritative GAAP.

The University’s consolidated financial statements include statements of financial position, activities and cash flows. In accordance with FASB ASC requirements, net assets and the changes in net assets are classified as with donor restrictions or without donor restrictions.

*Net assets with donor restrictions* are net assets subject to donor-imposed restrictions, either in perpetuity or for a specified time or purpose. Net assets with perpetual restrictions consist primarily of the historical amounts of endowed gifts. Additionally, contributions receivable and remainder interests which are required by donors to be retained in perpetuity are included at their estimated net present values. Net assets restricted by time or purpose consist of contributions receivable and remainder interests that are not required to be held in perpetuity. In addition, endowment appreciation and net unrealized losses on donor-restricted endowment funds for which historical cost exceeds market value are included.

*Net assets without donor restrictions* are net assets not subject to donor-imposed restrictions. These net assets may be designated for specific purposes at the discretion of management or may otherwise be limited by contractual agreements with outside parties. Revenue from donor-restricted sources is reclassified as revenue without donor restrictions when the circumstances of the restriction have been fulfilled. Donor-restricted revenues whose restrictions are met within the same fiscal year are reported as revenue without donor restrictions. All expenses from operations are reported as a reduction of net assets without donor restrictions, since the use of restricted contributions in accordance with donors’ stipulations results in the release of the restriction.

### Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts on the financial statements and the disclosure of contingencies and commitments. Actual results could differ from those estimates.

### Revenue Recognition

Tuition revenue is recognized over the course of each semester (summer, fall, spring) as instruction is provided to students. Tuition is due from students by the beginning of each applicable semester. Overdue payments are reflected in accounts receivable as the University has an unconditional right to payment. Tuition included in deferred revenue reflects summer semester tuition collected prior to June 30, but applied to the subsequent fiscal year, as the University does not split summer semester revenue between fiscal years. Tuition receipts of \$147.5 million, included in deferred revenue at June 30, 2018, were recognized during the year ended June 30, 2019. Tuition receipts of \$143.2 million, included in deferred revenue at June 30, 2017, were recognized during the year ended June 30, 2018. Institutional financial aid provided by the University for tuition and fees is reflected as a reduction of tuition and fee revenue. As tuition contracts have a duration of one year or less, the University has elected to apply the optional exemption prescribed by ASC 606-10-50-14 and, as such, has not disclosed the aggregate transaction price allocated to unsatisfied performance obligations or the time at which the revenue associated with these unsatisfied performance obligations is expected to be recognized. At June 30, unsatisfied performance obligations under tuition contracts relate solely to summer semester instruction to be provided in July and August of the subsequent year. Transaction prices for tuition and fees are determined and allocated based on the applicable published tuition and fees schedules.

Grants and contracts revenue is recognized over time as the eligible grant activities are conducted. Grants and contracts deemed to be exchange transactions fall under the scope of ASC Topic 606, Revenue from Contracts with Customers. The performance obligation for each grant or contract is deemed to be the research itself. Work completed under grants and contracts does not result in assets that can be sold to other customers and the University is entitled to payment for the work completed to date. Grants and contracts that are deemed to be contributions fall under the scope of ASC Topic 958, Not-for-Profit Entities. These are deemed to be conditional contributions, as eligible expenditures must be incurred in order to have a right of release of funding from the sponsor. Most grants and contracts are cost reimbursement basis, and incurred expenditures are periodically billed to the customer for reimbursement. Grants and contracts receipts of \$75.2 million, included in deferred revenue at June 30, 2018, were recognized during the year ended June 30, 2019. Grants and contracts receipts of \$70.4 million, included in deferred revenue at June 30, 2017, were recognized during the year ended June 30, 2018. The University has entered into numerous grants and contracts, with periods of performance ending at various dates from July 1, 2019 through December 31, 2050. The estimated performance obligations remaining under these grants and contracts as of June 30, 2019 total \$761.2 million. Transaction prices for grants and contracts are determined and allocated based on the budgets included in the respective award agreements.

Revenues from sales and services of educational activities and auxiliary enterprises consist primarily of health services, housing and food services, intercollegiate athletics, campus operations, and hospitality services. Performance obligations associated with these contracts consist of the provision of goods or services, and significant judgment is involved to determine whether the performance obligations are satisfied over time or at a point in time. Typically, revenue associated with semester-based contracts, such as housing and food services, is recognized over the course of the semester as services are provided. For other contracts, such as health services, athletic ticket sales, hotel room charges, and other campus operations, revenue is recognized at a point in time, when the good or service is provided. Contracts included in sales and services of educational activities and auxiliary enterprises are typically one year or less in length. As such, receipts included in deferred revenue at June 30, 2018 and 2017 were recognized during the years ended June 30, 2019 and 2018, respectively. In addition, the University has elected to apply the optional exemption prescribed by ASC 606-10-50-14 and, as such, has not disclosed the aggregate transaction price allocated to unsatisfied performance obligations or the time at which the revenue associated with these unsatisfied performance obligations is expected to be recognized. At June 30, unsatisfied performance obligations under sales and services of educational activities and auxiliary enterprises relate primarily to summer semester housing and food services to be provided in July and August of the subsequent year, as well as athletic events

held during the fall semester. Transaction prices for sales and services of educational activities and auxiliary enterprises are typically straightforward and explicitly stated in the contract.

The Health System has agreements with third-party payors that provide for payments to its subsidiaries at amounts different from their established rates. Payment arrangements include prospectively determined rates per discharge, reimbursed costs, discounted charges and per diem payments. Net patient service revenue is reported at the estimated net realizable amounts from patients, third-party payors and others for services rendered, including estimated retroactive adjustments under reimbursement agreements with third-party payors. In addition, net patient service revenue is net of provision for bad debts of \$67.2 million and \$50.7 million for the years ended June 30, 2019 and 2018, respectively. Retroactive adjustments are accrued on an estimated basis in the period the related services are rendered and adjusted in future periods as final settlements are determined or such estimates change.

The subsidiaries of the Health System provide care to patients who meet certain criteria under its charity care policy without charge or at amounts less than established rates. The Health System does not pursue collection of amounts determined to qualify as charity care; these amounts are not reported as net patient service revenue. The amounts of direct and indirect costs for services and supplies furnished under the Health System's charity care policy totaled approximately \$30.4 million and \$26.0 million for the years ended June 30, 2019 and 2018, respectively, and is based on a ratio of the Health System's operational costs to its gross charges. The amount of charges foregone for services and supplies furnished under the Health System's charity policy totaled approximately \$60.4 million and \$53.2 million during 2019 and 2018, respectively.

The University has elected to use the practical expedient prescribed by ASC 606-10-32-18, in which the promised amount of consideration need not be adjusted for the effects of a significant financing component if the period between when promised goods or services are transferred to a customer and when the customer pays for the goods or services is expected to be one year or less at contract inception.

### Contributions

Unconditional promises to give are recognized as revenues and receivables in the year made and consist of written or oral promises to contribute to the University in the future. Contributions receivable are recorded as donor-restricted revenue, either due to purpose restrictions and/or the implicit time restriction inherent in the future date at which the contribution is to be received. The amounts are present valued based on timing of expected collections.

### Fair Value of Financial Instruments

The University has provided fair value estimates for certain financial instruments. Fair value information presented in the financial statements is based on information available at June 30, 2019 and 2018. The carrying amounts of cash and cash equivalents, accounts receivable and accounts payable and other accrued expenses approximate fair value because of the terms and relatively short maturity of these financial instruments. The carrying values of the University's loans to students are also reasonable estimates of their fair value, as the total outstanding loans to students as of June 30, 2019 and 2018 have been made at the rates available to students for similar loans at such times. Investments are reported at fair value as disclosed in Note 4. The fair value of the University's bonds payable is disclosed in Note 8. See Note 6 for further discussion of fair value measurements.

### Cash Flows

The following items are included as supplemental disclosure to the statements of cash flows for the years ended June 30:

<i>(in thousands of dollars)</i>		<u>2019</u>		<u>2018</u>
Interest paid	\$	59,135	\$	51,533
Non-cash acquisitions of land, buildings and equipment		53,425		12,426

Capitalized costs accrued related to construction are \$76.2 million and \$88.7 million as of June 30, 2019 and 2018, respectively. Taxes paid for 2019 and 2018 are considered immaterial. Cash and cash equivalents include certain investments in highly liquid instruments with initial maturities of 90 days or less, except for such assets held by the University's investment managers as part of their long-term investment strategies. Short-term investments include other current investments held for general operating purposes with maturities greater than 3 months but less than 12 months.

### Accounts Receivable

Accounts receivable, net at June 30 consists of the following:

<i>(in thousands of dollars)</i>	<u>2019</u>	<u>2018</u>
Grants and contracts, net of allowance of \$2,105 and \$2,267	\$ 163,761	\$ 181,641
Patient accounts receivable, net of allowance of \$91,899 and \$61,634	348,331	250,789
Student receivables, net of allowance of \$15,467 and \$13,840	50,978	49,102
Investment and interest receivable	25,520	7,990
Other, net of allowance of \$7,299 and \$6,906	<u>68,236</u>	<u>79,402</u>
Total accounts receivable, net	<u>\$ 656,826</u>	<u>\$ 568,924</u>

The University maintains allowances for doubtful accounts to reflect management's best estimate of probable losses inherent in receivable balances. Management determines the allowances for doubtful accounts based on known factors, historical experience, and other currently available evidence. Receivables are written off when management determines they will not be collected.

Related to patient accounts receivable associated with services provided to patients who have third-party coverage, management analyzes contractually due amounts and provides an allowance for doubtful accounts (for example, for expected uncollectible deductibles and copayments or for payors who are known to be having financial difficulties that make the realization of amounts due unlikely). For receivables from self-pay patients, the subsidiaries of the Health System record a provision for bad debts in the period of service on the basis of past experience, which indicates that many patients are unable or unwilling to pay the portion of their bill for which they are financially responsible. In estimating the allowance for doubtful accounts, account age is taken into consideration. The difference between the standard rates (or the discounted rates if negotiated) and the amounts actually collected after all reasonable collection efforts have been exhausted is charged off against the allowance for doubtful accounts.

### Loans to Students

Loans to students are disbursed to qualified students based on need and include loans granted by the University from institutional resources and under federal government loan programs. Students enter a grace period upon ceasing at least half-time enrollment status. The grace period varies depending on the type of loan. Upon expiration of the grace period, interest begins to accrue, and repayment begins one month thereafter. Repayments of these loans are made directly to the University. Loans to students are uncollateralized and carry default risk. At June 30, 2019 and 2018, student loans represent 0.3% and 0.4% of total assets, respectively.

Funds advanced by the federal government of \$47.3 million and \$46.7 million at June 30, 2019 and 2018, respectively, are ultimately refundable to the government and are classified as liabilities in the consolidated statements of financial position. As of June 30, 2018, no additional disbursements are permitted under the federal Perkins loan program. The University is liquidating its Perkins portfolio through collections of outstanding Perkins loans. The federal liability related to the Perkins loan program will be reduced through the return of funds as required by the Department of Education.

Loans to students consisted of the following at June 30:

<i>(in thousands of dollars)</i>	<u>2019</u>	<u>2018</u>
Loans to students:		
Federal government loan programs:		
Perkins loan program	\$ 37,053	\$ 42,720
Health Professions Student Loans and Loans for Disadvantaged Students	<u>11</u>	<u>20</u>
Federal government loan programs	37,064	42,740
Institutional loan programs	<u>20,726</u>	<u>20,070</u>
	57,790	62,810
Less allowance for doubtful accounts:		
Balance, beginning of year	(3,443)	(3,118)
Provision for doubtful accounts	<u>(251)</u>	<u>(325)</u>
Balance, end of year	<u>(3,694)</u>	<u>(3,443)</u>
Loans to students, net	<u>\$ 54,096</u>	<u>\$ 59,367</u>

Allowances for doubtful accounts are established based on prior collection experience and current economic factors which, in management's judgment, could influence the ability of loan recipients to repay the amounts according to the terms of the loan. Further, the University does not evaluate credit quality of student loans receivable after the initial approval of the loan. Loans to students are considered past due when payment is not received by the due date, and interest continues to accrue until the loan is paid in full or written off. When loans to students are deemed uncollectible, an allowance for doubtful accounts is established.



The University considers the age of the amounts outstanding in determining the collectability of loans to students. The aging of the loans to students based on days delinquent and the related allowance for doubtful accounts at June 30 are as follows:

	<i>(in thousands of dollars)</i>				
	<u>45 days or less</u>	<u>46-75 days</u>	<u>76-105 days</u>	<u>Over 105 days</u>	<u>Total</u>
<u>2019</u>					
Loans to students:					
Federal government loan programs	\$ 30,702	\$ 29	\$ 31	\$ 6,302	\$ 37,064
Institutional loan programs	<u>17,571</u>	<u>16</u>	<u>15</u>	<u>3,124</u>	<u>20,726</u>
Total loans to students	<u>48,273</u>	<u>45</u>	<u>46</u>	<u>9,426</u>	<u>57,790</u>
Allowance for doubtful accounts:					
Federal government loan programs					(484)
Institutional loan programs					<u>(3,210)</u>
Total allowance for doubtful accounts					<u>(3,694)</u>
Total loans to students, net					<u>\$ 54,096</u>

	<i>(in thousands of dollars)</i>				
	<u>45 days or less</u>	<u>46-75 days</u>	<u>76-105 days</u>	<u>Over 105 days</u>	<u>Total</u>
<u>2018</u>					
Loans to students:					
Federal government loan programs	\$ 36,928	\$ 37	\$ 43	\$ 5,732	\$ 42,740
Institutional loan programs	<u>17,272</u>	<u>22</u>	<u>19</u>	<u>2,757</u>	<u>20,070</u>
Total loans to students	<u>54,200</u>	<u>59</u>	<u>62</u>	<u>8,489</u>	<u>62,810</u>
Allowance for doubtful accounts:					
Federal government loan programs					(594)
Institutional loan programs					<u>(2,849)</u>
Total allowance for doubtful accounts					<u>(3,443)</u>
Total loans to students, net					<u>\$ 59,367</u>

### Inventories

Inventories are stated at the lower of cost or net realizable value on the first-in, first-out basis.

### Investments

The University's noncurrent investments represent the University's endowment and other investments held for general operating purposes. The University's investments are reported at fair value in the accompanying financial statements. Investments in equity securities with readily determinable fair values and all investments in debt securities are reported at fair values with gains and losses included in the consolidated statements of activities. In the management of investments, the University authorizes certain investment managers to purchase derivative securities to attain a desired market position; and the University may directly invest in derivative securities to attain a desired market position. The University does not trade or issue derivative financial instruments other than through the investment management practices noted above. The University

records derivative securities at fair value with gains and losses reflected in the consolidated statements of activities.

The estimated fair value amounts for marketable debt, equity and fixed income securities held by the University have been determined using available market information as supplied by the various financial institutions that act as trustees or custodians for the University. For non-liquid holdings, generally limited partnership investments in private real estate, venture capital, private equity, natural resources, and private debt, estimated fair value is determined based upon financial information provided by the general partner. This financial information includes assumptions and methods that were reviewed by University management. The University believes that the estimated fair value is a reasonable estimate of market value as of June 30, 2019 and 2018. Because the limited partnerships are not readily marketable, the estimated value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market existed, and such differences could be material.

Income on operating investments and income used for the annual distribution under the annual spending policy for endowments are reported in operating revenues within the consolidated statement of activities.

#### Beneficial Interest in Perpetual Trusts

The University is the beneficiary of certain perpetual trusts held and administered by outside trustees. The fair value of these trust assets has been recorded as net assets with donor restrictions and related beneficial interest in perpetual trusts in the consolidated financial statements.

#### Investment in Plant

Total investment in plant as of June 30 is comprised of the following:

<i>(in thousands of dollars)</i>	<u>2019</u>	<u>2018</u>
Land	\$ 157,852	\$ 149,603
Buildings	7,744,942	7,218,469
Improvements other than buildings	722,140	706,585
Equipment	<u>1,750,893</u>	<u>1,612,938</u>
Total plant	10,375,827	9,687,595
Less accumulated depreciation	<u>(4,786,884)</u>	<u>(4,439,273)</u>
Total investment in plant, net	<u>\$ 5,588,943</u>	<u>\$ 5,248,322</u>

The value of land, buildings, and equipment is recorded at cost or, if received as gifts, at fair value at date of gift commitment. The University does not capitalize the cost of library books. Depreciation is computed over the estimated useful lives of the assets using the straight-line method. Useful lives range from 4 to 50 years for buildings, 10 to 20 years for improvements other than buildings, and 1 to 20 years for equipment. Depreciation expense was \$412.6 million and \$371.6 million for the fiscal years ended June 30, 2019 and 2018, respectively. The University has certain building and equipment lease agreements in effect which are considered capital leases that are included as long-term debt in the statements of financial position. These leases have been capitalized at the lower of fair market value or net present value of the minimum lease payments. Buildings and equipment held under capital leases are amortized on a straight-line basis over the shorter of the lease terms or the estimated useful lives of the assets. The capitalized cost and accumulated depreciation of the leases at June 30, 2019 and 2018 were \$130.9 million and \$71.5 million, and \$131.2 million and \$68.6 million, respectively.

Accounts Payable and Other Accrued Expenses

Accounts payable and other accrued expenses at June 30 consist of the following:

<i>(in thousands of dollars)</i>	<u>2019</u>	<u>2018</u>
Accounts payable (non-Health System)	\$ 270,540	\$ 299,611
Health System accounts payable and other accrued expenses	323,729	283,700
Accrued payroll and other related liabilities	113,249	108,782
Accrued bond interest	17,865	17,594
Student deposits	<u>3,127</u>	<u>2,903</u>
Total accounts payable and other accrued expenses	<u>\$ 728,510</u>	<u>\$ 712,590</u>

Impairment of Long-Lived Assets

Long-lived assets, which include investment in plant and definite-lived intangible assets, are assessed for impairment whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable. An impairment loss is recognized in change in net assets in the period that the impairment occurs.

Asset Retirement Obligations

The University has recognized liabilities for asset retirement obligations. The University has identified asbestos abatement and the decommissioning of the Breazeale Nuclear Reactor as conditional asset retirement obligations. These obligations are reported as part of other noncurrent liabilities within the consolidated statement of financial position. The following table details the change in liabilities for the years ended June 30:

	<i>(in thousands of dollars)</i>
Balance as of June 30, 2017	\$ 83,213
Adjustment to liability	2,855
Accretion expense	3,577
Liabilities settled	<u>(8,414)</u>
Balance as of June 30, 2018	81,231
Adjustment to liability	8,540
Accretion expense	3,516
Liabilities settled	<u>(10,121)</u>
Balance as of June 30, 2019	<u>\$ 83,166</u>

Annuities Payable

Annuities payable consist of annuity payments currently due and the actuarial amount of annuities payable. The actuarial amount of annuities payable is the present value of the aggregate liability for annuity payments over the expected lives of the beneficiaries.

Net Assets

Net assets consist of the following at June 30:

<i>(in thousands of dollars)</i>	<u>2019</u>	<u>2018</u>
Net assets without donor restrictions:		
Undesignated	\$ -	\$ 1,743
Designated for specific purposes:		
Designated for plant activities	1,501,045	1,481,893
Health System	1,306,953	1,205,733
Operating budget carryforward	1,053,237	1,072,321
Funds functioning as endowments	860,795	762,836
Designated for scholarships	112,687	107,354
Designated for postretirement benefits	(961,864)	(974,891)
Other designated net assets	236,129	224,876
Total designated for specific purposes	<u>4,108,982</u>	<u>3,880,122</u>
Net investment in plant	<u>3,543,893</u>	<u>3,316,763</u>
Non-controlling interest	<u>252,217</u>	<u>223,647</u>
Total net assets without donor restrictions	<u>\$ 7,905,092</u>	<u>\$ 7,422,275</u>
Net assets with donor restrictions:		
Endowment funds	\$ 2,307,883	\$ 2,116,650
Future contributions	200,794	256,628
Split-interest agreements	92,919	100,681
Student loan funds	17,391	17,310
Contributions for property, plant and equipment	<u>12,752</u>	<u>10,850</u>
Total net assets with donor restrictions	<u>\$ 2,631,739</u>	<u>\$ 2,502,119</u>
Total net assets	<u>\$ 10,536,831</u>	<u>\$ 9,924,394</u>

Net assets without donor restrictions that are designated for specific purposes have been designated at the discretion of management.

Income Taxes

The University files U.S. federal and state tax returns. The statute of limitations on the University's federal returns generally remains open for three years following the year they are filed. In accordance with ASC Topic 740, Income Taxes, the University continues to evaluate tax positions and has determined there is no material impact on the University financial statements.

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update ("ASU") 2014-09, "Revenue from Contracts with Customers." This update clarifies the principles for recognizing revenue that (1) removes inconsistencies and weaknesses in revenue requirements, (2) provides a more robust framework for addressing revenue issues, (3) improves comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets, (4) provides more useful information to users of financial statements through improved disclosure requirements, and (5) simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. In August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers; Deferral of the Effective Date." This update defers the effective date of the original ASU. This update was effective for the University beginning July 1, 2018. Although the adoption of this guidance did not have a material impact on the consolidated financial statements, enhanced disclosures related to revenue from contracts with customers have been included in Note 2.

In January 2016, the FASB issued ASU 2016-01, “*Financial Instruments – Overall; Recognition and Measurement of Financial Assets and Financial Liabilities.*” This update addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments and was effective for the University beginning July 1, 2018. The adoption of this guidance did not have a material impact on the consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, “*Leases.*” This update requires substantial changes to lease accounting to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The main difference between previous GAAP and this guidance is the recognition of lease assets and lease liabilities by lessees for those leases classified as operating under previous GAAP. This update is effective for the University beginning July 1, 2019 with early adoption permitted. The University is currently evaluating the impact this guidance may have on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-14, “*Not-for-Profit Entities; Presentation of Financial Statements of Not-for-Profit Entities.*” This update amends the requirements for financial statements and notes in Topic 958, Not-for-Profit Entities. The most significant amendment requires a not-for-profit entity (“NFP”) to present on the face of the statement of financial position amounts for two classes of net assets at the end of the period, rather than for the previously required three classes. That is, an NFP will report amounts for *net assets with donor restrictions* and *net assets without donor restrictions*, as well as the currently required amount for total net assets. This update was effective for the University beginning July 1, 2018 and the consolidated financial statements reflect the updated guidance, including the additions of Notes 3 and 10. In addition, the adoption of this guidance resulted in the following net asset reclassifications as of June 30, 2017:

(in thousands of dollars)

<u>Net Asset Classifications</u>	<u>ASU 2016-14 Classifications</u>		
	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total net assets</u>
As previously presented:			
Unrestricted	\$ 6,526,231	\$ -	\$ 6,526,231
Temporarily restricted	-	708,103	708,103
Permanently restricted	-	<u>1,608,164</u>	<u>1,608,164</u>
Net assets as previously presented	6,526,231	2,316,267	8,842,498
Reclassifications to implement ASU 2016-14:			
Underwater endowments	1,299	(1,299)	-
Net assets, as reclassified	<u>\$ 6,527,530</u>	<u>\$ 2,314,968</u>	<u>\$ 8,842,498</u>

In August 2016, the FASB issued ASU 2016-15, “*Statement of Cash Flows; Classification of Certain Cash Receipts and Cash Payments.*” This update provides guidance on eight specific cash flows issues with the objective of reducing the existing diversity in practice and was effective for the University beginning July 1, 2018. The adoption of this guidance did not have a material impact on the consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, “*Compensation – Retirement Benefits; Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.*” This update requires that an employer report the service cost component in the same line items as other compensation costs arising from services rendered by the pertinent employees during the period. In addition, the other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations. This update was early adopted by the University in 2019, with retrospective adoption resulting in a reclassification of \$129.3 million of operating expenses to other components of net periodic postretirement benefit cost within nonoperating activities on the consolidated statement of activities for the year ended June 30, 2018.

The reclassification adjustments for the year ended June 30, 2018 are as follows:

(in thousands of dollars)

	As previously presented	ASU 2017-07 reclassification	As currently presented
<u>Operating expenses</u>			
Instruction	\$ 1,420,364	\$ (68,449)	\$ 1,351,915
Research	857,786	(6,124)	851,662
Public service	101,470	(5,425)	96,045
Academic support	399,597	(23,166)	376,431
Student services	208,112	(7,861)	200,251
Institutional support	375,025	(17,520)	357,505
Total educational and general	3,362,354	(128,545)	3,233,809
Auxiliary enterprises	444,125	(775)	443,350
Health System expense	2,121,177	-	2,121,177
Total operating expenses	5,927,656	(129,320)	5,798,336
<u>Nonoperating activities</u>			
Other components of net periodic postretirement benefit cost	-	(129,320)	(129,320)

In June 2018, the FASB issued ASU 2018-08, “*Not-for-Profit Entities; Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made.*” This update clarifies and improves current guidance about whether a transfer of assets (or the reduction, settlement, or cancellation of liabilities) is a contribution or an exchange transaction. In addition, this update requires that an entity determine whether a contribution is conditional on the basis of whether an agreement includes a barrier that must be overcome and either a right of return of assets transferred or a right of release of a promisor’s obligation to transfer assets. This update was effective for the University beginning July 1, 2018. The adoption of this guidance did not have a material impact on the consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, “*Fair Value Measurement; Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement.*” This update modifies the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement. This update is effective for the University beginning July 1, 2020, with early adoption permitted. The University has not yet evaluated the impact this guidance may have on its consolidated financial statements.

### 3. LIQUIDITY AND AVAILABILITY OF FINANCIAL ASSETS

The University regularly monitors liquidity required to meet its operating needs and other contractual commitments, while also striving to maximize the investment of its available funds. For purposes of analyzing resources available to meet general expenditures over a 12-month period, the University considers all expenditures related to its ongoing mission-related activities as well as the conduct of services undertaken to support those activities to be general expenditures.

Student loans receivable are not considered to be available to meet general expenditures because principal and interest on these loans are used solely to make new loans.

In addition to financial assets available to meet general expenditures over the next 12 months, the University operates with a balanced budget and anticipates collecting sufficient revenue to cover general expenditures not covered by donor-restricted resources. Refer to the statement of cash flows, which identifies the sources and uses of the University’s cash and shows positive cash generated by operations for the year ended June 30, 2019.

The University has various sources of liquidity at its disposal, including cash and cash equivalents and fixed income and equity securities.

The University has designated a portion of its resources without donor restrictions for endowment and other purposes. These funds are invested for long-term appreciation and current income but remain available and may be spent at the discretion of management.

The following reflects the University's financial assets as of the statement of financial position date, reduced by amounts not available for general use within one year. Certain long-term investments could be liquidated if needed based on the terms of their agreements.

<i>(in thousands of dollars)</i>	<u>June 30, 2019</u>
Total assets	\$ 15,920,956
Less:	
Inventories	(52,516)
Prepaid expenses and other assets	(137,764)
Total investment in plant, net	(5,588,943)
Beneficial interest in perpetual trusts	(23,898)
Other assets	<u>(177,398)</u>
Total financial assets	9,940,437
Less:	
Noncurrent investments	(6,304,490)
Contractual or donor-imposed restrictions:	
Deposits held by bond trustees	(118,753)
Deposits held for others	(40,587)
Receivables subject to time restrictions	(58,071)
Receivables subject to donor-imposed restrictions	(102,791)
Loans to students, net	<u>(54,096)</u>
Financial assets available to meet cash needs for general expenditures within one year	<u>\$ 3,261,649</u>

#### 4. INVESTMENTS

Investments by major category as of June 30 are summarized as follows:

<i>(in thousands of dollars)</i>	<u>2019</u>	<u>2018</u>
Money markets	\$ 318,849	\$ 183,623
Fixed income:		
U.S. government/agency	941,173	874,684
U.S. corporate	594,125	791,604
Foreign	148,584	202,459
Other	451,674	441,925
Equities	2,198,001	2,135,407
Private capital	<u>2,059,526</u>	<u>1,767,259</u>
Total	<u>\$ 6,711,932</u>	<u>\$ 6,396,961</u>

Other fixed income investments consist of collateralized mortgage obligations, mortgage-backed securities and asset-backed securities. Equity investments are comprised of domestic and foreign common stocks. Private capital consists primarily of interests in private real estate, venture capital, private equity, natural resources, private debt, commodities and hedge fund limited partnerships.

Futures contracts comprise the University's beneficially held derivative instruments at June 30, 2019 and 2018 and are included in the fair value of the University's investments. These contracts are fully cash collateralized and marked to market daily. The fair value of derivative instruments is included in the fair value of the University's investments within the money market category. Futures contracts have minimal credit risk because the counterparties are the exchanges themselves. Fully cash collateralized derivative securities comprised \$4.0 million, or 0.06%, of total investments at June 30, 2019 and 2018. The University's derivatives consist of S&P equity futures at June 30, 2019 and 2018 and are employed as a low cost, passive investment vehicle with daily liquidity which allows the University to maintain desired market exposure in light of irregular cash flows.

The following schedules summarize the investment return and its classification in the consolidated statement of activities for the years ended June 30:

<i>(in thousands of dollars)</i> <u>2019</u>	Without donor <u>restrictions</u>	With donor <u>restrictions</u>	<u>Total</u>
Investment income	\$ 117,557	\$ 17,811	\$ 135,368
Net realized gains (losses), including endowment spending	87,123	(66,484)	20,639
Net unrealized gains	<u>177,065</u>	<u>130,090</u>	<u>307,155</u>
Total returns	<u>\$ 381,745</u>	<u>\$ 81,417</u>	<u>\$ 463,162</u>

<i>(in thousands of dollars)</i> <u>2018</u>	Without donor <u>restrictions</u>	With donor <u>Restrictions</u>	<u>Total</u>
Investment income	\$ 185,372	\$ 15,141	\$ 200,513
Net realized gains, including endowment spending	73,428	34,663	108,091
Net unrealized gains	<u>21,192</u>	<u>34,418</u>	<u>55,610</u>
Total returns	<u>\$ 279,992</u>	<u>\$ 84,222</u>	<u>\$ 364,214</u>

## 5. ENDOWMENT NET ASSETS

The University's endowment includes both donor-restricted endowment funds and funds designated to function as endowments. As required by GAAP, net assets associated with endowment funds, including funds designated to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The ASC Not-for-Profit Entities Presentation of Financial Statements Subtopic (ASC Subtopic 958-205) provides guidance on the net asset classification of donor-restricted endowment funds for not-for-profit organizations subject to an enacted version of the Uniform Prudent Management of Institutional Funds Act ("UPMIFA") and improves disclosure about an organization's endowment funds regardless of whether the organization is subject to UPMIFA. The Commonwealth of Pennsylvania has not adopted UPMIFA but rather has enacted Pennsylvania Act 141 ("PA Act 141"). PA Act 141 permits an organization's trustees to define income as a stipulated percentage of endowment assets (between 2% and 7% of the fair value of the assets averaged over a period of at least three preceding years) without regard to actual interest, dividend, or realized and unrealized gains.

The University has interpreted PA Act 141 to permit the University to spend the earnings of its endowment based on a total return approach, without regard to the fair value of the original gift. As a result of this interpretation, the University classifies as net assets with donor restrictions the original value of gifts donated to the permanent endowment, the original value of subsequent gifts to the permanent endowment, and 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. Also included in net assets with donor restrictions are gains and losses attributable to permanent endowments and deficiencies associated with funds where the value of the fund has fallen below the original value of the gift. Funds functioning as endowments are established at the direction of University management and are classified as net assets without donor restrictions due to the lack of external donor restrictions. Also included in net assets without donor restrictions are gains and losses attributable to funds functioning as endowments.

From time to time, due to unfavorable market fluctuations, the fair value of some assets associated with individual donor-restricted endowment funds may fall below the level that donors require to be retained as a perpetual fund, while other assets are unaffected to the same extent and maintain or exceed the level required. Such deficiencies are reported as net assets with donor restrictions. As of June 30, 2019 and 2018, funds with an original gift value of \$13.0 million and \$52.1 million were "underwater" by \$2.3 million and \$1.4 million, respectively. Subsequent investment gains will be used to restore the balance up to the fair market value of the original gift.



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

<i>(in thousands of dollars)</i> <u>2019</u>	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total</u>
Donor-restricted endowment funds	\$ -	\$ 2,278,892	\$ 2,278,892
Funds functioning as endowments	<u>860,795</u>	<u>-</u>	<u>860,795</u>
Total net assets	<u>\$ 860,795</u>	<u>\$ 2,278,892</u>	<u>\$ 3,139,687</u>
<i>(in thousands of dollars)</i> <u>2018</u>	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total</u>
Donor-restricted endowment funds	\$ -	\$ 2,099,675	\$ 2,099,675
Funds functioning as endowments	<u>762,836</u>	<u>-</u>	<u>762,836</u>
Total net assets	<u>\$ 762,836</u>	<u>\$ 2,099,675</u>	<u>\$ 2,862,511</u>

## Changes in endowment net assets for the years ended June 30:

<i>(in thousands of dollars)</i> <u>2019</u>	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total</u>
Endowment net assets, beginning of the year	\$ 762,836	\$ 2,099,675	\$ 2,862,511
Endowment return, net	143,382	71,869	215,251
Contributions	-	107,348	107,348
Endowment spending	(117,470)	-	(117,470)
Transfers to create funds functioning as endowments	<u>72,047</u>	<u>-</u>	<u>72,047</u>
Endowment net assets, end of the year	<u>\$ 860,795</u>	<u>\$ 2,278,892</u>	<u>\$ 3,139,687</u>
<i>(in thousands of dollars)</i> <u>2018</u>	<u>Without donor restrictions</u>	<u>With donor restrictions</u>	<u>Total</u>
Endowment net assets, beginning of the year	\$ 651,647	\$ 1,944,527	\$ 2,596,174
Endowment return, net	129,478	70,945	200,423
Contributions	-	84,203	84,203
Endowment spending	(105,183)	-	(105,183)
Transfers to create funds functioning as endowments	<u>86,894</u>	<u>-</u>	<u>86,894</u>
Endowment net assets, end of the year	<u>\$ 762,836</u>	<u>\$ 2,099,675</u>	<u>\$ 2,862,511</u>

Not included above are the endowment net assets of subsidiaries of \$32.4 million and \$20.2 million as of June 30, 2019 and 2018, respectively.

The University has adopted investment and spending policies for endowment assets that attempt to provide a relatively predictable stream of funding to programs supported by its endowment while seeking to maintain, over time, the purchasing power of the endowment assets. The overall management objective for the University's pooled endowment funds is to preserve or grow the real (inflation-adjusted) purchasing power of the assets through a prudent long-term investment strategy. This objective would be achieved on a total return basis. Under these policies, as approved by the Board of Trustees and the Penn State Investment Council, the primary investment objective of the University's pooled endowment is to attain a

real total return (net of investment management fees) that at least equals a total annual effective spending rate of 5.25% (program spending of 4.5% plus administrative costs of 0.75%) over the long term.

To satisfy 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) and current yield (interest and dividends). The University targets diversified asset allocation that places a greater emphasis on equity-based investments to achieve its long-term return objectives within prudent risk constraints. The endowment assets of the University are invested in a broad range of equities and fixed income securities, thereby limiting the market risk exposure in any one institution or individual investment.

The University has a policy of appropriating for distribution each year a certain percentage (4.5% for 2019 and 2018) of its pooled endowment fund's average fair market value over the prior five years preceding the fiscal year in which the distribution is planned. Accordingly, over the long term, the University expects the current spending policy to allow its endowment to provide generous current spending while preserving "intergenerational equity". This is consistent with the University's objective to maintain the purchasing power of the endowment assets held in perpetuity as well as to provide additional real growth through new gifts and investment returns.

## 6. FAIR VALUE MEASUREMENTS

The University utilizes the following fair value hierarchy, which prioritizes into three broad levels the inputs to valuation techniques used to measure fair value:

Level 1 – Quoted prices (unadjusted) for identical assets or liabilities in active markets as of the measurement date. Such instruments valued at Level 1 primarily consist of securities that are directly held and actively traded in public markets.

Level 2 – Inputs other than unadjusted quoted prices that are observable for the asset or liability, directly or indirectly, including quoted prices for similar assets or liabilities in active markets, inputs other than quoted prices that are observable for the asset or liability, and inputs that are derived from observable market data by correlation or other means.

Level 3 – Unobservable inputs that cannot be corroborated by observable market data.

In instances in which the inputs used to measure fair value fall into different levels of the fair value hierarchy, the fair value measurement has been determined based on the lowest level input that is significant to the fair value measurement in its entirety. The University's assessment of significance of a particular item to the fair value measurement in its entirety requires judgment, including consideration of inputs specific to the asset.

The following table presents information as of June 30, 2019 about the University's financial assets and liabilities that are measured at fair value on a recurring basis:

<i>(in thousands of dollars)</i>	Quoted Prices in Active Markets For Identical Assets <u>Level 1</u>	Significant Other Observable Inputs <u>Level 2</u>	Significant Unobservable Inputs <u>Level 3</u>	Total <u>Fair Value</u>
<b>Assets:</b>				
Long-term Investment Pool:				
Money markets	\$ 147,569	\$ 40,181	\$ -	\$ 187,750
Fixed income				
U.S. government/agency	-	106,695	-	106,695
U.S. corporate	-	72,121	-	72,121
Foreign	-	60,223	-	60,223
Other	-	86,696	40	86,736
Equities	<u>900,617</u>	<u>4,812</u>	-	<u>905,429</u>
Total	<u>\$ 1,048,186</u>	<u>\$ 370,728</u>	<u>\$ 40</u>	<u>\$ 1,418,954</u>
Operating investments:				
Money markets	\$ 90,798	\$ 40,301	\$ -	\$ 131,099
Fixed income				
U.S. government/agency	71,951	762,527	-	834,478
U.S. corporate	41,294	480,710	-	522,004
Foreign	4,733	83,628	-	88,361
Other	16,909	347,858	171	364,938
Equities	<u>214,037</u>	<u>2</u>	<u>5,453</u>	<u>219,492</u>
Total	<u>\$ 439,722</u>	<u>\$ 1,715,026</u>	<u>\$ 5,624</u>	<u>\$ 2,160,372</u>
Deposits held by bond trustees:				
Money markets	\$ 118,753	\$ -	\$ -	\$ 118,753
Beneficial interest in perpetual trusts				
	\$ -	\$ -	\$ 23,898	\$ 23,898
<b>Liabilities:</b>				
Present value of annuities payable	\$ -	\$ -	\$ 57,049	\$ 57,049

The following table presents information as of June 30, 2018 about the University's financial assets and liabilities that are measured at fair value on a recurring basis:

<i>(in thousands of dollars)</i>	Quoted Prices in Active Markets For Identical Assets <u>Level 1</u>	Significant Other Observable Inputs <u>Level 2</u>	Significant Unobservable Inputs <u>Level 3</u>	Total <u>Fair Value</u>
<b><u>Assets:</u></b>				
Long-term Investment Pool:				
Money markets	\$ 152,310	\$ 756	\$ -	\$ 153,066
Fixed income				
U.S. government/agency	-	86,060	-	86,060
U.S. corporate	-	152,990	-	152,990
Foreign	-	70,523	-	70,523
Other	-	91,022	-	91,022
Equities	<u>914,841</u>	<u>85</u>	-	<u>914,926</u>
Total	<u>\$ 1,067,151</u>	<u>\$ 401,436</u>	<u>\$ -</u>	<u>\$ 1,468,587</u>
Operating investments:				
Money markets	\$ 30,558	\$ -	\$ -	\$ 30,558
Fixed income				
U.S. government/agency	43,736	744,887	-	788,623
U.S. corporate	79,872	558,742	-	638,614
Foreign	15,023	116,913	-	131,936
Other	29,255	321,648	-	350,903
Equities	<u>158,312</u>	<u>7</u>	<u>5,297</u>	<u>163,616</u>
Total	<u>\$ 356,756</u>	<u>\$ 1,742,197</u>	<u>\$ 5,297</u>	<u>\$ 2,104,250</u>
Deposits held by bond trustees:				
Money markets	\$ 102,659	\$ -	\$ -	\$ 102,659
Beneficial interest in perpetual trusts				
	\$ -	\$ -	\$ 23,587	\$ 23,587
<b><u>Liabilities:</u></b>				
Present value of annuities payable	\$ -	\$ -	\$ 59,236	\$ 59,236

The fair value tables above exclude investments of \$3,132.6 million and \$2,824.1 million as of June 30, 2019 and 2018, respectively, which are measured at net asset value (NAV) per share or its equivalent and are not classified in the fair value hierarchy.

The Long-term Investment Pool (LTIP) is a mutual fund-like vehicle used for investing the University's endowment funds, funds functioning as endowments, and other operating funds that are expected to be held long-term. A share method of accounting for the LTIP is utilized by the University. Each participating fund enters into and withdraws from the LTIP based on monthly share values. At June 30, 2019 and 2018, the fair value of endowment funds and funds functioning as endowments within the LTIP totaled \$3,164.9 million and \$2,891.7 million, respectively. At June 30, 2019 and 2018, the fair value of operating funds included in the LTIP totaled \$1,383.5 million and \$1,398.3 million, respectively.

The following tables present information related to changes in Level 3 for each category of financial assets and liabilities for year ended June 30, 2019:

<i>(in thousands of dollars)</i>	Operating Investments	Long Term Investment Pool	Beneficial Interest in Perpetual Trusts
<u>Assets:</u>			
Beginning balance	\$ 5,297	\$ -	\$ 23,587
Total realized and unrealized gains	156	-	311
Purchases	171	40	-
Ending balance	<u>\$ 5,624</u>	<u>\$ 40</u>	<u>\$ 23,898</u>
	Present Value of Annuities Payable		
<u>Liabilities:</u>			
Beginning balance	\$ 59,236		
Actuarial adjustment of liability	1,129		
Gifts	279		
Sales	(3,595)		
Ending balance	<u>\$ 57,049</u>		

The following tables present information related to changes in Level 3 for each category of financial assets and liabilities for year ended June 30, 2018:

<i>(in thousands of dollars)</i>	Operating Investments	Beneficial Interest in Perpetual Trusts
<u>Assets:</u>		
Beginning balance	\$ 4,688	\$ 19,854
Total realized and unrealized gains	602	3,651
Gifts	-	82
Purchases	7	-
Ending balance	<u>\$ 5,297</u>	<u>\$ 23,587</u>
	Present Value of Annuities Payable	
<u>Liabilities:</u>		
Beginning balance	\$ 58,070	
Actuarial adjustment of liability	2,255	
Gifts	986	
Sales	(2,075)	
Ending balance	<u>\$ 59,236</u>	

There were no transfers of assets between Level 3 and Level 2 and between Level 1 and Level 2 in 2019 and 2018.

The following table presents the fair value and redemption frequency for those investments whose fair value is not readily determinable and is estimated using NAV or its equivalent as of June 30, 2019 and 2018:

<i>(in thousands of dollars)</i>	Fair Value		Unfunded	Redemption	Redemption
	2019	2018	Commitments At June 30, 2019		
<b>Commingled Funds:</b>					
U.S. Equity	\$ 262,664	\$ -		Monthly	30 days
Non-U.S. Equity	693,701	927,415		Quarterly/ Daily/Monthly	5-90 days
Subtotal	<u>\$ 956,365</u>	<u>\$ 927,415</u>			
<b>Marketable Investment Partnerships:</b>					
Absolute Return	\$ 61,895	\$ 59,528		Quarterly	60 days
Distressed Debt	54,518	54,317		Quarterly/ Semi Annual	60-90 days
Commodities	70,711	82,833		Monthly	30-60 days
Opportunistic	291,267	268,806		Monthly/ Quarterly/ Annually	30-90 days
Directional Long/Short	288,072	303,068		Monthly	30 days
Subtotal	<u>\$ 766,463</u>	<u>\$ 768,552</u>			
<b>Non-Marketable Investment Partnerships:</b>					
Private Real Estate	\$ 56,782	\$ 66,430	\$ 89,968		
Venture Capital	530,760	383,882	182,207		
Private Equity	500,739	390,952	309,196		
Natural Resources	133,764	142,396	58,005		
Private Debt	187,733	144,497	236,252		
Subtotal	<u>\$ 1,409,778</u>	<u>\$ 1,128,157</u>	<u>\$ 875,628</u>		
Total	<u>\$ 3,132,606</u>	<u>\$ 2,824,124</u>	<u>\$ 875,628</u>		

Commingled Funds include investments that aggregate assets from multiple investors and are managed collectively following a prescribed strategy. Redemptions vary from daily to quarterly with required notification of 90 days or less. U.S. equity strategies aim to diversify sources of return by investing in various U.S. equity vehicles. The non-U.S. equity strategy is invested in developed and developing countries outside of the United States and spans the entire equity capitalization spectrum. These collective portfolios preclude the need to obtain securities registration in foreign countries.

Marketable Investment Partnerships include several hedge funds whose underlying positions are traded via public securities markets. Liquidity terms range from quarterly to annually with advance notification for redemption ranging from 30 to 90 days. The fair values of the investments for each fund in this category have been estimated using the net asset value of the LTIP's share holdings in the fund. Five major investment strategies are included within this category. Absolute Return refers to relative value strategies. Distressed Debt refers to securities rated below investment grade, along with non-rated debt. Commodities refer to publicly traded commodity instruments primarily including futures and options. Opportunistic refers to global multi-strategy. Directional refers to equity long/short strategies in both U.S. and non-U.S. markets.

Non-Marketable Investment Partnerships include limited partnership interests in a variety of illiquid investments. The fair values of the investments for each fund in this category have been estimated using the net asset value of the LTIP's ownership interest in partner's capital and cannot be redeemed. Realizations from each fund are received as the underlying investments are liquidated or distributed, typically within 10 years after initial commitment. Unfunded commitments represent remaining commitments of the LTIP's drawdown funds as of June 30, 2019. Five major investment strategies are included within this category.

Private Real Estate includes properties primarily located in the U.S. Venture Capital includes non-public startups and enterprises in early stages of growth located globally. Private Equity includes buyouts of previously public companies as well as enterprises that are planning to go public in the near future, including funds focusing on opportunities outside the U.S. Natural Resources largely include companies primarily involved in oil and natural gas in addition to a variety of other natural resources. Private Debt includes global private credit securities rated below investment grade as well as non-rated debt.

## 7. CONTRIBUTIONS RECEIVABLE

Contributions receivable are summarized as follows as of June 30:

<i>(in thousands of dollars)</i>	<u>2019</u>	<u>2018</u>
In one year or less	\$ 47,135	\$ 69,963
Between one year and five years	75,687	70,295
More than five years	<u>112,164</u>	<u>114,750</u>
Contributions receivable, gross	234,986	255,008
Less allowance	(5,723)	(6,427)
Less discount	<u>(49,733)</u>	<u>(52,096)</u>
Contributions receivable, net	<u>\$ 179,530</u>	<u>\$ 196,485</u>

Contributions received during the years ended June 30, 2019 and 2018 are discounted at rates ranging from 1.71% to 2.15% and 2.33% to 2.90%, respectively. The discount rates for prior periods ranged from 0.11% to 6.28%.

At June 30, 2019 and 2018, the University has received bequest intentions of \$606.3 million and \$546.2 million, respectively, and certain other conditional promises to give of \$50.5 million and \$30.7 million, respectively. These intentions and conditional promises to give are not included in the consolidated financial statements.

The following table summarizes the change in contributions receivable, net during the year ended June 30, 2019:

	<i>(in thousands of dollars)</i>
Balance at the beginning of year	\$ 196,485
New pledges	68,206
Collections on pledges	(60,657)
Correction to remove certain conditional pledges	(27,571)
Decrease in allowance	704
Decrease in unamortized discounts	<u>2,363</u>
Balance at the end of year	<u>\$ 179,530</u>

In preparing the 2019 financial statements, the University identified and corrected an out of period error related to certain conditional contributions that had been previously recognized as unconditional contributions. As such, contributions receivable in the accompanying consolidated statement of financial position as of June 30, 2019, and gifts and pledges with donor restrictions in the accompanying consolidated statement of activities for the year ended June 30, 2019 have been reduced by \$27.6 million, respectively, to correct this out of period error. In addition, the University determined that its previously reported conditional promises to give of approximately \$104.6 million as of June 30, 2018 were understated by approximately \$472.3 million. As such, the bequest intentions amounts disclosed above as of June 30, 2018 has been revised to correct the previously reported amount. The University has not revised its previously reported consolidated financial statements for the correction of the foregoing errors based on the belief that the effect of such errors is not material.

**8. LONG-TERM DEBT**

The various bond issues, notes payable and capital lease obligations that are included in long-term debt in the statements of financial position consist of the following at June 30:

<i>(in thousands of dollars)</i>	<u>2019</u>	<u>2018</u>
<u>The Pennsylvania State University Bonds</u>		
Series 2019A	\$ 107,000	\$ -
Series 2019B	119,000	-
Series 2018	64,210	64,210
Series 2017A	154,680	157,080
Series 2017B	122,340	125,000
Series 2016A	116,890	119,580
Series 2016B	211,980	221,480
Series 2015A	60,800	62,320
Series 2015B	100,515	104,335
Series 2010	123,625	127,580
Series 2009B	74,235	74,235
Series 2007B	43,835	47,545
 <u>Pennsylvania Higher Educational Facilities</u>		
<u>Authority University Revenue Bonds</u>		
<u>(issued for The Pennsylvania State University)</u>		
Series 2006	2,155	2,410
Series 2004	2,230	2,540
Series 2002	1,530	1,995
 <u>Lycoming County Authority College</u>		
<u>Revenue Bonds (issued for Penn College)</u>		
Series 2016	50,675	52,465
Series 2015	3,440	5,030
Series 2012	22,175	23,255
Series 2011	<u>37,655</u>	<u>37,735</u>
Total bonds payable	1,418,970	1,228,795
Unamortized bond premiums	164,003	146,254
Unamortized deferred bond costs	(6,504)	(5,981)
 <u>Notes payable and capital leases</u>		
Notes payable	21,366	24,632
Capital lease obligations	<u>52,817</u>	<u>56,477</u>
Total notes payable and capital leases	<u>74,183</u>	<u>81,109</u>
Total long-term debt	<u>\$ 1,650,652</u>	<u>\$ 1,450,177</u>



<u>Debt issuance</u>	<u>Interest rate mode</u>	<u>Interest rates</u>	<u>Payment ranges and maturity</u> <i>(in thousands of dollars)</i>
<b>The Pennsylvania State University Bonds</b>			
Series 2019A	Fixed	5.00%	\$1,575 to \$6,720 through September 2049
Series 2019B	Fixed	2.05% - 3.50%	\$2,555 to \$3,720 through September 2034 with \$20,455 and \$52,515 due September 2039 and September 2049, respectively
Series 2018	Fixed	2.00% - 5.00%	\$975 to \$2,320 through September 2037 with \$16,650 and \$18,255 due September 2043 and September 2048, respectively
Series 2017A	Fixed	2.00% - 5.00%	\$2,510 to \$5,965 through September 2037 with \$34,750 and \$44,620 due September 2042 and September 2047, respectively
Series 2017B	Fixed	1.477% - 3.793%	\$2,695 to \$3,830 through September 2032 with \$21,305 and \$56,595 due September 2037 and September 2047, respectively
Series 2016A	Fixed	5.00%	\$2,820 to \$6,465 through September 2036 with \$37,520 due September 2041
Series 2016B	Fixed	4.00% - 5.00%	\$7,165 to \$22,195 through September 2036
Series 2015A	Fixed	5.00%	\$1,580 to \$3,445 through September 2035 with \$20,000 due September 2040
Series 2015B	Fixed	5.00%	\$3,975 to \$8,435 through September 2035
Series 2010	Fixed	3.375% - 5.00%	\$4,115 to \$6,595 through March 2030 with \$21,805 and \$44,245 due March 2035 and March 2040, respectively
Series 2009B	Variable	1.58%	June 2031
Series 2007B	Fixed	5.25%	\$3,910 to \$5,955 through August 2027
<b>Pennsylvania Higher Educational Facilities Authority ("PHEFA") University Revenue Bonds</b>			
Series 2006	Fixed	4.375% - 5.125%*	\$265 to \$280 through September 2020 with \$1,610 due September 2025
Series 2004	Fixed	4.80% - 5.00%*	\$325 due September 2019 and \$1,905 due September 2024
Series 2002	Fixed	5.00%*	\$2,435 due March 2022
*Annual interest costs to the University for interest rates greater than 3.00% are subsidized by PHEFA.			
<b>Lycoming County Authority College Revenue Bonds</b>			
Series 2016	Fixed	2.125% - 5.00%	\$1,855 to \$3,615 through October 2032 with \$19,345 due October 2037
Series 2015	Fixed	2.50% - 4.00%	\$465 to \$625 through January 2025
Series 2012	Fixed	2.50% - 5.00%	\$1,170 due May 2020 with \$2,565, \$6,395 and \$12,045 due May 2022, May 2026 and May 2032, respectively
Series 2011	Fixed	4.00% - 5.24%	\$1,565 to \$1,850 through July 2021 with \$14,170 and \$18,705 due July 2026 and July 2030, respectively

The Series 2019A Bonds are general obligation bonds issued in June 2019 for the purpose of financing various construction and renovation projects. The Series 2019A Bonds are subject to early redemption provisions, at the option of the University, beginning September 2029.

The Series 2019B Bonds are taxable general obligation bonds issued in June 2019 for the purpose of financing the general corporate purposes of the University. The Series 2019B Bonds are subject to early redemption provisions, at the option of the University, in order of their maturity, at the make-whole redemption price. The bonds maturing in September 2039 and September 2049 are subject to mandatory sinking fund redemption.

The Series 2009B Bonds are currently paying interest on a variable rate basis at a long-term rate for the period June 1, 2019 through May 31, 2020. The University has the option to convert to another variable rate (daily, weekly, monthly or flexible) or to a fixed rate basis (such rates are generally determined on a market basis) at respective conversion dates. The bonds currently pay interest at 1.58% with adjustment on the respective date to the rate the remarketing agent believes will cause the bonds to have a market value equal to the principal. The 2009B bondholders have the right to tender bonds on the purchase dates while such bonds bear interest at the daily, weekly or monthly rate. The 2009B Bonds were issued subject to the self-liquidity program established by the University on the date of issuance pursuant to which the University will provide liquidity for the 2009B Bonds from its general funds in the event of insufficient remarketing proceeds.

The University has complied with all financial debt covenants for the years ended June 30, 2019 and 2018.

Maturities and sinking fund requirements on bonds payable for each of the next five fiscal years and thereafter are summarized as follows:

<u>Year</u>	Annual <u>Installments</u> <i>(in thousands of dollars)</i>
2020	\$ 38,760
2021	44,605
2022	46,655
2023	48,790
2024	50,965
Thereafter	1,189,195
	<u>\$ 1,418,970</u>

The fair value of the University's bonds payable is estimated based on current rates offered for similar issues with similar security, terms and maturities using available market information as supplied by the various financial institutions who act as trustees or custodians for the University. At June 30, 2019, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, are \$1,576.5 million and \$1,596.8 million, respectively. At June 30, 2018, the carrying value and estimated fair value of the University's bonds payable, including issuance premiums and deferred bond costs, were \$1,369.1 million and \$1,347.6 million, respectively. Certain bond issues have associated issuance premiums; these issuance premiums total \$164.0 million and \$146.3 million at June 30, 2019 and 2018, respectively, and are presented within the statement of financial position as long-term debt. These issuance premiums will be amortized over the term of the respective outstanding bonds. Certain bond issues have associated deferred bond costs; these deferred bond costs total \$6.5 million and \$6.0 million at June 30, 2019 and 2018, respectively, and are presented within the statement of financial position as a reduction in long-term debt. These deferred bond costs will be amortized over the term of the respective outstanding bonds.

#### Notes payable and capital leases

The University has three notes payable included within the consolidated statements of financial position at June 30, 2019 with balances of \$5.8 million, \$7.0 million, and \$8.6 million. These notes have payments due annually through June 2024, June 2025, and March 2026 and bear interest at 2.60%, 2.85%, and 2.80%, respectively. The current portion of payments due under these notes totals \$3.4 million at June 30, 2019.

The University has certain building and equipment lease agreements in effect which are considered capital leases. Future minimum lease payments under capital leases together with the present value of the net minimum lease payments as of June 30, 2019 are as follows:

<u>Year</u>	<i>(in thousands of dollars)</i>
2020	\$ 13,013
2021	10,590
2022	7,133
2023	5,593
2024	4,504
Thereafter	<u>26,764</u>
Total minimum lease payments	67,597
Less imputed interest	<u>(14,780)</u>
Capital lease obligation	52,817
Current portion	<u>10,956</u>
Long-term portion	<u>\$ 41,861</u>

## 9. OPERATING LEASES

The University has certain lease agreements in effect which are considered operating leases. During the year ended June 30, 2019, the University recorded expenses of \$22.6 million for leased equipment and \$37.7 million for leased building space. During the year ended June 30, 2018, the University recorded expenses of \$22.1 million for leased equipment and \$31.1 million for leased building space.

Future minimum lease payments under operating leases as of June 30, 2019 are as follows:

<u>Year</u>	<i>(in thousands of dollars)</i>
2020	\$ 27,625
2021	19,921
2022	15,452
2023	12,076
2024	11,189
Thereafter	<u>46,334</u>
Total minimum lease payments	<u>\$ 132,597</u>

## 10. FUNCTIONAL AND NATURAL CLASSIFICATION OF EXPENSES

Functional expenses by natural classification as of June 30, 2019 are as follows:

<i>(in thousands of dollars)</i>	<u>Educational and General</u>	<u>Auxiliary Enterprises</u>	<u>Health System</u>	<u>Total</u>
Salaries and wages	\$ 1,693,149	\$ 108,831	\$ 1,110,763	\$ 2,912,743
Benefits	539,695	55,855	285,459	881,009
Depreciation	272,561	38,203	101,813	412,577
Plant operations and maintenance	150,493	19,585	47,789	217,867
Other components of net periodic postretirement benefit cost	96,344	628	-	96,972
Interest	24,599	23,031	11,902	59,532
Supplies, services, and other	<u>732,797</u>	<u>219,789</u>	<u>843,775</u>	<u>1,796,361</u>
Total	<u>\$ 3,509,638</u>	<u>\$ 465,922</u>	<u>\$ 2,401,501</u>	<u>\$ 6,377,061</u>

Total expenses by natural classification as of June 30, 2018 are as follows:

*(in thousands of dollars)*

	<u>Total</u>
Salaries and wages	\$ 2,715,225
Benefits	830,737
Depreciation	371,570
Plant operations and maintenance	218,044
Other components of net periodic postretirement benefit cost	129,320
Interest	55,402
Supplies, services, and other	<u>1,607,358</u>
Total	<u>\$ 5,927,656</u>

The costs of plant operations and maintenance, depreciation, and interest have been allocated across all functional expense categories to reflect the full cost of those activities. Plant operations and maintenance and depreciation expense are allocated based on the total proportionate expenses of each functional classification. Interest expense is allocated based on the proportionate share of total debt-financed construction.

## 11. RETIREMENT BENEFITS

The University provides retirement benefits for substantially all regular employees, primarily through either contributory defined benefit plans administered by the Commonwealth of Pennsylvania State Employees' Retirement System ("SERS") and The Public School Employees' Retirement System or defined contribution plans administered by the Teachers Insurance and Annuity Association. The University is billed for its share of the estimated actuarial cost of the defined benefit plans (\$125.8 million and \$121.0 million for the years ended June 30, 2019 and 2018, respectively). The Health System provides retirement benefits for substantially all employees through one of three defined contribution plans administered by Empower Retirement. The University's total cost for retirement benefits, included in expenses, is \$285.2 million and \$269.7 million for the years ended June 30, 2019 and 2018, respectively.

The SERS is the administrator of a cost-sharing, multi-employer retirement system established by the Commonwealth of Pennsylvania to provide pension benefits for employees of state government and certain independent agencies. As provided by statute, the SERS Board of Trustees has exclusive control and management responsibility of the funds and full power to invest the funds. The SERS funding policy provides for periodic member contributions at statutory rates and employer contributions at actuarially determined rates (expressed as a percentage of annual gross pay) that are sufficient to accumulate assets to pay benefits when due. The University's contributions to this plan for the years ended June 30, 2019 and 2018 were \$122.7 million and \$118.2 million, respectively, and represent approximately 6.0% of total contributions to the plan based on projections for fiscal year 2019. The plan is funded at less than 65% with the funded ratio of the plan at 56.0% as of December 31, 2018.

## 12. POSTRETIREMENT BENEFITS

The University sponsors a retiree medical plan covering eligible retirees and eligible dependents. This program includes a Preferred Provider Organization ("PPO") plan (both a traditional and a qualified high deductible option) for retirees and their dependents who are not eligible for Medicare, and a Medicare Advantage PPO plan. In addition, the University provides certain retiree life insurance benefits to eligible retirees as described below.

Employees who were hired prior to January 1, 2010 are eligible for medical coverage after they retire if either of the following requirements are satisfied:

- they are at least age 60 and have at least 15 years of continuous regular full-time employment and participation in a University-sponsored medical plan immediately preceding the retirement date

- regardless of age, if they have at least 25 years of regular full-time service. The last 10 of those 25 years of University service must be continuous and they must participate in a University-sponsored medical plan during the last 10 years immediately preceding the retirement date.

Effective January 1, 2016, any non-union employee who retires on or before December 31, 2020 will receive a \$5,000 term life insurance policy benefit at no cost to the employee. If a non-union employee retires after December 31, 2020, no life insurance benefit is provided. For union employees, a \$5,000 term life insurance policy is provided at no cost to the employee regardless of their retirement date.

The retiree PPO medical plan is a self-funded program, and all medical claims and other expenses are paid from net assets without donor restrictions of the University. The Medicare Advantage PPO plan and life insurance program are fully-insured. The retirees pay varying amounts for coverage under the medical plan.

For those employees who were hired after December 31, 2009, the University will contribute funds each month on their behalf to a Retirement Healthcare Savings Plan. This plan is designed to help pay for qualified medical and health-related expenses in retirement, including the purchase of a health insurance policy.

Retirees will be eligible to access their Retirement Healthcare Savings Plan account when they are no longer actively employed at Penn State and have satisfied either of the following requirements:

- completed 25 years of continuous full-time service and are age 60 or older
- completed a minimum of 15 years of continuous full-time service and are age 65 or older.

Included in net assets without donor restrictions at June 30, 2019 and 2018 are the following amounts that have not yet been recognized in net periodic postretirement cost: unrecognized prior service cost (benefit) of (\$2.5) million and (\$4.1) million and unrecognized actuarial loss of \$396.9 million and \$459.7 million, respectively.

The following sets forth the plan's benefit obligation, plan assets and funded status reconciled with the amounts recognized in the University's consolidated statements of financial position at June 30:

Change in benefit obligation:

(in thousands of dollars)

	<u>2019</u>	<u>2018</u>
Benefit obligation at beginning of year	\$ 2,193,555	\$ 2,318,462
Service cost	41,329	47,477
Interest cost	89,066	92,448
Actuarial gain	(171,326)	(95,091)
Benefits paid	(46,617)	(58,199)
Plan amendment	-	1,312
Plan assumptions	<u>118,028</u>	<u>(112,854)</u>
Benefit obligation at end of year	<u>\$ 2,224,035</u>	<u>\$ 2,193,555</u>

Change in plan assets:

(in thousands of dollars)

	<u>2019</u>	<u>2018</u>
Fair value of plan assets at beginning of year	\$ -	\$ -
Employer contributions	46,617	58,199
Benefits paid	<u>(46,617)</u>	<u>(58,199)</u>
Fair value of plan assets at end of year	<u>\$ -</u>	<u>\$ -</u>
Funded status	\$ (2,224,035)	\$ (2,193,555)
Unrecognized prior service cost (benefit)	-	-
Unrecognized net actuarial loss	-	-
Accrued postretirement benefit expense	<u>\$ (2,224,035)</u>	<u>\$ (2,193,555)</u>

Net periodic postretirement cost includes the following components for the years ended June 30:  
(in thousands of dollars)

	<u>2019</u>	<u>2018</u>
Operating expenses:		
Service cost	\$ 41,329	\$ 47,477
Nonoperating activities:		
Interest cost	89,066	92,448
Amortization of prior service cost	(1,574)	(3,131)
Amortization of unrecognized net loss	<u>9,480</u>	<u>40,003</u>
Net periodic postretirement cost	<u>\$ 138,301</u>	<u>\$ 176,797</u>

The assumed healthcare cost trend rate used in measuring the accumulated postretirement benefit obligation was 6.90% and 7.20% for the years ended June 30, 2019 and 2018, respectively, reduced each year to an ultimate level of 5.00%. The postretirement benefit obligation discount rate was 3.92% and 4.46% for the years ended June 30, 2019 and 2018, respectively. During 2019, the plan had favorable claims experience compared to assumptions and positive results related to the change in the mortality table and improvement scale. During 2018, the plan had favorable demographic experience compared to assumptions. In addition, the plan had positive per capita medical claims experience over the past 3 years contributing to favorable results during 2018.

If the healthcare cost trend rate assumptions were increased by 1% in each year, the accumulated postretirement benefit obligation would be increased by \$461.6 million and \$452.6 million as of June 30, 2019 and 2018, respectively. The effect of this change on the sum of the service cost and interest cost components of the net periodic postretirement benefit cost would be an increase of \$30.8 million and \$34.2 million as of June 30, 2019 and 2018, respectively. If the healthcare cost trend rate assumptions were decreased by 1% in each year, the accumulated postretirement benefit obligation would be decreased by \$367.7 million and \$348.3 million as of June 30, 2019 and 2018, respectively. The effect of this change on the sum of the service cost and interest cost components of the net periodic postretirement benefit cost would be a decrease of \$23.3 million and \$25.7 million as of June 30, 2019 and 2018, respectively.

Gains and losses in excess of 10% of the accumulated postretirement benefit obligation are amortized over the average future service to assumed retirement of active participants.

Postretirement benefits expected to be paid for the years ended June 30 are as follows:

	<i>(in thousands of dollars)</i>
2020	\$ 57,457
2021	62,212
2022	66,950
2023	72,001
2024	77,291
2025-29	457,061

### 13. PENN STATE HEALTH

Penn State Health was organized exclusively for the charitable, educational, and scientific purposes as defined and limited by Section 501(c)(3) of the Internal Revenue Code of 1986. The Health System's purpose is to promote, support and further the charitable, educational, and scientific purposes of the University. The Health System is controlled by the University with a minority ownership by Highmark Health.

The wholly owned subsidiaries of the Health System include the Milton S. Hershey Medical Center ("MSHMC"), Saint Joseph's Regional Health Network and Medical Group ("SJRHN/SJMG"), Penn State Community Medical Group ("PSCMG"), Nittany Health, Inc. ("Nittany"), Central PA Health Network ("CIN") and Hampden Medical Center ("Hampden").

In July 2015, the Health System acquired SJRHN/SJMG. SJRHN/SJMG is a 180-bed, not-for-profit acute care hospital that provides inpatient, outpatient, and emergency care services to the Berks County Region.

In January 2016, the ownership of Nittany transferred from the University to the Health System. Nittany (formerly Penn State Hershey Health System, Inc.) is a corporate investor in healthcare joint ventures, which are supportive of the missions of the Health System. Nittany's objectives are consistent with the strategic objective to extend the range of healthcare services offered by and through the Health System over a broader geographic region. Nittany recorded non-controlling interest related to the acquisition of additional ownership interest in a joint venture. This non-controlling interest is recorded in net assets without donor restrictions within the consolidated statements of financial position with a value at June 30, 2019 and 2018 of \$2.1 million and \$1.9 million, respectively.

In May 2016, the ownership of MSHMC transferred from the University to the Health System. At June 30, 2019, MSHMC is a 548-bed, not-for-profit acute care, academic medical center located in Hershey, Pennsylvania. The University retains ownership of the buildings and land occupied by MSHMC, which is co-located with the University's College of Medicine. The clinical facilities of the Medical Center complex are leased to MSHMC. MSHMC makes certain payments to support the College of Medicine. MSHMC is a Level 1 Regional Trauma Center and provides inpatient, outpatient, and emergency care services to residents of central Pennsylvania through its central facility in Hershey and 35 medical group sites. Additionally, MSHMC operates an ambulatory surgical center, which provides endoscopy procedures to the Centre County Region.

In February 2017, the Health System established PSCMG. The purpose of PSCMG is to extend the ambulatory clinical footprint of the Health System into a broader geographic region. In October 2017, the Health System, through an asset purchase agreement, began operations of 18 medical group sites. During 2019, 5 additional clinic sites were acquired.

In July 2017, CIN ownership was transferred from joint ownership by MSHMC and SJRHN/SJMG to direct ownership by the Health System. The purpose of CIN is to develop population health initiatives across the Health System organization.

In October 2017, the Health System established Hampden (formerly 4814 Development Assoc., Inc.). The purpose of Hampden was to acquire property in Cumberland County, which is intended to be the future site of an acute care hospital. The land acquisition took place in October 2017.

In March 2018, the Health System formed LPADC ("LPADC"). The purpose of LPADC was to acquire property in Lancaster County, which is intended to be the future site of an acute care hospital and medical office building. The land acquisition took place in July 2019.

In January 2018, Highmark Health purchased a 20% minority interest in the Health System. The Health System received cash contributions of \$200.0 million in exchange for three board seats and certain reserve powers. The contributions are recorded as capital contributions within non-controlling interest on the statement of activities for the year ended June 30, 2018. Additionally, the Health System recorded non-controlling interest, excess of revenues over expenses, related to this minority interest. The total non-controlling interest related to Highmark Health is recorded in net assets without donor restrictions within the consolidated statements of financial position with a value at June 30, 2019 and 2018 of \$250.1 million and \$221.7 million, respectively.

During 2019 and 2018, the Health System received cash contributions related to the Community Health Reinvestment Act from Highmark Health. The cash contributions of \$30.0 million are recorded as Health System revenue on the consolidated statements of activities. Additionally, during 2019 and 2018, the Health System paid Highmark Health \$161.6 million and \$146.3 million, respectively, related to employee benefit expenses and recorded \$577.5 million and \$544.0 million, respectively, in net patient revenue related to Highmark Health Third Party Payor contracts.

## 14. CONTINGENCIES AND COMMITMENTS

### Contractual Obligations

The University has contractual obligations for the construction of new buildings and for additions to existing buildings in the amount of \$1,279.9 million, of which \$1,055.7 million has been paid or accrued as of June 30, 2019. The contract costs are being financed from available resources and from borrowings.

### Letters of Credit

The University has available letters of credit in the amount of \$37.8 million and \$31.8 million as of June 30, 2019 and 2018, respectively. These letters of credit are used primarily to comply with minimum state and federal regulatory laws that govern various University activities. The fair value of these letters of credit approximates contract values based on the nature of the fee arrangements with the issuing banks.

### Guarantees

The University has a contract with a third party whereby the third party acts as an agent of the University in connection with procurement of electricity. The University guarantees the payment of the obligations of the third party incurred on behalf of the University to counterparties.

### Self-Insurance

The University has a coordinated program of commercial and self-insurance for medical malpractice claims at MSHMC through the use of a qualified trust and a domestic captive insurance company in combination with a self-insured retention layer and is supplementing this program through participation in the Pennsylvania Medical Care Availability and Reduction of Error Fund ("MCARE Fund"), in accordance with Pennsylvania law. An estimate of the present value, discounted at 2% for the years ended June 30, 2019 and 2018, of the medical malpractice claims liability in the amount of \$166.3 million and \$131.1 million is recorded as of June 30, 2019 and 2018, respectively.

The subsidiaries of the Health System are self-insured for all medical malpractice claims asserted on or after July 1, 2003, for all amounts that are below the coverage of excess insurance policies and not included in the insurance coverage of the MCARE Fund. Under the self-insurance program, the Health System is required to maintain a malpractice trust fund in an amount at least equal to the expected loss of known claims. The balance of this trust fund was \$32.1 million and \$31.5 million at June 30, 2019 and 2018, respectively. The Health System intends to fund any claims due during the next year from cash flows from operations.

With approval from the Pennsylvania Department of Labor and Industry ("PA-DLI"), the University elected to self-insure potential obligations applicable to Pennsylvania workers' compensation. Certain claims under the program are contractually administered by a private agency. The University purchased insurance coverage for excess obligations over \$600,000 per incident. An estimate of the self-insured workers' compensation claims liability in the amount of \$7.2 million and \$6.8 million, discounted at 1.76% and 2.73%, respectively, is recorded as of June 30, 2019 and 2018, respectively. The University has established a trust fund, in the amount of \$13.8 million and \$13.2 million at June 30, 2019 and 2018, respectively, as required by PA-DLI, to provide for the payment of claims under this self-insurance program. The Health System is self-insured for workers' compensation claims and has purchased excess policies through commercial insurers which cover individual claims in excess of \$750,000 per incident for workers' compensation claims.

The University and the Health System are self-insured for certain health care benefits provided to employees. The University, MSHMC and SJRHN/SJMG have purchased excess policies which cover employee health benefit claims in excess of \$600,000, \$575,000 and \$375,000 per employee per year, respectively. The University and the Health System provide for reported claims and claims incurred but not reported.

### Litigation and Contingencies

In November 2011, the University was made aware of certain allegations in a Commonwealth of Pennsylvania Grand Jury presentment. Various legal proceedings and investigations have arisen as a result of such allegations, including criminal proceedings against former officers and employees of the



University. Certain claims and civil litigation have been filed against the University with anticipation that other complaints could be filed. The University has recognized an expense of \$0.1 million and \$4.0 million for the years ended June 30, 2019 and 2018, respectively, with such amounts included in institutional support within the consolidated statement of activities. Additional claims could be paid in the future but without having knowledge of the number and nature of such claims the University is unable to predict the outcome of these matters or the ultimate legal and financial liability and at this time cannot reasonably estimate the possible loss or range of loss. Accordingly, no amounts have been accrued in the financial statements for these claims.

In addition to the settlement costs, the University has incurred costs for the fiscal years ended June 30, 2019 and 2018 totaling \$2.8 million and \$3.5 million, respectively, for internal investigation, legal, communications and other related costs. These costs are included in institutional support within the consolidated statement of activities.

The University has submitted claims to insurance carriers related to the claims that have been settled or paid. Some insurance claims have been paid and other insurance claims remain outstanding.

Based on its operation of the Health System (see Note 13), the University, like the rest of the healthcare industry, is subject to numerous laws and regulations of federal, state and local governments. Compliance with these laws and regulations can be subject to government review and interpretation, as well as regulatory actions. Recently, government reviews of healthcare providers for compliance with regulations have increased. Although the University believes it has done its best to comply with these numerous regulations, such government reviews could result in significant repayments of previously billed and collected revenues from patient services.

Various other legal proceedings have arisen in the normal course of conducting University business. The outcome of such litigation is not expected to have a material effect on the financial position of the University.

## **15. SUBSEQUENT EVENTS**

The University has evaluated subsequent events through October 25, 2019, the date on which the consolidated financial statements were issued. It did not identify any subsequent events to be disclosed other than those below or previously noted.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
10 001		Agricultural Research Basic and Applied Research	Research and Development	\$ 1,120,661	\$ 597,947,085	Y				\$ 1,001,927
10 001		Agricultural Research Basic and Applied Research	Research and Development	\$ 1,120,661	\$ 597,947,085	N	Geisinger Health System	U.S. DEPARTMENT OF AGRICULTURE		\$ 55,187
10 001		Agricultural Research Basic and Applied Research	Research and Development	\$ 1,120,661	\$ 597,947,085	N	Geisinger Health System	USDA AGRICULTURAL RESEARCH SER		\$ (423)
10 025		Plant and Animal Disease, Pest Control, and Animal Care	Research and Development	\$ 1,460,066	\$ 597,947,085	Y			\$ 18,833	\$ 536,282
10 025		Plant and Animal Disease, Pest Control, and Animal Care	Research and Development	\$ 1,460,066	\$ 597,947,085	N	Commonwealth of Pennsylvania	44187358		\$ 134,027
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Commonwealth of Pennsylvania	44166072		\$ 1,742
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Commonwealth of Pennsylvania	44166075		\$ 5,695
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Commonwealth of Pennsylvania	44176523		\$ 20,427
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Commonwealth of Pennsylvania	44176527		\$ 15,504
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Commonwealth of Pennsylvania	44176532		\$ 37,962
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Commonwealth of Pennsylvania	44176702		\$ 28,532
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Commonwealth of Pennsylvania	ME 44187030		\$ 45,205
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Pennsylvania Co-Operative Potato Growers, Inc.	ME# 44166082		\$ 8,220
10 170		Specialty Crop Block Grant Program - Farm Bill	Research and Development	\$ 233,190	\$ 597,947,085	N	Pennsylvania Co-Operative Potato Growers, Inc.	ME44176528		\$ 29,703
10 200		Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,192,964	\$ 597,947,085	Y				\$ 787,071
10 200		Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,192,964	\$ 597,947,085	N	Kansas State University	2015-39575-24367		\$ 83,372
10 200		Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,192,964	\$ 597,947,085	N	Kansas State University	2017-39575-27343		\$ 239,416
10 200		Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,192,964	\$ 597,947,085	N	Rutgers University	2017-34383-27261		\$ 15,000
10 200		Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,192,964	\$ 597,947,085	N	Rutgers University	2017-34383-27261 AMEND 1		\$ 18,800
10 200		Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,192,964	\$ 597,947,085	N	Rutgers University	2017-34383-2761		\$ 2,397
10 200		Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,192,964	\$ 597,947,085	N	University of Maine, The	2009-34141-20050		\$ (414)
10 200		Grants for Agricultural Research, Special Research Grants	Research and Development	\$ 1,192,964	\$ 597,947,085	N	University of Maine, The	2016-34141-25708		\$ 47,322
10 210		Higher Education - Graduate Fellowships Grant Program	Research and Development	\$ 80,855	\$ 597,947,085	Y				\$ 80,855
10 212		Small Business Innovation Research	Research and Development	\$ 68,005	\$ 597,947,085	N	Epicrop Technologies Inc.	2017-33610-27022		\$ 68,005
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 383,336	\$ 597,947,085	N	University of Maryland	20173864026915		\$ 9,769
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 383,336	\$ 597,947,085	N	University of Vermont, The	2014-38640-22161		\$ 19,093
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 383,336	\$ 597,947,085	N	University of Vermont, The	2015-38640-23777		\$ 34,151
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 383,336	\$ 597,947,085	N	University of Vermont, The	2016-38640-25380		\$ 196,674
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 383,336	\$ 597,947,085	N	University of Vermont, The	2017-38640-26915	\$ 1,989	\$ 41,795
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 383,336	\$ 597,947,085	N	University of Vermont, The	2018-38640-28415		\$ 22,643
10 215		Sustainable Agriculture Research and Education	Research and Development	\$ 383,336	\$ 597,947,085	N	University of Vermont, The	2053864023777		\$ 6,205
10 216		1890 Institution Capacity Building Grants	Research and Development	\$ 4,173	\$ 597,947,085	N	Deleware State University	N/A		\$ 4,173
10 217		Higher Education - Institution Challenge Grants Program	Research and Development	\$ 34,459	\$ 597,947,085	Y				\$ 34,459
10 250		Agricultural and Rural Economic Research, Cooperative Agreements and Collaborations	Research and Development	\$ 26,756	\$ 597,947,085	Y				\$ 26,756
10 253		Consumer Data and Nutrition Research	Research and Development	\$ 711	\$ 597,947,085	Y				\$ 711
10 303		Integrated Programs	Research and Development	\$ 642,349	\$ 597,947,085	Y				\$ 638,012
10 304		Homeland Security Agricultural	Research and Development	\$ 92,685	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300568287 4400015622		\$ 74,139
10 304		Homeland Security Agricultural	Research and Development	\$ 92,685	\$ 597,947,085	N	Cornell University	2016-37620-25852		\$ 18,546
10 307		Organic Agriculture Research and Extension Initiative	Research and Development	\$ 1,574,416	\$ 597,947,085	Y			\$ 110,909	\$ 1,574,416
10 309		Specialty Crop Research Initiative	Research and Development	\$ 315,336	\$ 597,947,085	N	Michigan State University	2014-51181-22380		\$ 139,217
10 309		Specialty Crop Research Initiative	Research and Development	\$ 315,336	\$ 597,947,085	N	North Carolina State University	2016-51181-25404		\$ 1,981
10 309		Specialty Crop Research Initiative	Research and Development	\$ 315,336	\$ 597,947,085	N	North Carolina State University	2016-51181-25409		\$ 30,229
10 309		Specialty Crop Research Initiative	Research and Development	\$ 315,336	\$ 597,947,085	N	North Carolina State University	USDA NATIONAL INSTITUTE OF FOO		\$ 37,422
10 309		Specialty Crop Research Initiative	Research and Development	\$ 315,336	\$ 597,947,085	N	Rutgers University	2016-51181-235399		\$ 72,110
10 309		Specialty Crop Research Initiative	Research and Development	\$ 315,336	\$ 597,947,085	N	Texas A & M University	2018-51181-28436		\$ 4,949
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	Y			\$ 1,508,995	\$ 6,237,699
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Cornell University	USDA NATIONAL INSTITUTE OF FOO		\$ 13,495
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Kansas State University	2013-68004-20378		\$ 2,052
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Michigan State University	N/A		\$ 125,410
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Montana State University	2015-68006-22850		\$ 7,300
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Montana State University	USDA NATIONAL INSTITUTE OF FOO		\$ 4,963
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Purdue University	2016-67019-25014		\$ 98,550

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Rutgers University	2017-67023-26906		\$ 54,653
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Sam Houston State University	2017-68006-26235		\$ 62,627
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Syracuse University	2016-68006-24739		\$ 56,822
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	University of Alabama	2018-67017-27558		\$ 64,692
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	University of California at Davis	2018-67015-27500		\$ 30,962
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	University of New Hampshire	2017-67013-26594		\$ 68,176
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	University of Pennsylvania	2018-67015-27494	\$ 9,608	\$ 80,392
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	University of Wisconsin	2012-68002-20525		\$ (9,767)
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	2017-67017-26783		\$ 25,573
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	2017-67019-26401		\$ 48,539
10 310		Agriculture and Food Research Initiative (AFRI)	Research and Development	\$ 7,047,946	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	2018-67007-28452		\$ 37,175
10 311		Beginning Farmer and Rancher Development Program	Research and Development	\$ 291,043	\$ 597,947,085	Y				\$ 194,764
10 312		Biomass Research and Development Initiative Competitive Grants Program (BRDI)	Research and Development	\$ 196,678	\$ 597,947,085	N	Dartmouth College	USDA		\$ 196,678
10 320		Sun Grant Program	Research and Development	\$ 1,417,464	\$ 597,947,085	N	South Dakota State University	N/A		\$ 348,711
10 320		Sun Grant Program	Research and Development	\$ 1,417,464	\$ 597,947,085	N	South Dakota State University	2014-38502-22598	\$ 866,602	\$ 1,068,753
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 427,940	\$ 597,947,085	Y			\$ 19,818	\$ 193,951
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 427,940	\$ 597,947,085	N	Cornell University	2015-70006-24274		\$ 346
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 427,940	\$ 597,947,085	N	Cornell University	U.S. DEPARTMENT OF AGRICULTURE		\$ (13)
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 427,940	\$ 597,947,085	N	Cornell University	USDA NATIONAL INSTITUTE OF FOO		\$ 12,610
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 427,940	\$ 597,947,085	N	North Carolina State University	2016-70006-25877		\$ 27,028
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 427,940	\$ 597,947,085	N	University of Maryland	2015-70006-24277		\$ 4,327
10 329		Crop Protection and Pest Management Competitive Grants Program	Research and Development	\$ 427,940	\$ 597,947,085	N	West Virginia University	2017-70006-22484		\$ 6,283
10 330		Alfalfa and Forage Research Program	Research and Development	\$ 17,827	\$ 597,947,085	N	University of Kentucky	2016-70005-25648		\$ 3,125
10 330		Alfalfa and Forage Research Program	Research and Development	\$ 17,827	\$ 597,947,085	N	University of Wisconsin	2017-70005-27087		\$ 14,702
10 458		Crop Insurance Education in Targeted States	Research and Development	\$ 108,631	\$ 597,947,085	N	Commonwealth of Pennsylvania	44176583		\$ 42,792
10 500		Cooperative Extension Service	Research and Development	\$ 28,393,433	\$ 597,947,085	Y			\$ 19,814	\$ 13,551,671
10 500		Cooperative Extension Service	Research and Development	\$ 28,393,433	\$ 597,947,085	N	University of Minnesota	2013-41520-21529	\$ 144,129	\$ 215,854
10 500		Cooperative Extension Service	Research and Development	\$ 28,393,433	\$ 597,947,085	N	University of Minnesota	2018-41520-28908	\$ 90,140	\$ 248,159
10 500		Cooperative Extension Service	Research and Development	\$ 28,393,433	\$ 597,947,085	N	University of Nebraska	2017-41521-27121		\$ 24,344
10 678		Forest Stewardship Program	Research and Development	\$ 109,845	\$ 597,947,085	Y				\$ 3,167
10 680		Forest Health Protection	Research and Development	\$ 50,133	\$ 597,947,085	Y				\$ 50,133
10 699		Partnership Agreements	Research and Development	\$ 8,389	\$ 597,947,085	Y				\$ 8,389
10 777		Norman E. Borlaug International Agricultural Science and Technology Fellowship	Research and Development	\$ 56,385	\$ 597,947,085	N	Michigan State University	N/A		\$ 56,385
10 902		Soil and Water Conservation	Research and Development	\$ 62,203	\$ 597,947,085	N	Great Lakes Commission	USDA NATURAL RESOURCES CONSERV		\$ 4,682
10 902		Soil and Water Conservation	Research and Development	\$ 62,203	\$ 597,947,085	N	Indiana University of Pennsylvania	NR193A750010C0001		\$ 22,250
10 902		Soil and Water Conservation	Research and Development	\$ 62,203	\$ 597,947,085	N	University of Rhode Island, The	68-3A75-17-480		\$ 8,071
10 903		Soil Survey	Research and Development	\$ (10,655)	\$ 597,947,085	Y				\$ (10,655)
10 912		Environmental Quality Incentives Program	Research and Development	\$ 158,604	\$ 597,947,085	Y			\$ 96,274	\$ 97,357
10 912		Environmental Quality Incentives Program	Research and Development	\$ 158,604	\$ 597,947,085	N	Cornell University	USDA NATURAL RESOURCES CONSERV		\$ 20,076
10 960		Technical Agricultural Assistance	Research and Development	\$ 302,372	\$ 597,947,085	Y				\$ 302,372
10 RD	4300565807 4400015622	Agricultural Research Service - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300565807 4400015622		\$ (127)
10 RD	14-JV-11242302-144	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 3,765
10 RD	14-JV-11272167-037	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 58,695
10 RD	17-DG-11420004-090	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 357
10 RD	2015-68001-23233	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 660,296
10 RD	2016-46100-25845	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 64,178
10 RD	2016-70006-25833	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 135,199
10 RD	2017-36100-06042	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ (21)
10 RD	2017-51300-26818	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y			\$ 5,357	\$ 85,164
10 RD	2017-67015-26455	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 125,585
10 RD	2018-67013-27402	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 130,834
10 RD	58-2094-7-016	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ (216)
10 RD	58-8070-7-008	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 3,928

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
10 RD	API7PPQFO000C159	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ (1,040)
10 RD	API7PPQS&T00C026	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ (11,665)
10 RD	API7VSNVSL00C036	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 3,060
10 RD	TA-CR-16-028	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 158,436
10 RD	UNNUMBERED AGREEMENT	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 21,205
10 RD	44176801	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	N	Commonwealth of Pennsylvania	44176801		\$ 21,618
10 RD	F0016275102008	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	N	Purdue University	USDA NATIONAL INSTITUTE OF FOO		\$ 33,381
10 RD	3TG640	Department of Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	N	South Dakota State University	2014-38502-22598		\$ 72,045
10 RD	1/1/2019-12/31/2019	National Institute of Food and Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 57,638
10 RD	2016-67011-24710	National Institute of Food and Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 15,999
10 RD	5/1/2019-4/30/2020	National Institute of Food and Agriculture - Non-Specified	Research and Development	\$ 1,645,510	\$ 597,947,085	Y				\$ 7,196
11 017		Ocean Acidification Program (OAP)	Research and Development	\$ 13,907	\$ 597,947,085	N	Virginia Institute of Marine Science	NA18OAR0170430		\$ 13,907
11 020		Cluster Grants	Research and Development	\$ 39,557	\$ 597,947,085	Y				\$ 39,557
11 307		Economic Adjustment Assistance	Research and Development	\$ 77,660	\$ 597,947,085	N	Gannon University	N/A		\$ 77,660
11 312		Research and Evaluation Program	Research and Development	\$ 51,438	\$ 597,947,085	N	Indiana University	ED17HDQ3120040		\$ 51,438
11 417		Sea Grant Support	Research and Development	\$ 1,315,819	\$ 597,947,085	Y			\$ 379,340	\$ 1,277,613
11 417		Sea Grant Support	Research and Development	\$ 1,315,819	\$ 597,947,085	N	Commonwealth of Pennsylvania	1434-03HQRU1548		\$ 38,206
11 429		Marine Sanctuary Program	Research and Development	\$ 43,007	\$ 597,947,085	Y				\$ 43,007
11 431		Climate and Atmospheric Research	Research and Development	\$ 65,664	\$ 597,947,085	Y			\$ 6,278	\$ 54,018
11 431		Climate and Atmospheric Research	Research and Development	\$ 65,664	\$ 597,947,085	N	RAND Corporation	NA16OAR4310179		\$ 11,646
11 432		National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	Research and Development	\$ 122,130	\$ 597,947,085	N	University of Illinois	NA17OAR43201152		\$ 12,087
11 432		National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes	Research and Development	\$ 122,130	\$ 597,947,085	N	University of Michigan	NA17OAR4320152		\$ 110,043
11 459		Weather and Air Quality Research	Research and Development	\$ 264,811	\$ 597,947,085	Y				\$ 264,811
11 462		Hydrologic Research	Research and Development	\$ 6,971	\$ 597,947,085	N	University Corporation for Atmospheric Research	NA16NWS4620043		\$ 6,971
11 468		Applied Meteorological Research	Research and Development	\$ 131,547	\$ 597,947,085	Y				\$ 131,547
11 478		Center for Sponsored Coastal Ocean Research Coastal Ocean Program	Research and Development	\$ 30,711	\$ 597,947,085	N	Virginia Institute of Marine Science	NA16NOS478027		\$ 30,711
11 481		Educational Partnership Program	Research and Development	\$ 70,773	\$ 597,947,085	N	Howard University	NA16SEC4810006		\$ 70,773
11 482		Coral Reef Conservation Program	Research and Development	\$ 33,090	\$ 597,947,085	Y				\$ 33,090
11 609		Measurement and Engineering Research and Standards	Research and Development	\$ 804,193	\$ 597,947,085	Y				\$ 804,552
11 609		Measurement and Engineering Research and Standards	Research and Development	\$ 804,193	\$ 597,947,085	N	University of Louisville	70NANB13H192		\$ (359)
11 RD	INTERNAL SUB AWARD	Department of Commerce - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y			\$ (55,224)	\$ 41,068
11 RD	BIC 20607	Department of Commerce - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	N	Battery Innovation Center, Inc	06-79-05782		\$ 78
11 RD	60NANB17D279	National Institute of Standards and Technology - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y				\$ 1,839
11 RD	70NANB18H048	National Institute of Standards and Technology - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y				\$ 1,200
11 RD	70NANB18H100	National Institute of Standards and Technology - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y				\$ 240
11 RD	1333MD18PNEED0032	National Oceanic and Atmospheric Administration - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y				\$ 44,353
11 RD	INTERNAL SUB AWARD	National Oceanic and Atmospheric Administration - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y				\$ 122,290
11 RD	NA14OAR4170063 NO. 12	National Oceanic and Atmospheric Administration - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y				\$ 7,102
11 RD	RA133R18SE0020	National Oceanic and Atmospheric Administration - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y				\$ (1)
11 RD	SP133E17SE1302	National Oceanic and Atmospheric Administration - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	Y				\$ 21,653
11 RD	8601-SUB03	National Oceanic and Atmospheric Administration - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	N	Earth Resources Technology, Inc	NATIONAL OCEANIC AND ATMOSPHER		\$ 38,424
11 RD	8601-SUB03 TASK ORDER 003	National Oceanic and Atmospheric Administration - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	N	Earth Resources Technology, Inc	NATIONAL OCEANIC AND ATMOSPHER		\$ 8,458
11 RD	S2017-0119	National Oceanic and Atmospheric Administration - Non-Specified	Research and Development	\$ 355,785	\$ 597,947,085	N	Synoptic Data	NATIONAL OCEANIC AND ATMOSPHER		\$ 69,081
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	Y			\$ 242,046	\$ 6,928,323
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	N	Georgia Institute of Technology	OFFICE OF NAVAL RESEARCH		\$ 118,000
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	N	North Carolina Agricultural and Technical State University	N/A		\$ 12,292
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	N	Purdue University	N00014-18-1-2371		\$ 24,926
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	N	Research Foundation for The State University of New York, The	N00014-18-1-2614		\$ 25,631
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	N	University of Minnesota	N00014-12-1-1030		\$ 1,922

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**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	N	University of Minnesota	N00014-17-1-2438		\$ 55,511
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	N	Vanderbilt University	N00014-18-1-2107		\$ 69,628
12 300		Basic and Applied Scientific Research	Research and Development	\$ 7,261,054	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	N00014-17-1-2520		\$ 14,821
12 351		Scientific Research - Combating Weapons of Mass Destruction	Research and Development	\$ 1,222,280	\$ 597,947,085	Y			\$ 392,444	\$ 987,060
12 351		Scientific Research - Combating Weapons of Mass Destruction	Research and Development	\$ 1,222,280	\$ 597,947,085	N	Columbia University	HDTRA-11-0027		\$ 9,714
12 351		Scientific Research - Combating Weapons of Mass Destruction	Research and Development	\$ 1,222,280	\$ 597,947,085	N	University of Iowa, The	HDTRA1-18-1-0012		\$ 160,753
12 351		Scientific Research - Combating Weapons of Mass Destruction	Research and Development	\$ 1,222,280	\$ 597,947,085	N	University of Minnesota	HDTRA11710445		\$ 64,753
12 360		Research on Chemical and Biological Defense	Research and Development	\$ 224,453	\$ 597,947,085	N	Raytheon Company	W911NF-09-2-0053N		\$ 224,453
12 420		Military Medical Research and Development	Research and Development	\$ 1,783,733	\$ 597,947,085	Y			\$ 28,393	\$ 1,707,925
12 420		Military Medical Research and Development	Research and Development	\$ 1,783,733	\$ 597,947,085	N	Johns Hopkins University	W81XWH-09-2-0108		\$ 75,808
12 431		Basic Scientific Research	Research and Development	\$ 2,644,454	\$ 597,947,085	Y			\$ 164,421	\$ 1,843,972
12 431		Basic Scientific Research	Research and Development	\$ 2,644,454	\$ 597,947,085	N	George Mason University	N/A		\$ 244,625
12 431		Basic Scientific Research	Research and Development	\$ 2,644,454	\$ 597,947,085	N	Georgia Institute of Technology	U.S. ARMY CONTRACTING COMMAND		\$ 206,000
12 431		Basic Scientific Research	Research and Development	\$ 2,644,454	\$ 597,947,085	N	National Center for Manufacturing Sciences	W911NF-18-2-0041		\$ 76,215
12 431		Basic Scientific Research	Research and Development	\$ 2,644,454	\$ 597,947,085	N	Princeton University	W911NF-12-1-0461		\$ 5,133
12 431		Basic Scientific Research	Research and Development	\$ 2,644,454	\$ 597,947,085	N	University of Wisconsin - Madison	W911NF-17-1-0462		\$ 110,591
12 431		Basic Scientific Research	Research and Development	\$ 2,644,454	\$ 597,947,085	N	Worcester Polytechnic Institute	W911NF-15-2-0024		\$ 157,918
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 3,542,376	\$ 597,947,085	Y			\$ 2,382,118	\$ 3,130,194
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 3,542,376	\$ 597,947,085	N	Digital Manufacturing and Design Innovation Institute	U.S. ARMY CONTRACTING COMMAND	\$ 96,350	\$ 115,976
12 630		Basic, Applied, and advanced Research in Science and Engineering	Research and Development	\$ 3,542,376	\$ 597,947,085	N	The Network Science Consortium	U.S. ARMY RESEARCH, DEVELOPMEN		\$ 275,829
12 630		Basic, Applied, and Advanced Research in Science and Engineering	Research and Development	\$ 3,542,376	\$ 597,947,085	N	UI Labs	W31P4Q-14-2-0001	\$ 20,377	\$ 20,377
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	Y			\$ 1,435,863	\$ 4,697,717
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	Delaware State University	AIR FORCE OFFICE OF SCIENTIFIC		\$ 29,391
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	General Electric	FA8650-12-2-7230		\$ 28
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	INVERCON LLC	FA95501710088		\$ 94,470
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	National Center for Defense Manufacturing & Machining	FA8650-12-2-7230	\$ 8,919	\$ 8,919
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	National Center for Defense Manufacturing & Machining	FA8650-16-2-5700	\$ 79,833	\$ 332,575
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	North Carolina State University	FA9550-17-1-0318		\$ 27,815
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	Physical Sciences, Inc.	HQ0147-16-C-7808		\$ 53,040
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	Purdue University	FA9550-19-1-0008		\$ 58,553
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	Research Foundation for The State University of New York, The	FA955015010313		\$ 9,296
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	Stanford University	FA9550-14-10317		\$ 221,174
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	FA9550-17-1-0341		\$ 3,335
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	Youngstown Business Incubator	FA8650-12-2-7230		\$ 19,005
12 800		Air Force Defense Research Sciences Program	Research and Development	\$ 5,793,066	\$ 597,947,085	N	Youngstown State University	FA8650-16-2-5700		\$ 237,748
12 901		Mathematical Sciences Grant	Research and Development	\$ 23,491	\$ 597,947,085	Y				\$ (3,808)
12 902		Information Security Grants	Research and Development	\$ (8,919)	\$ 597,947,085	Y				\$ (8,919)
12 903		GenCyber Grants Program	Research and Development	\$ 85,153	\$ 597,947,085	Y				\$ 85,153
12 905		CyberSecurity Core Curriculum	Research and Development	\$ 63,433	\$ 597,947,085	Y				\$ 1,575
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	Y			\$ 1,668,311	\$ 3,742,825
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	Carnegie Institution for Science	W31P4Q-13-1-0005		\$ 21,190
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	Carnegie Mellon University	DEFENSE ADVANCED RESEARCH PROJ		\$ 122,951
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	Montana State University	D18AC00031		\$ 78,836
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	North Carolina State University	HR0011-16-C-0035		\$ 591,231
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	University of Colorado	W31P4Q-13-1-0015		\$ 47,151
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	University of South Florida	D15AP0089		\$ 128,901
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	University of Southern California	W911NF-18-1-0027		\$ 195,918
12 910		Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	Versus Research	D18AP0069		\$ 67,993

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	910	Research and Technology Development	Research and Development	\$ 5,272,787	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	W911NF-16-2-0010		\$ 275,791
12	RD	HR0011-15-C-0029	Defense Advanced Research Projects Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y			\$ 43,878	\$ 66,379
12	RD	206487	Defense Advanced Research Projects Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Actuated Medical, Inc.	DEFENSE ADVANCED RESEARCH PROJ		\$ 817
12	RD	APS-17-05	Defense Advanced Research Projects Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Applied Physical Sciences Corporation	N66604-16-C-2187		\$ (14)
12	RD	D17PC00133	Defense Advanced Research Projects Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	De Novo DNA	DEFENSE ADVANCED RESEARCH PROJ		\$ 2,297
12	RD	E203809-3	Defense Advanced Research Projects Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	George Mason University	DEFENSE ADVANCED RESEARCH PROJ		\$ 44,493
12	RD	E203809-3	Defense Advanced Research Projects Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	George Mason University	HR0011-16-C-0055		\$ 99,377
12	RD	40001859-027	Defense Advanced Research Projects Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Purdue University	HR0011-18-3-0004		\$ 10,361
12	RD	450528-19079	Defense Advanced Research Projects Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	N66001-17-C-4052		\$ 56,529
12	RD	HHM402-17-P-0037	Defense Intelligence Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 2,992
12	RD	HDTRA1-10-1-0029	Defense Threat Reduction Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ (45,074)
12	RD	HDTRA1-13-C-0064	Defense Threat Reduction Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 2,800
12	RD	HDTRA1-13-C-0064 CLIN 0004	Defense Threat Reduction Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 261,182
12	RD	HDTRA1-16-1-0005	Defense Threat Reduction Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y			\$ 273,143	\$ 419,174
12	RD	401100953	Defense Threat Reduction Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	General Electric	246819		\$ 168,186
12	RD	P010198789	Defense Threat Reduction Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Leidos Inc	DEFENSE THREAT REDUCTION AGENC		\$ 88,979
12	RD	P010216733	Defense Threat Reduction Agency - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Leidos Inc	HC1028-12-D-0001		\$ 2,912
12	RD	26906	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Applied Physical Sciences Corporation	HR0011-18-C-0004		\$ 1,538
12	RD	PO14-1135	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Applied Research Associates, Inc	HDTRA1-14-D-0003 TO 008		\$ (406)
12	RD	22941	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Brimrose Technology Corporation	HQ0147-15-C-7401		\$ 36,304
12	RD	SC1519801	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Charles River Analytics Inc.	W81XWH-17-C-0002		\$ 181,993
12	RD	S18-06114	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	EOIR Technologies, Inc.	DOTC-13-01-INIT334		\$ 135,128
12	RD	MSA 124818 TO 151814	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	John Hopkins University	HQ0034-13-D-0003		\$ 116,805
12	RD	P010216733	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Leidos Inc	HC1028-12-D-0021		\$ 138,983
12	RD	26495	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Mainstream Engineering Corporation	HQ0147-18-C-7215		\$ 179
12	RD	26495 MODIFICATION1	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Mainstream Engineering Corporation	HQ0147-18-7215		\$ 13,023
12	RD	26973	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Mainstream Engineering Corporation	HQ1047-19-C-7132		\$ 2,640
12	RD	27701	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	MTEQ, Inc.	W909MY-12-D-0008		\$ 99,590
12	RD	26860	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	QorTek	QU0147-17-C-7345		\$ 7,439
12	RD	26544	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Senvol LLC	SP4701-18-P-0112		\$ 31,039
12	RD	PO 2942	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	SRI International	2014-SC-4-0188		\$ (3,147)
12	RD	2017-107 CLIN 0001	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Steel Founders' Society of America	SP4701-17-D-1161		\$ 75,972
12	RD	2102739-03 TO HQ003417F0283	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Stevens Institute of Technology	HQ0034-13-D-0004		\$ 40
12	RD	2102876-04	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Stevens Institute of Technology	HQ0034-13-D-0004		\$ 18,361
12	RD	2015-328 TO3 NRTC-FY15-R-01	Department of Defense - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Vertical Left Consortium	NRTC-FY15-R-01	\$ 1,948	\$ 1,948
12	RD	FA8650-12-C-7225	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y			\$ 10,608	\$ 10,608
12	RD	FA8750-17-C-0254	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 340,977
12	RD	FA9550-15-1-0239	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 22,105
12	RD	FA9550-15-1-0400	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 100
12	RD	FA9550-17-1-0173	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 166,308
12	RD	FA9550-18-1-0135	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 15,496
12	RD	FA9550-18-1-0235	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 172,815
12	RD	FA9550-18-1-0296	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	Y				\$ 109,471
12	RD	238-5404-PSU	Department of the Air Force - Non-Specified	\$ 229,646,797	\$ 597,947,085	N	Azimuth Corporation	AIR FORCE RESEARCH LABORATORY		\$ 52,081

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD S901982BAH	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Booz-Allen & Hamilton Inc	FA8750-17-F-0105		\$ 345,326
12	RD 20180006 PROJ 9308	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	CFD Research Corporation	FA8650-18-C-6870		\$ 94,604
12	RD 216084	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Dynamic Systems & Research Corporation	AIR FORCE RESEARCH LABORATORY		\$ 22,001
12	RD DSD-SC-15-009 TO-08ESM786292	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Dynamics Corporation	FA8650-11-D-5702 TO-0009		\$ 225
12	RD 401119780	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Electric	FA8650-16-2-5700		\$ 44,427
12	RD 26496	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	HAMR Industries LLC	FA8651-18-P-0056		\$ 57,904
12	RD 201826	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	H-Nu Systems LLC	AIR FORCE RESEARCH LABORATORY		\$ 94,970
12	RD IIA-1815-SK-00001	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Homeland Defense & Security Inc	FA8075-13-D-0001		\$ 96,762
12	RD 201040	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	INVERCON LLC	AIR FORCE OFFICE OF SCIENTIFIC		\$ 121,518
12	RD DWY-16-100 TO-3	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	L3 Brashear	FA8702-15-D-0001		\$ 886
12	RD DWY-16-100 TO-4	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	L3 Brashear	FA8702-15-D-0001		\$ 47,945
12	RD DWY-16-100 TO-5	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	L3 Brashear	FA8702-15-D-0001		\$ 709
12	RD PO10203201	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Leidos Inc	FA9451-17-D-0070		\$ 51,260
12	RD 4103009755	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Lockheed Martin Corporation	U.S. DEPARTMENT OF THE AIR FOR		\$ (6,166)
12	RD 4103702371	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Lockheed Martin Corporation	U.S. DEPARTMENT OF THE AIR FOR		\$ (1)
12	RD 1627-PENN	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Matrix Research Inc.	U.S. DEPARTMENT OF THE AIR FOR		\$ 85,499
12	RD CRFR-008 TO CRFR-008-002-01	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Matrix Research Inc.	N/A		\$ 16,144
12	RD 21348 PSU01AC20	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Metrolaster Inc	FA9101-13-C-0023		\$ (77)
12	RD NOK-PSU09062017	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Nokomis, Inc.	W81XWH-17-C-0059		\$ 46
12	RD SC 82985-4117-46	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Physical Sciences, Inc.	FA8650-18-P-5058		\$ 39,003
12	RD 4201931021	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Raytheon Company	JOINT IED DEFEAT ORGANIZATION		\$ 6,115
12	RD 24296 PO 1041.PSU	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Sabre Systems, Inc.	FA8750-16-C-0216		\$ 172,834
12	RD SPG-FD-18-C-0024	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	SL Global, Inc	FA8750-18-C-0033		\$ 32,049
12	RD 25494	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Surmet Corporation	FA8650-07-2-5508		\$ 391
12	RD SC16-5995-1	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Toyon Research Corporation	FA8650-16-C-1769		\$ 85,364
12	RD S-111-04G-001	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	UES, Inc	FA8650-18-D-5405		\$ 14,805
12	RD S-111-041-001	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	UES, Inc	FA8650-18-D-5405		\$ 10,761
12	RD S-143-000-001	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	UES, Inc.	FA8650-17-P-2024		\$ 445
12	RD S-160-000-001	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	UES, Inc.	FA8650-19-C-2051		\$ 30,946
12	RD S-976-000-001	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	UES, Inc.	FA8650-14-C-5193		\$ (360)
12	RD RSC18008	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	University of Dayton Research Institute	FA8650-18-D-5761/0001		\$ 87,176
12	RD UTA14-001124	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	University of Texas at Austin, The	FA95601410089		\$ 171,648
12	RD AFRL-17C0425-PS-DW	Department of the Air Force - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Voxel, Inc	DEFENSE ADVANCED RESEARCH PROJ		\$ 221,356
12	RD W15P7T-06-D-R401 DO 0012	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 38,728	\$ 40,665
12	RD W81XWH-14-1-0283	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 34,488
12	RD W81XWH-15-1-0339	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 46,236
12	RD W81XWH-16-1-0725	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 30,230	\$ 483,143
12	RD W81XWH-17-1-0197	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 294,092
12	RD W81XWH-17-C-0247	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 534,432
12	RD W81XWH1810103	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 202,105
12	RD W81XWH-18-1-0283	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 97,328
12	RD W81XWH-18-D-0017	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 2,126
12	RD W911NF-09-2-0016	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 33
12	RD W911NF-11-D-0002 DO 0002	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (5,405)
12	RD W911NF-11-D-0002 DO 0003	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 848,294	\$ 949,780
12	RD W911NF-13-2-0045	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 315,047	\$ 788,335

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	W911NF-15-2-0066	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 136,820
12	RD	W911NF-17-1-0237	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,954
12	RD	W911NF-18-1-0043	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 155,911
12	RD	W911NF-18-1-0099	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 56,733
12	RD	W911NF1810261	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 167,670
12	RD	W911NF-18-1-0414	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 48,328
12	RD	W911W6-17-2-0003	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 242,589	\$ 1,212,349
12	RD	W911W6-17-2-0003 MOD P00005	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 104,956
12	RD	W911W6-17-2-0003 TASK A 1.1	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 31,302
12	RD	W911W6-17-2-0003 TASK A 1.12	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 98,410
12	RD	W912HQ-15-C-0063	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 545
12	RD	W912HQ-16-C-0006	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 608,931
12	RD	W912HQ-17-C-0041	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 124,072
12	RD	W91CRB-17-C-0047	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 323,971
12	RD	214561	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Actuated Medical, Inc.	JOINT PROGRAM EXECUTIVE OFFICE	\$ 33,839
12	RD	2014-309-002	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	DOTC-17-01-INIT0453	\$ 325,000 \$ 800,112
12	RD	2014-309-003 MOD 1	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	DOTC-17-01-INIT0451	\$ 294,000 \$ 452,163
12	RD	2014-309-003 MOD 1	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	W15QKN-14-9-1001	\$ 14,063
12	RD	2015-328 TASK 01	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	W15QKN-10-9-0003	\$ (4,250)
12	RD	2018-825	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	U.S. DEPARTMENT OF THE ARMY	\$ 32,145
12	RD	2018-867 CWMD1826-001	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	U.S. ARMY CONTRACTING COMMAND	\$ 153,098
12	RD	1257-2075	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Aptima Inc	W56KGU-18-C-0023	\$ 30,519
12	RD	SC1608001	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Charles River Analytics Inc.	U.S. DEPARTMENT OF THE ARMY	\$ 71,110
12	RD	2694	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Concurrent Technologies Corporation	W15QKN-14-9-1002	\$ 1,573
12	RD	196907	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Cytosorbents Corporation	U.S. ARMY MEDICAL RESEARCH AND	\$ 112,549
12	RD	183737	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	DCS Corporation	W56HZV-17-C-0062	\$ 16,811
12	RD	190873 W56HZV-17-C-0062	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	DCS Corporation	W56HZV-17-C-0062 TES-S-17-01	\$ 8,949
12	RD	23810	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Gear Research Institute	W56HZV-15-C-0197	\$ (25)
12	RD	4500063383	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Atomics	W15P7T-06-D-E402	\$ (1,326)
12	RD	E2030473	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	George Mason University	N/A	\$ 52,378
12	RD	24025	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	H.F. Webster Engineering Services	W911QX-16-C-0024	\$ 110,844
12	RD	25697 PO W15Q-2	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	HAMR Industries LLC	W15QKN-17-C-0060	\$ (213)
12	RD	W81XWH-10-2-0090	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Johns Hopkins University	W81XWH-10-2-0090	\$ 6,756
12	RD	W81XWH-17-2-0032	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Johns Hopkins University	U.S. ARMY RESEARCH, DEVELOPMEN	\$ 28,571
12	RD	PO10188059	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Leidos Inc	W15QKN-14-9-1001	\$ (1,107)
12	RD	217716	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Micromechatronics, Inc	U.S. DEPARTMENT OF THE ARMY	\$ 33,164
12	RD	79324-1	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Nammo Talley Inc.	W911QY-17-C-00300	\$ 2,517
12	RD	AR2-0114	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Nanosonic, Inc	W31P4Q-18-C-0114	\$ 205,039
12	RD	70-201618/T01	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	National Advanced Mobility Consortium	W15QKN-14-9-1002	\$ 422
12	RD	19595 PO WM004641	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Navmar Applied Science Corporation	W911QXO-12-C-0021	\$ (53)
12	RD	060418-01	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	New Tech Ceramics, Inc.	W91CRB-17-C-0022	\$ 88,983
12	RD	101917-01	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	New Tech Ceramics, Inc.	ARMY RIF - UNKNOWN NUMBER	\$ 8,921
12	RD	2016-1652-04	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	North Carolina State University	W911NF-16-1-0406	\$ 145,611

See notes to schedule of expenditures of federal awards.



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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD 209847	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Novateur Research Solutions, LLC	W31P4Q-18-C-0055		\$ 62,499
12	RD 214553	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Qortek Inc	W31P4Q-18-C-0104		\$ 60,919
12	RD 5003884741	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Rolls-Royce	N00014-16-C-2031		\$ 144,053
12	RD 23823 PO 4500426062	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Sikorsky Aircraft Corporation	W911W6-11-2-0008		\$ 317
12	RD STC-19-02	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Strategic Technology Consulting	W15QKN-18-9-1008		\$ 5,158
12	RD S17-095010	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	SURVICE Engineering Company	U.S. ARMY CONTRACTING COMMAND		\$ 72,170
12	RD S18-095004	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	SURVICE Engineering Company	DOTC-17-01-INIT0086		\$ 63,190
12	RD 218657	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Third Wave Systems	U.S. ARMY RESEARCH LABORATORY		\$ 14,955
12	RD S-161-000-001	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	UES, Inc	W911NF19P0024		\$ 52,729
12	RD S-146-000-001	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	UES, Inc.	W911QX-17-P-0227		\$ (287)
12	RD 10028801-PENN-APP CLIN 006	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	University of Utah, The	U.S. ARMY RESEARCH LABORATORY		\$ 163,538
12	RD PO-0016096 LI 1	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Vencore, Inc.	W91ZLK-15-D-0006		\$ (1,832)
12	RD PO-0016096 LI 2	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Vencore, Inc.	W91ZLK-15-D-0006		\$ 1,993
12	RD 25549 W15QKN-18-C-0002	Department of the Army - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	VRC Metal Systems, LLC	W15QKN-18-C-0002		\$ 6,941
12	RD N00014-05-D-0275 DO 0002	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 14,140	\$ 14,140
12	RD N00014-05-D-0275 DO 0003	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 6,431	\$ 6,496
12	RD N00014-05-G-0106 DO 0008	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 33,824	\$ 33,824
12	RD N00014-05-G-0106 DO 0116	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (1,251)
12	RD N00014-10-D-0145 DO 0004	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 509,991	\$ 766,202
12	RD N00014-10-D-0145 DO 0005	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (1,065)
12	RD N00014-10-D-0145 DO 0010	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 49,220
12	RD N00014-10-G-0259 DO 0024	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (373)
12	RD N00014-10-G-0259 DO 0034	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 612,576
12	RD N00014-15-D-5003 DO 0001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 565,000
12	RD N00014-15-D-5003 DO 0002	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 689,317
12	RD N00014-15-D-5003 DO 1419FM002	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 23,730
12	RD N00014-15-D-5003 DO 16FM010	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 84,035	\$ 238,775
12	RD N00014-15-D-5003 DO 18FM019	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 481,941
12	RD N00014-15-D-5003 DO_16-F-M010	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,432,075	\$ 1,598,621
12	RD N00014-15-D-5003 DO-0001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 87,362
12	RD N00014-15-D-5003 DO-0002	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 44,452
12	RD N00014-15-G-0001 DO 0001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 202,574
12	RD N00014-15-G-0001 DO 0002	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 1,929,752
12	RD N00014-15-G-0001 DO 0003	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 80,889
12	RD N00014-15-G-0001 DO 0005	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 299,020

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00014-15-G-0001 DO 1416F3005	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 171,378
12	RD	N00014-15-G-0001 DO 18F1006	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,485,609
12	RD	N00014-15-G-0001 DO 18F7001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 84,305
12	RD	N00014-15-G-0001 DO-1418F2006	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 821,312	\$ 3,568,193
12	RD	N00014-15-G-0001/16-F-3013	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 207,375
12	RD	N00014-15-G-0001/17-F-2015	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 15,122
12	RD	N00014-16-1-2082	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 140,435
12	RD	N00014-16-1-2816	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 150,177
12	RD	N00014-16-1-2912	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 201,520
12	RD	N00014-16-1-2952	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 21,191
12	RD	N00014-16-F-M010	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 625,175	\$ 1,260,803
12	RD	N00014-17-1-2088	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 176,096
12	RD	N00014-17-1-2361	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 117,900
12	RD	N00014-17-1-2526	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 181,526
12	RD	N00014-17-1-2894	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 325,717
12	RD	N00014-17-F-M004	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 967,461	\$ 1,018,419
12	RD	N00014-18-1-2471	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 99,681
12	RD	N00014-18-1-2511	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 65,193
12	RD	N00014-18-1-2595	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 203,426
12	RD	N00014-18-1-2793	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 49,932
12	RD	N00014-18-1-2895	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,000
12	RD	N00014-19-C-2033	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 111,048
12	RD	N00014-19-C-2034	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 22,654
12	RD	N00014919TG00369	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 14,208
12	RD	N00014-99-2-0005	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (20,838)
12	RD	N00019-16-TG-00439	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (410)
12	RD	N0001919TG00368	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 11,238
12	RD	N00024-02-D-6604 DO 0241	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (242)
12	RD	N00024-02-D-6604 DO 0272	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 17,144	\$ 18,001
12	RD	N00024-02-D-6604 DO 0415	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,832)
12	RD	N00024-02-D-6604 DO 0434	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (78,998)
12	RD	N00024-02-D-6604 DO 0436	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 7
12	RD	N00024-02-D-6604 DO 0467	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (633)
12	RD	N00024-02-D-6604 DO 0512	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 50,040	\$ 50,040
12	RD	N00024-02-D-6604 DO 0573	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (4,706)
12	RD	N00024-02-D-6604 DO 0736	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (41,032)
12	RD	N00024-12-D-6402 DO 0018	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 126
12	RD	N00024-12-D-6402 DO 0062	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 1,041	\$ 2,687
12	RD	N00024-12-D-6402 DO 0076	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 79
12	RD	N00024-12-D-6404 DO 0001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (30,340)
12	RD	N00024-12-D-6404 DO 0005	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 19,544	\$ 20,139

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-12-D-6404 DO 0016	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,120
12	RD	N00024-12-D-6404 DO 0059	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 14
12	RD	N00024-12-D-6404 DO 0095	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 250,671
12	RD	N00024-12-D-6404 DO 0103	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (24,212)
12	RD	N00024-12-D-6404 DO 0109	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ (2,908)	\$ (2,908)
12	RD	N00024-12-D-6404 DO 0116	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,641)
12	RD	N00024-12-D-6404 DO 0119	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 671
12	RD	N00024-12-D-6404 DO 0121	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 36,469
12	RD	N00024-12-D-6404 DO 0124	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (22,840)
12	RD	N00024-12-D-6404 DO 0144	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ (75)	\$ 167
12	RD	N00024-12-D-6404 DO 0145	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (19,309)
12	RD	N00024-12-D-6404 DO 0151	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,745)
12	RD	N00024-12-D-6404 DO 0160	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 7
12	RD	N00024-12-D-6404 DO 0167	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 401,847
12	RD	N00024-12-D-6404 DO 0198	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (3,807)
12	RD	N00024-12-D-6404 DO 0201	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (198)
12	RD	N00024-12-D-6404 DO 0208	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 1,000	\$ 1,000
12	RD	N00024-12-D-6404 DO 0210	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (3,780)
12	RD	N00024-12-D-6404 DO 0219	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (10)
12	RD	N00024-12-D-6404 DO 0225	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 7,661
12	RD	N00024-12-D-6404 DO 0242	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (644)
12	RD	N00024-12-D-6404 DO 0246	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 4,333	\$ 4,550
12	RD	N00024-12-D-6404 DO 0260	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 98,274
12	RD	N00024-12-D-6404 DO 0274	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (13,645)
12	RD	N00024-12-D-6404 DO 0275	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 852
12	RD	N00024-12-D-6404 DO 0276	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,149)
12	RD	N00024-12-D-6404 DO 0278	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,103,133)
12	RD	N00024-12-D-6404 DO 0279	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (371)
12	RD	N00024-12-D-6404 DO 0284	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,251
12	RD	N00024-12-D-6404 DO 0287	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (791)
12	RD	N00024-12-D-6404 DO 0293	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (26,172)

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12	RD	N00024-12-D-6404 DO 0296	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 38,166
12	RD	N00024-12-D-6404 DO 0306	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,005)
12	RD	N00024-12-D-6404 DO 0309	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,249
12	RD	N00024-12-D-6404 DO 0310	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 15,181
12	RD	N00024-12-D-6404 DO 0317	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (983)
12	RD	N00024-12-D-6404 DO 0321	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 27
12	RD	N00024-12-D-6404 DO 0323	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 25
12	RD	N00024-12-D-6404 DO 0334	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 621,952
12	RD	N00024-12-D-6404 DO 0335	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 16
12	RD	N00024-12-D-6404 DO 0336	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 461,039
12	RD	N00024-12-D-6404 DO 0339	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (117)
12	RD	N00024-12-D-6404 DO 0344	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 359,579
12	RD	N00024-12-D-6404 DO 0348	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 127,347
12	RD	N00024-12-D-6404 DO 0350	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 317
12	RD	N00024-12-D-6404 DO 0362	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (50,222)
12	RD	N00024-12-D-6404 DO 0363	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (18,967)
12	RD	N00024-12-D-6404 DO 0370	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 252
12	RD	N00024-12-D-6404 DO 0371	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (3,531)
12	RD	N00024-12-D-6404 DO 0372	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 754
12	RD	N00024-12-D-6404 DO 0375	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 516
12	RD	N00024-12-D-6404 DO 0382	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (3,095)
12	RD	N00024-12-D-6404 DO 0392	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (20)
12	RD	N00024-12-D-6404 DO 0394	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,042,704
12	RD	N00024-12-D-6404 DO 0402	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (105)
12	RD	N00024-12-D-6404 DO 0404	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,080)
12	RD	N00024-12-D-6404 DO 0405	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 76
12	RD	N00024-12-D-6404 DO 0409	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (189)
12	RD	N00024-12-D-6404 DO 0412	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (124)
12	RD	N00024-12-D-6404 DO 0413	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 322,994
12	RD	N00024-12-D-6404 DO 0416	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (189)
12	RD	N00024-12-D-6404 DO 0418	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1

See notes to schedule of expenditures of federal awards.

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-12-D-6404 DO 0422	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (797)
12	RD	N00024-12-D-6404 DO 0423	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 408,172	\$ 3,774,245
12	RD	N00024-12-D-6404 DO 0425	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 3,369	\$ 3,369
12	RD	N00024-12-D-6404 DO 0426	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 4,460,416
12	RD	N00024-12-D-6404 DO 0428	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 553,485
12	RD	N00024-12-D-6404 DO 0429	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 908,923
12	RD	N00024-12-D-6404 DO 0434	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 176
12	RD	N00024-12-D-6404 DO 0436	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,275)
12	RD	N00024-12-D-6404 DO 0437	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,286)
12	RD	N00024-12-D-6404 DO 0439	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (610)
12	RD	N00024-12-D-6404 DO 0442	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 260
12	RD	N00024-12-D-6404 DO 0445	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 53,270
12	RD	N00024-12-D-6404 DO 0448	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (93,822)
12	RD	N00024-12-D-6404 DO 0451	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 57,321	\$ 1,974,333
12	RD	N00024-12-D-6404 DO 0455	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 309,999
12	RD	N00024-12-D-6404 DO 0456	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 77,420
12	RD	N00024-12-D-6404 DO 0457	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 742
12	RD	N00024-12-D-6404 DO 0458	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,562,715
12	RD	N00024-12-D-6404 DO 0459	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (841)
12	RD	N00024-12-D-6404 DO 0461	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 319,183
12	RD	N00024-12-D-6404 DO 0463	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 124,330
12	RD	N00024-12-D-6404 DO 0464	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (209)
12	RD	N00024-12-D-6404 DO 0465	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 24,217
12	RD	N00024-12-D-6404 DO 0467	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 14,297	\$ 51,581
12	RD	N00024-12-D-6404 DO 0468	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (266)
12	RD	N00024-12-D-6404 DO 0469	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (7,046)
12	RD	N00024-12-D-6404 DO 0470	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (562)
12	RD	N00024-12-D-6404 DO 0471	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (9,146)
12	RD	N00024-12-D-6404 DO 0472	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 139,354
12	RD	N00024-12-D-6404 DO 0481	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 63,677
12	RD	N00024-12-D-6404 DO 0482	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (6,397)

See notes to schedule of expenditures of federal awards.

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-12-D-6404 DO 0484	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 67,527
12	RD	N00024-12-D-6404 DO 0486	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,542,513
12	RD	N00024-12-D-6404 DO 0488	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 58,999
12	RD	N00024-12-D-6404 DO 0492	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 150,782
12	RD	N00024-12-D-6404 DO 0495	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,368,914
12	RD	N00024-12-D-6404 DO 0496	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 10
12	RD	N00024-12-D-6404 DO 0497	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 17,071
12	RD	N00024-12-D-6404 DO 0499	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (989)
12	RD	N00024-12-D-6404 DO 0500	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 25,674
12	RD	N00024-12-D-6404 DO 0502	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 53,674	\$ 90,409
12	RD	N00024-12-D-6404 DO 0503	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 28
12	RD	N00024-12-D-6404 DO 0505	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 367,599
12	RD	N00024-12-D-6404 DO 0506	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,297,569
12	RD	N00024-12-D-6404 DO 0507	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,464)
12	RD	N00024-12-D-6404 DO 0508	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,157)
12	RD	N00024-12-D-6404 DO 0509	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,652)
12	RD	N00024-12-D-6404 DO 0510	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (6)
12	RD	N00024-12-D-6404 DO 0514	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 756
12	RD	N00024-12-D-6404 DO 0515	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1
12	RD	N00024-12-D-6404 DO 0518	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 171,422
12	RD	N00024-12-D-6404 DO 0519	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,208)
12	RD	N00024-12-D-6404 DO 0520	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1)
12	RD	N00024-12-D-6404 DO 0522	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (236)
12	RD	N00024-12-D-6404 DO 0523	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 3,574
12	RD	N00024-12-D-6404 DO 0524	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 40,590
12	RD	N00024-12-D-6404 DO 0526	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 262,152	\$ 389,339
12	RD	N00024-12-D-6404 DO 0529	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 643,525
12	RD	N00024-12-D-6404 DO 0530	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 67,605
12	RD	N00024-12-D-6404 DO 0531	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,819)
12	RD	N00024-12-D-6404 DO 0532	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 8,913,403
12	RD	N00024-12-D-6404 DO 0533	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 613,101

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-12-D-6404 DO 0535	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 54,186
12	RD	N00024-12-D-6404 DO 0538	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (174)
12	RD	N00024-12-D-6404 DO 0541	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 364,179
12	RD	N00024-12-D-6404 DO 0542	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 936,483
12	RD	N00024-12-D-6404 DO 0543	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 87
12	RD	N00024-12-D-6404 DO 0544	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 33,808
12	RD	N00024-12-D-6404 DO 0545	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 517,207
12	RD	N00024-12-D-6404 DO 0547	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2
12	RD	N00024-12-D-6404 DO 0548	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,139,158
12	RD	N00024-12-D-6404 DO 0549	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 103,261
12	RD	N00024-12-D-6404 DO 0550	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 124
12	RD	N00024-12-D-6404 DO 0552	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 26
12	RD	N00024-12-D-6404 DO 0553	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 1,214,469	\$ 2,736,780
12	RD	N00024-12-D-6404 DO 0555	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,168)
12	RD	N00024-12-D-6404 DO 0556	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,648
12	RD	N00024-12-D-6404 DO 0557	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (3,812)
12	RD	N00024-12-D-6404 DO 0558	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (5,757)
12	RD	N00024-12-D-6404 DO 0559	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,375
12	RD	N00024-12-D-6404 DO 0560	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,262)
12	RD	N00024-12-D-6404 DO 0561	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (623)
12	RD	N00024-12-D-6404 DO 0562	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 19
12	RD	N00024-12-D-6404 DO 0566	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 4,334
12	RD	N00024-12-D-6404 DO 0567	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 131
12	RD	N00024-12-D-6404 DO 0568	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 5,595
12	RD	N00024-12-D-6404 DO 0569	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 159
12	RD	N00024-12-D-6404 DO 0572	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (624)
12	RD	N00024-12-D-6404 DO 0574	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 248,120
12	RD	N00024-12-D-6404 DO 0576	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (8,943)
12	RD	N00024-12-D-6404 DO 0577	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 463,053
12	RD	N00024-12-D-6404 DO 0578	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 18
12	RD	N00024-12-D-6404 DO 0579	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (787)

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-12-D-6404 DO 0580	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 33,709
12	RD	N00024-12-D-6404 DO 0581	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 3,433
12	RD	N00024-12-D-6404 DO 0582	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,028
12	RD	N00024-12-D-6404 DO 0583	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 713,210
12	RD	N00024-12-D-6404 DO 0585	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 15
12	RD	N00024-12-D-6404 DO 0586	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 131,033
12	RD	N00024-12-D-6404 DO 17F8300	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 584,055
12	RD	N00024-12-D-6404 DO 17F8301	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (29)
12	RD	N00024-12-D-6404 DO 17F8302	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 61,017
12	RD	N00024-12-D-6404 DO 17F8303	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 161,496
12	RD	N00024-12-D-6404 DO 17F8304	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 201,789
12	RD	N00024-12-D-6404 DO 17F8305	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 360
12	RD	N00024-12-D-6404 DO 17F8306	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,300)
12	RD	N00024-12-D-6404 DO 17F8307	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 113,190
12	RD	N00024-12-D-6404 DO 17F8309	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 3,119
12	RD	N00024-12-D-6404 DO 17F8310	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 282,042
12	RD	N00024-12-D-6404 DO 17F8311	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 3,526
12	RD	N00024-12-D-6404 DO 17F8313	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,354,185
12	RD	N00024-12-D-6404 DO 17F8315	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 56,683
12	RD	N00024-12-D-6404 DO 17F8316	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2
12	RD	N00024-12-D-6404 DO 17F8317	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 39,835	\$ 1,743,389
12	RD	N00024-12-D-6404 DO 17F8318	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 455,350
12	RD	N00024-12-D-6404 DO 17F8320	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 272,241
12	RD	N00024-12-D-6404 DO 17F8321	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 339
12	RD	N00024-12-D-6404 DO 17F8322	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 170,118
12	RD	N00024-12-D-6404 DO 17F8323	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 554,969
12	RD	N00024-12-D-6404 DO 17F8324	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 51,099
12	RD	N00024-12-D-6404 DO 17F8325	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 75,330
12	RD	N00024-12-D-6404 DO 17F8326	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 646
12	RD	N00024-12-D-6404 DO 17F8327	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 279
12	RD	N00024-12-D-6404 DO 17F8328	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 223,066	\$ 1,040,926

See notes to schedule of expenditures of federal awards.



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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-12-D-6404 DO 17F8330	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 86,328
12	RD	N00024-12-D-6404 DO 17F8331	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1)
12	RD	N00024-12-D-6404 DO 17F8332	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 485,680
12	RD	N00024-12-D-6404 DO 17F8333	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 180
12	RD	N00024-12-D-6404 DO 17F8334	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2)
12	RD	N00024-12-D-6404 DO 17F8335	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 7,038
12	RD	N00024-12-D-6404 DO 17F8337	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (2,565)
12	RD	N00024-12-D-6404 DO 17F8338	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 255,421
12	RD	N00024-12-D-6404 DO 17F8340	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,403,169
12	RD	N00024-12-D-6404 DO 17F8341	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 36,137
12	RD	N00024-12-D-6404 DO 17F8342	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 292,902
12	RD	N00024-12-D-6404 DO 17F8343	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 137,813	\$ 645,673
12	RD	N00024-12-D-6404 DO 17F8344	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 936,607
12	RD	N00024-12-D-6404 DO 17F8345	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 239,903
12	RD	N00024-12-D-6404 DO 17F8346	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,399,306
12	RD	N00024-12-D-6404 DO 17F8347	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 12,384
12	RD	N00024-12-D-6404 DO 17F8348	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 136,462
12	RD	N00024-12-D-6404 DO 17F8349	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 470,764
12	RD	N00024-12-D-6404 DO 17F8350	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 219,758
12	RD	N00024-12-D-6404 DO 17F8351	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (257)
12	RD	N00024-12-D-6404 DO 17F8352	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 128,777
12	RD	N00024-12-D-6404 DO 17F8353	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 110,560
12	RD	N00024-12-D-6404 DO 17F8354	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 270,692
12	RD	N00024-12-D-6404 DO 17F8355	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 65,613	\$ 426,718
12	RD	N00024-12-D-6404 DO 17F8356	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 125,633
12	RD	N00024-12-D-6404 DO 17F8359	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 201,889
12	RD	N00024-12-D-6404 DO 17F8360	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 79,306
12	RD	N00024-12-D-6404 DO 17F8362	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (681)
12	RD	N00024-12-D-6404 DO 17F8364	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 861
12	RD	N00024-12-D-6404 DO 17F8365	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 143,855
12	RD	N00024-12-D-6404 DO 17F8367	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 61,708

See notes to schedule of expenditures of federal awards.

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-12-D-6404 DO 18F8300	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 882,206
12	RD	N00024-12-D-6404 DO 18F8302	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 65,708
12	RD	N00024-12-D-6404 DO 18F8303	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (1,901)
12	RD	N00024-12-D-6404 DO 18F8304	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ (4,669)
12	RD	N00024-12-D-6404 DO 18F8305	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 260,204
12	RD	N00024-12-D-6404 DO 18F8306	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 355,108
12	RD	N00024-12-D-6404 DO 18F8307	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 155,272	\$ 647,391
12	RD	N00024-12-D-6404 DO 18F8308	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 17,344
12	RD	N00024-12-D-6404 DO 18F8309	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 2,319,453	\$ 14,809,015
12	RD	N00024-12-D-6404 DO 18F8310	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 466,240
12	RD	N00024-12-D-6404 DO 18F8311	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 139,325
12	RD	N00024-12-D-6404 DO 18F8312	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 192,127	\$ 1,244,548
12	RD	N00024-12-D-6404 DO 18F8313	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 727,282
12	RD	N00024-12-D-6404 DO 18F8314	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 7,868,194
12	RD	N00024-12-D-6404 DO 18F8315	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 275,053
12	RD	N00024-12-D-6404 DO 18F8316	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 127,363
12	RD	N00024-12-D-6404 DO 18F8317	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 197,245	\$ 2,853,253
12	RD	N00024-12-D-6404 DO 18F8318	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 231,089
12	RD	N00024-12-D-6404 DO 18F8320	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 602,722
12	RD	N00024-12-D-6404 DO 18F8321	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 3,255,250
12	RD	N00024-12-D-6404 DO 18F8322	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 614,439
12	RD	N00024-12-D-6404 DO 18F8323	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 26,858
12	RD	N00024-12-D-6404 DO 18F8324	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 315,258
12	RD	N00024-12-D-6404 DO 18F8325	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 394,125
12	RD	N00024-12-D-6404 DO 18F8326	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,239,822
12	RD	N00024-12-D-6404 DO 18F8327	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 565,821
12	RD	N00024-12-D-6404 DO 18F8329	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,739,364
12	RD	N00024-12-D-6404 DO 18F8330	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 103,463
12	RD	N00024-12-D-6404 DO 18F8331	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 124,189
12	RD	N00024-12-D-6404 DO 18F8332	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 538,754
12	RD	N00024-12-D-6404 DO 18F8333	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 648,152

See notes to schedule of expenditures of federal awards.

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-12-D-6404 DO 18F8334	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 35,603
12	RD	N00024-12-D-6404 DO 18F8335	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 55,944	\$ 155,098
12	RD	N00024-12-D-6404 DO 18F8337	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 484,975
12	RD	N00024-12-D-6404 DO 18F8338	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,265,601
12	RD	N00024-12-D-6404 DO 18F8339	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 73,175
12	RD	N00024-12-D-6404 DO 18F8340	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 17,661
12	RD	N00024-12-D-6404 DO 18F8341	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,180,396
12	RD	N00024-12-D-6404 DO 18F8342	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 62,583
12	RD	N00024-12-D-6404 DO 18F8343	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 997,909
12	RD	N00024-12-D-6404 DO 18F8344	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,101,772
12	RD	N00024-12-D-6404 DO 18F8345	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,481,814
12	RD	N00024-12-D-6404 DO 18F8346	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 104,762
12	RD	N00024-12-D-6404 DO 18F8347	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 36,077
12	RD	N00024-12-D-6404 DO 18F8348	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 406,326
12	RD	N00024-12-D-6404 DO 18F8349	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 53,009
12	RD	N00024-12-D-6404 DO 18F8350	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 49,657
12	RD	N00024-12-D-6404 DO 18F8352	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 49,510
12	RD	N00024-12-D-6404 DO 18F8353	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 3,727,677
12	RD	N00024-12-D-6404 DO 18F8354	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 31,323
12	RD	N00024-12-D-6404 DO 18F8355	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 188,581
12	RD	N00024-12-D-6404 DO 18F8356	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 105,951
12	RD	N00024-12-D-6404 DO 18F8357	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 216,463
12	RD	N00024-12-D-6404 DO 18F8358	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 466,152
12	RD	N00024-12-D-6404 DO 18F8360	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 434,689
12	RD	N00024-12-D-6404 DO 18F8363	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 8,157	\$ 463,985
12	RD	N00024-12-D-6404 DO 18F8365	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 244,349
12	RD	N00024-12-D-6404 DO 18F8366	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 30,843	\$ 264,194
12	RD	N00024-12-D-6404 DO 19F8301	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 252,567
12	RD	N00024-12-D-6404 DO 19F8302	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 164,512
12	RD	N00024-12-D-6404 DO 19F8303	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 114,049
12	RD	N00024-12-D-6404 DO 19F8304	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 224,087

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-18-D-6401	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 7,658
12	RD	N00024-18-D-6401 DO 18F8402	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 596,195
12	RD	N00024-18-D-6401 DO 18F8403	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 17,918
12	RD	N00024-18-D-6401 DO 18F8404	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 454,271
12	RD	N00024-18-D-6401 DO 18F8405	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 133,910
12	RD	N00024-18-D-6401 DO 18F8407	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,153,036
12	RD	N00024-18-D-6401 DO 18F8408	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 903,680
12	RD	N00024-18-D-6401 DO 18F8409	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 164,422
12	RD	N00024-18-D-6401 DO 18F8410	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 218,342	\$ 40,011,815
12	RD	N00024-18-D-6401 DO 18F8411	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 194,702
12	RD	N00024-18-D-6401 DO 18F8412	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 68,650
12	RD	N00024-18-D-6401 DO 18F8413	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 136,203
12	RD	N00024-18-D-6401 DO 18F8414	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 221,589
12	RD	N00024-18-D-6401 DO 18F8415	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 200,761
12	RD	N00024-18-D-6401 DO 18F8416	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 22,078
12	RD	N00024-18-D-6401 DO 18F8417	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 117,990
12	RD	N00024-18-D-6401 DO 18F8418	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 837,324
12	RD	N00024-18-D-6401 DO 18F8419	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 491,311
12	RD	N00024-18-D-6401 DO 18F8420	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 749,497
12	RD	N00024-18-D-6401 DO 18F8421	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 89,069
12	RD	N00024-18-D-6401 DO 18F8422	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 247,477
12	RD	N00024-18-D-6401 DO 18F8423	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 231,509
12	RD	N00024-18-D-6401 DO 18F8425	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 143,092
12	RD	N00024-18-D-6401 DO 18F8426	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 662,620
12	RD	N00024-18-D-6401 DO 18F8427	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 231,881	\$ 1,061,074
12	RD	N00024-18-D-6401 DO 18F8428	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 126,963
12	RD	N00024-18-D-6401 DO 18F8429	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 208,470
12	RD	N00024-18-D-6401 DO 18F8430	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 138,496	\$ 873,452
12	RD	N00024-18-D-6401 DO 18F8431	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 100,572
12	RD	N00024-18-D-6401 DO 18F8432	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 289,642
12	RD	N00024-18-D-6401 DO 18F8433	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 153,549

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-18-D-6401 DO 18F8434	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 55,445
12	RD	N00024-18-D-6401 DO 18F8435	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 90,886
12	RD	N00024-18-D-6401 DO 18F8436	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 340,390
12	RD	N00024-18-D-6401 DO 18F8437	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 129,695
12	RD	N00024-18-D-6401 DO 18F8438	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,833,778
12	RD	N00024-18-D-6401 DO 18F8439	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 74,068
12	RD	N00024-18-D-6401 DO 18F8440	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 4,722,038
12	RD	N00024-18-D-6401 DO 18F8442	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 283,291
12	RD	N00024-18-D-6401 DO 18F8443	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 142,614
12	RD	N00024-18-D-6401 DO 18F8444	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 121,027
12	RD	N00024-18-D-6401 DO 18F8445	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,597,770
12	RD	N00024-18-D-6401 DO 18F8447	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 35,062
12	RD	N00024-18-D-6401 DO 18F8448	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 135,914	\$ 1,685,868
12	RD	N00024-18-D-6401 DO 18F8449	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 873,975
12	RD	N00024-18-D-6401 DO 18F8450	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 1,174,199
12	RD	N00024-18-D-6401 DO 18F8451	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 65,097
12	RD	N00024-18-D-6401 DO 18F8452	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 401,983
12	RD	N00024-18-D-6401 DO 19F8401	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 30,741
12	RD	N00024-18-D-6401 DO 19F8402	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 108,496
12	RD	N00024-18-D-6401 DO 19F8403	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 26,144
12	RD	N00024-18-D-6401 DO 19F8404	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 190,666
12	RD	N00024-18-D-6401 DO 19F8405	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 60,788
12	RD	N00024-18-D-6401 DO 19F8406	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 164,890	\$ 3,694,866
12	RD	N00024-18-D-6401 DO 19F8407	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 214,838
12	RD	N00024-18-D-6401 DO 19F8408	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 139,634
12	RD	N00024-18-D-6401 DO 19F8409	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 65,259
12	RD	N00024-18-D-6401 DO 19F8411	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y		\$ 9,172	\$ 2,085,045
12	RD	N00024-18-D-6401 DO 19F8412	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 20,217
12	RD	N00024-18-D-6401 DO 19F8413	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 49,075
12	RD	N00024-18-D-6401 DO 19F8414	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 851,550
12	RD	N00024-18-D-6401 DO 19F8415	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 121,914

See notes to schedule of expenditures of federal awards.

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD	N00024-18-D-6401 DO 19F8416	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 927,323
12	RD	N00024-18-D-6401 DO 19F8417	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 52,120
12	RD	N00024-18-D-6401 DO 19F8418	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 70,320
12	RD	N00024-18-D-6401 DO 19F8420	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 66,553
12	RD	N00024-18-D-6401 DO 19F8421	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 115,459
12	RD	N00024-18-D-6401 DO 19F8423	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 86,537
12	RD	N00024-18-D-6401 DO 19F8424	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 17,921
12	RD	N00024-18-D-6401 DO 19F8425	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 88,431
12	RD	N00024-18-D-6401 DO 19F8426	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 48,256
12	RD	N00024-18-D-6401 DO 19F8427	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 81,323
12	RD	N00024-18-D-6401 DO 19F8428	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 58,046
12	RD	N00024-18-D-6401 DO 19F8429	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 461
12	RD	N00024-18-D-6401 DO 19F8431	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 17,666
12	RD	N00024-18-D-6401 DO 19F8432	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 562,916
12	RD	N00024-18-D-6401 DO 19F8433	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 498,535
12	RD	N00024-18-D-6401 DO 19F8437	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 308,533
12	RD	N00024-18-D-6401 DO 19F8438	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 12,480
12	RD	N00024-18-D-6401 DO 19F8439	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 14,475
12	RD	N00024-18-D-6401 DO 19F8441	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 69,456
12	RD	N00024-18-D-6401 DO 19F8442	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 2,034
12	RD	N00024-18-D-6401 DO 19F8443	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 6,756
12	RD	N00024-18-D-6401 DO 19F8444	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 107,620
12	RD	N00024-18-D-6401 DO 19F8445	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 72,299
12	RD	N00024-18-D-6401 DO 19F8447	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 10,256
12	RD	N00024-18-D-6401 DO 19F8448	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 53,590
12	RD	N00024-18-D-6401 DO 19F8449	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 15,018
12	RD	N00024-18-D-6401 DO 19F8451	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 129,951
12	RD	N00024-18-D-6401 DO 19F8452	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 29,928
12	RD	N00024-18-D-6401 DO 19F8453	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 3,650
12	RD	N00024-18-D-6401 DO 19F8455	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 13,704
12	RD	N00024-18-D-6401 DO 19F8456	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 175

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD N00039-88-C-0051	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 42
12	RD N00173-09-C-4601	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y			\$ 5,887	\$ 7,112
12	RD N00173-17-1-G004	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 177,614
12	RD N00173-18-P-0359	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 7,130
12	RD N00406-17-P-2510	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (304)
12	RD N00421-03-D-0044 DO 0008	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (1,592)
12	RD N00421-03-D-0044 DO 0009	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (540)
12	RD N00421-18-TG-03502	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 14,130
12	RD N6600118P0028	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 17,481
12	RD N6600118P0312	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 27,000
12	RD N6600119P6189	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 13,248
12	RD PO 1148 20714	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Accipiter Systems, Inc	SBIR N091-034-2B		\$ (12)
12	RD 34858	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Cooling Technologies, Inc	U.S. DEPARTMENT OF THE NAVY		\$ 44,615
12	RD 29646	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Cooling Technologies, Inc.	U.S. DEPARTMENT OF THE NAVY		\$ 2,175
12	RD 2012-532 TO-0007	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	N00014-11-D-0504		\$ 8,450
12	RD 2012-532 TO-006	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	N00014-11-D-0504		\$ 602
12	RD 2015-460 TO-01	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	N00014-14-D-0377 DO-0002		\$ 7,131
12	RD 2018-427	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	N00024-98-9-2310		\$ 50,005
12	RD 2018-457 TO-001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Advanced Technology International	N00014-17-D-4003		\$ 121,965
12	RD 0006A-6	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	American Lightweight Materials	N00014-14-2-0002		\$ 44,035
12	RD N68335-17-C-0037/1	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Analysis, Design & Diagnostics, Inc.	N68335-17-C-0037		\$ 156,974
12	RD 2016-1117-N-PSU	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Applied Optimization, Inc	N68335-17-C-008		\$ (831)
12	RD 263-18-PSU-01	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Applied Optimization, Inc	N68335-17-C-0149		\$ 78,598
12	RD 2018-0425-N-PSU	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Applied Optimization, Inc	N68335-18-C-0340		\$ 23,267
12	RD APS-14-05	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Applied Physical Sciences Corporation	N00014-14-C-0041		\$ (1)
12	RD APS-18-17	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Applied Physical Sciences Corporation	N00024-17-C-2117		\$ 252,826
12	RD S15-001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Applied Technologies, Inc	N00178-07-D-4963		\$ 1
12	RD 921123	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Assurance Technology Corporation	N00173-18-C-6007		\$ 235,185
12	RD PO 911014 JOB 5795-049 & 050	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Assurance Technology Corporation	G500Q140ADS402/N00173-15-F2002		\$ 34,779
12	RD 1004858	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	BAE Systems	N00024-13-D-6400		\$ 88,584
12	RD 1017191	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	BAE Systems	N68335-18-C-0106		\$ 90,205
12	RD 1022225	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	BAE Systems	N66001-16-C-4001		\$ 82,663
12	RD 956537	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	BAE Systems	N66604-17-C-0005		\$ 487
12	RD 956537/TA1	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	BAE Systems	N66604-17-C-0005		\$ 24
12	RD C200398	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Bechtel Bettis, Inc.	B9233018CNR000004		\$ 1,155,527
12	RD 26933	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	BNNT, LLC	N00014-18-C-2012		\$ 26,157
12	RD SUBC 23977	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	BNNT, LLC	N00014-16-C-2058		\$ 155
12	RD 106417SB3K TASK 1	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Booz-Allen & Hamilton Inc	N/A		\$ (3,467)
12	RD 106417SB3K TO 2	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Booz-Allen & Hamilton Inc	N00178-04-D-4024		\$ (56)
12	RD 106417SB3K TO 2 MOD 1	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Booz-Allen & Hamilton Inc	N00178-04-D-4024		\$ (856)
12	RD DWY-16-100 TO2 MOD 3	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Brashear LP	MIT LINCOLN LABS		\$ 385,497
12	RD SC1527501	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Charles River Analytics Inc.	OFFICE OF NAVAL RESEARCH		\$ 89,647
12	RD SC1720001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Charles River Analytics Inc.	OFFICE OF NAVAL RESEARCH		\$ 77,103
12	RD 2015-SC033	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Coherent Technical Services Inc	N00014-15-P-1167		\$ (1,380)
12	RD 18090	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Composite Technology Development	OFFICE OF NAVAL RESEARCH		\$ 9,317
12	RD 151000036	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Concurrent Technologies Corporation	N0001410D0062/0013		\$ (4,946)
12	RD S160600115	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Concurrent Technologies Corporation	N00014-10-D-0062		\$ 3

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD 191-16-C-0001	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Cortana	N68335-15-C-0142		\$ (312)
12	RD 494297	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Curtiss-Wright Electro Mechanical Corporation	N00406-13-C-3012		\$ 14
12	RD 25901	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Curtiss-Wright Corporation	N00024-12-C-2115		\$ (9,600)
12	RD 25903	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Curtiss-Wright Corporation	N00104-15-G-A752		\$ (7,306)
12	RD 26195	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Curtiss-Wright Corporation	N00024-12-C-2115		\$ (332)
12	RD 26196 PO 504908	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Curtiss-Wright Corporation	N00024-12-C-2115		\$ (332)
12	RD 26197	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Curtiss-Wright Corporation	N00024-12-C-2115		\$ (332)
12	RD 27633	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	DFR Solutions	N68335-18-C-0823		\$ 8,380
12	RD 25371	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	DSPlagic	M67854-17-C-6554		\$ (477)
12	RD 25729	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Eagle Harbor Technologies Inc.	N00014-15-C-0025		\$ (2,998)
12	RD ARL-PSU 134Y02 TO PO-0007973	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Engility Corporation	N00178-04-D-4143 DO-4Y02		\$ 722
12	RD 14017	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Engineering & Software System Solutions, Inc	N6833518C0201		\$ 14,732
12	RD 23369	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Gear Research Institute	N68335-13-C-0225		\$ 1,066
12	RD 27355	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Gear Research Institute	N00019-17-C-0020		\$ 71,923
12	RD GENERAL DYNAMICS	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Dynamics Corporation	N61331-11-C-0017		\$ 3,853
12	RD G11W5791	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Dynamics Corporation	N61331-11-C-0017		\$ 31,476
12	RD PPS030-087	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Dynamics Electric Boat	N00024-03-C-2101		\$ (31,547)
12	RD PPS030-087 SUPP 028	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Dynamics Electric Boat	N00014-02-C-2101		\$ (270)
12	RD SNC055-080	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Dynamics Electric Boat	N/A		\$ 13,558
12	RD SNE106-102	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Dynamics Electric Boat	N00024-17-C-2117		\$ 17,317
12	RD 401105828	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	General Electric	N00014-18-C-2010		\$ 218,200
12	RD 24548	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Image Acoustics, Inc.	N00014-18-C-2008		\$ 22,775
12	RD 25484	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	In-Depth Engineering Corporation	N68335-18-C-0066		\$ 74,367
12	RD SUBC IOS 3263 NAVY - LUT AM II	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Intelligent Optical Systems, Inc.	N68335-17-C-0148		\$ (1,105)
12	RD 117643 TO 133521	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Johns Hopkins University	N00024-13-D-6400		\$ 9
12	RD 117643 TO 153690	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Johns Hopkins University	N00024-13-D-6400		\$ 43,755
12	RD 117643 TO 141304	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Johns Hopkins University	NAVSEA N00024-13-D-6400		\$ 2,653
12	RD P166002 JOB #1570825201	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Johnson Controls, Inc	N00024-13-C-2128		\$ (935)
12	RD 2015-4525	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	KCF Technologies	N00024-15-P-4525		\$ (221)
12	RD 25294/17-4037	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	KCF Technologies	N00024-17-C-4037		\$ 114,427
12	RD 199266	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Kyma Technologies	N00014-17-C-2003		\$ 8,014
12	RD P010168364	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Leidos Inc	N00173-13-F-2007		\$ (301)
12	RD 6574020275	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Lockheed Martin Corporation	OFFICE OF NAVAL RESEARCH		\$ 135,156
12	RD PO 4102690612	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Lockheed Martin Corporation	N/A		\$ (108)
12	RD PO 4102690612	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Lockheed Martin Corporation	SNC043-014		\$ (790)
12	RD 4207-AK04-082-12	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Material Science Corporation	N66604-08-D-0034 DO-0002		\$ (597)
12	RD 14612 20753	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	MZA Associates Corporation	N00014-13-P-1075		\$ (396)
12	RD 1046	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	NEVA Systems LLC	N00014-18-C-2023		\$ 137,319
12	RD 25781	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Noise Control Engineering, LLC	N6833517C0547		\$ 19,103
12	RD SUBCONTRACT 2018-038	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Noise Control Engineering, LLC	N6833519C0072		\$ 6,924
12	RD 2015-1959-04	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	North Carolina State University	N00014-15-1-2863		\$ 193,392
12	RD 7500148620	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Northrop Grumman Corporation	N00178-04-D-4091-N410		\$ 212,343
12	RD 197441 TO 03	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Oceanering International, Inc.	SNB166-009		\$ (145)
12	RD 202828	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Polymics, Ltd.	N/A		\$ (104)
12	RD 1548/ 25432	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Questek Innovations LLC	N68335-17-C-0318		\$ (101)
12	RD 1775	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Questek Innovations LLC	N68335-17-C-0318		\$ 23,781
12	RD 1875	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Questek Innovations LLC	N68335-18-C-0537		\$ 45,077
12	RD 5003884741	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Rolls-Royce	N00014-16-C-2031		\$ 70,498
12	RD 498565	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Rolls-Royce PLC	N00014-09-D-0680		\$ 18
12	RD 5004-PSU DO 6	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Sabre Systems, Inc.	N00178-05-D-4546 DO-4Y02		\$ (1,069)
12	RD 205455	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Senvol LLC	N/A		\$ 177,877
12	RD 209058	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	SiliconScapes	N00178-17-P-6188		\$ 4,999

See notes to schedule of expenditures of federal awards.



**THE PENNSYLVANIA STATE UNIVERSITY  
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12	RD 27012 PO 18118PENN	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	SRICO Incorporated	N00030-18-C-0213		\$ 17,711
12	RD 208699	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Systems Technology, Inc	N6833518C0092		\$ 71,980
12	RD 141114-3262-01	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	TRS Technologies, Inc	N00014-15-P-1076		\$ (1,389)
12	RD 170406-3329-01	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	TRS Technologies, Inc	N00014-17-C-4004		\$ 74,966
12	RD 7222014 PO 2084 20743	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Ultra Communications Inc	N00024-14-C-4060		\$ (47)
12	RD 3002890796	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	University of Michigan	N65540-10-C-0003		\$ (25)
12	RD 2017A21381	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	University of Texas at Austin, The	N/A		\$ (21)
12	RD 450487-19079	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	N00014-17-1-2498		\$ 157,745
12	RD 424568	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Volvo Technology of America, Inc	N00173-10-C-2021		\$ 158
12	RD 424568	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Volvo Technology of America, Inc	N00173-12-D-2023 DO31		\$ 391
12	RD 25192	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	VRC Metal Systems, LLC	N00024-17-C-4020		\$ 97,582
12	RD 25193	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	VRC Metal Systems, LLC	N68335-17-C-0556		\$ 89,391
12	RD 8741-0002	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Wagner Associates	N00014-10-C-0525		\$ (8)
12	RD 25809	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Welkins, LLC	N00253-17-C-001		\$ 6,711
12	RD PO# 17-2502	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	WR Systems, Ltd.	N65236-16-D-8001		\$ 1,266
12	RD 1097-00026	Department of the Navy - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	XL Scientific, LLC dba Versus Research	N68335-19-C-0106		\$ 37,200
12	RD HQ0147-16-C-6006	Missile Defense Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 203,333
12	RD 72977-1926-46	Missile Defense Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Physical Sciences, Inc.	HQ0147-16-C-7808		\$ 109,054
12	RD SC19-F111-1	National Geospatial-Intelligence Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Toyon Research Corporation	HM0476-18-C-0065		\$ 34,060
12	RD H98230-16-D-0022 DO 0001	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 613,709
12	RD H98230-16-D-0022 DO 0004	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (226)
12	RD H98230-16-D-0022 TO 0004	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 121,208
12	RD H98230-16-D-0022/0002	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 589,827
12	RD H98230-16-D-0022/0004	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 224,790
12	RD H98230-16-D-0022/0006	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 61,437
12	RD H98230-16-D-0022/0007	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 96,690
12	RD H98230-16-D-0022/0008	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 267,066
12	RD H98230-17-1-0409	National Security Agency - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 56,509
12	RD M0008816WRPC702	United States Marine Corps - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 58,599
12	RD M00264-18-C-0002	United States Marine Corps - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ (2,029)
12	RD M00264-18-P-0213	United States Marine Corps - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 159,505
12	RD M67004-99-D-0037 DO 0079	United States Marine Corps - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	Y				\$ 10,149
12	RD ISEG-18-02 DO-001	United States Marine Corps - Non-Specified	Research and Development	\$ 229,646,797	\$ 597,947,085	N	Trident Systems Inc	M67854-18-C-6703		\$ 257,571
15	225	Recreation and Visitor Services	Research and Development	\$ 35,472	\$ 597,947,085	Y				\$ 35,472
15	232	Wildland Fire Research and Studies	Research and Development	\$ 97,149	\$ 597,947,085	Y				\$ 97,149
15	255	Science and Technology Projects Related to Coal Mining and Reclamation	Research and Development	\$ 98,265	\$ 597,947,085	Y			\$ 1,923	\$ 98,265
15	560	SECURE Water Act - Research Agreements	Research and Development	\$ 58,024	\$ 597,947,085	Y				\$ 58,024
15	608	Fish and Wildlife Management Assistance	Research and Development	\$ 40,025	\$ 597,947,085	N	Commonwealth of Pennsylvania	4100081597		\$ 22,134
15	608	Fish and Wildlife Management Assistance	Research and Development	\$ 40,025	\$ 597,947,085	N	Commonwealth of Pennsylvania	4100077068		\$ 15,385
15	608	Fish and Wildlife Management Assistance	Research and Development	\$ 40,025	\$ 597,947,085	N	University of Maryland Center for Environmental Science	F12AP01037		\$ 2,506
15	657	Endangered Species Conservation - Recovery Implementation Funds	Research and Development	\$ 104,573	\$ 597,947,085	N	National Fish and Wildlife Foundation	N/A		\$ 104,573
15	662	Great Lakes Restoration	Research and Development	\$ 671,070	\$ 597,947,085	Y			\$ 155,328	\$ 671,070
15	678	Cooperative Ecosystem Studies Unit	Research and Development	\$ 44,519	\$ 597,947,085	Y				\$ 44,519
15	805	Assistance to State Water Resources Research Institutes	Research and Development	\$ 92,362	\$ 597,947,085	Y				\$ 63,913
15	805	Assistance to State Water Resources Research Institutes	Research and Development	\$ 92,362	\$ 597,947,085	N	University of Illinois	G16AP00001		\$ 28,449
15	808	U.S. Geological Survey Research and Data Collection	Research and Development	\$ 23,619	\$ 597,947,085	Y				\$ 23,619

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY  
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
15	812	Cooperative Research Units	Research and Development	\$ 342,740	\$ 597,947,085	Y				\$ 342,740
15	945	Cooperative Research and Training Programs - Resources of the National Park System	Research and Development	\$ 364,618	\$ 597,947,085	Y			\$ 1,179	\$ 245,876
15	945	Cooperative Research and Training Programs - Resources of the National Park System	Research and Development	\$ 364,618	\$ 597,947,085	N	Arizona State University	P17AC00977		\$ 5,000
15	945	Cooperative Research and Training Programs - Resources of the National Park System	Research and Development	\$ 364,618	\$ 597,947,085	N	Oregon State University	NATIONAL PARK SERVICE		\$ 113,742
15	RD	P14AC01354 P11AC30805	Department of the Interior - Non-Specified	\$ 787,529	\$ 597,947,085	Y				\$ 12,753
15	RD	1434-03HQRU1548	Department of the Interior - Non-Specified	\$ 787,529	\$ 597,947,085	N	Commonwealth of Pennsylvania	1434-03HQRU1548		\$ 57,918
15	RD	23033	Department of the Interior - Non-Specified	\$ 787,529	\$ 597,947,085	Y	Hadal, Inc.	D16PC00210		\$ 77,262
15	RD	F17AP00711	Fish and Wildlife Service - Non-Specified	\$ 787,529	\$ 597,947,085	Y				\$ 28,876
15	RD	1434-03HQRU1548	Fish and Wildlife Service - Non-Specified	\$ 787,529	\$ 597,947,085	N	Commonwealth of Pennsylvania	1434-03HQRU1548		\$ 225,846
15	RD	1434-03HQRU1548 #33	Fish and Wildlife Service - Non-Specified	\$ 787,529	\$ 597,947,085	N	Commonwealth of Pennsylvania	1434-03HQRU1548 #33		\$ 48,500
15	RD	1434-03HQRU1548 4000021607	Fish and Wildlife Service - Non-Specified	\$ 787,529	\$ 597,947,085	N	Commonwealth of Pennsylvania	1434-03HQRU1548 4000021607		\$ 82,738
15	RD	1434-03HQRU1548 RES PROJ 27	Fish and Wildlife Service - Non-Specified	\$ 787,529	\$ 597,947,085	N	Commonwealth of Pennsylvania	1434-03HQRU1548 RES PROJ 27		\$ 59,983
15	RD	1434-03HQRU1548 RES PROJ 31	Fish and Wildlife Service - Non-Specified	\$ 787,529	\$ 597,947,085	N	Commonwealth of Pennsylvania	1434-03HQRU1548 RES PROJ 31		\$ 148,949
15	RD	P14AC01495	National Park Service - Non-Specified	\$ 787,529	\$ 597,947,085	Y				\$ 42,590
15	RD	P17PX03542	National Park Service - Non-Specified	\$ 787,529	\$ 597,947,085	Y				\$ 2,114
16	560	National Institute of Justice Research, Evaluation, and Development Project Grants	Research and Development	\$ 911,704	\$ 597,947,085	Y			\$ 230,717	\$ 911,704
16	566	National Institute of Justice W.E.B. DuBois Fellowship Program	Research and Development	\$ 4,569	\$ 597,947,085	N	Towson University	NATIONAL INSTITUTE OF JUSTICE		\$ 4,569
16	734	Special Data Collections and Statistical Studies	Research and Development	\$ 79,616	\$ 597,947,085	Y				\$ 79,616
16	738	Edward Byrne Memorial Justice Assistance Grant Program	Research and Development	\$ 138,685	\$ 597,947,085	N	Commonwealth of Pennsylvania	28733		\$ 72,746
16	817	Innovations in Community-Based Crime Reduction	Research and Development	\$ 27,693	\$ 597,947,085	N	Arizona State University	FP00007901		\$ 27,693
16	888	Consolidated And Technical Assistance Grant Program to Address Children and Youth Experiencing Domestic and Sexual Violence and Engage Men and Boys as Allies	Research and Development	\$ 8,504	\$ 597,947,085	N	Safe Journey	2017-CY-AX-0004		\$ 8,504
16	RD	2014-DN-BX-K007	National Institute of Justice - Non-Specified	\$ 148,293	\$ 597,947,085	Y				\$ 34,789
16	RD	2015-DN-BX-K025	National Institute of Justice - Non-Specified	\$ 148,293	\$ 597,947,085	Y				\$ 113,504
20	109	Air Transportation Centers of Excellence	Research and Development	\$ 406,960	\$ 597,947,085	Y			\$ 20,000	\$ 406,960
20	215	Highway Training and Education	Research and Development	\$ 8,250	\$ 597,947,085	Y				\$ 8,250
20	529	Bus Testing Facility	Research and Development	\$ 99,363	\$ 597,947,085	Y				\$ 99,363
20	701	University Transportation Centers Program	Research and Development	\$ 30,766	\$ 597,947,085	Y				\$ 30,766
20	RD	6913G618P800139	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 16,901
20	RD	69A3551847103	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y			\$ 21,771	\$ 198,718
20	RD	DTFH61-12-C-00032	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y			\$ 12,964	\$ 20,954
20	RD	PA 2017-007-00	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 101,964
20	RD	PA 2018-001-00	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 753,143
20	RD	PA 2018-040-00	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 2,573,675
20	RD	PA 2019-004-00	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 29,266
20	RD	PA 24-2017-007-00	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 109,265
20	RD	PA 24-7011	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y			\$ 51,049	\$ 51,049
20	RD	PA 24-7012	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ -
20	RD	SUB0000854	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	N	National Academy of Sciences	FR-RRD-0070-16-01-00	\$ 16,998	\$ 26,670
20	RD	3TB400	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	N	South Dakota State University	311283		\$ 2,157
20	RD	23510	Department of Transportation - Non-Specified	\$ 4,695,160	\$ 597,947,085	N	TechKnowServ Corporation	DTRT5715C10046		\$ 1,976
20	RD	09-C-NE-PSU AMENDMENT 13	Federal Aviation Administration - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ (632)
20	RD	13-C-AJFE-PSU A028	Federal Aviation Administration - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 6,882
20	RD	13-C-AJFE-PSU A031	Federal Aviation Administration - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 126,092
20	RD	13-C-AJFE-PSU A034	Federal Aviation Administration - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 67,370
20	RD	13-C-AJFE-PSU AMENDMENT 016	Federal Aviation Administration - Non-Specified	\$ 4,695,160	\$ 597,947,085	Y				\$ 1

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY  
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
20 RD	13-C-AJFE-PSU AMENDMENT 035	Federal Aviation Administration - Non-Specified	Research and Development	\$ 4,695,160	\$ 597,947,085	Y				\$ 25,409
20 RD	13-C-AJFE-PSU_AMEND 037	Federal Aviation Administration - Non-Specified	Research and Development	\$ 4,695,160	\$ 597,947,085	Y			\$ 20,001	\$ 40,663
20 RD	13-C-AJFE-PSU-AMENDMENT 032	Federal Aviation Administration - Non-Specified	Research and Development	\$ 4,695,160	\$ 597,947,085	Y				\$ 24,496
20 RD	99-G-032	Federal Aviation Administration - Non-Specified	Research and Development	\$ 4,695,160	\$ 597,947,085	Y				\$ (75,862)
20 RD	10/1/2018-10/31/2019	Federal Aviation Administration - Non-Specified	Research and Development	\$ 4,695,160	\$ 597,947,085	N	United Technologies Corporation - Pratt & Whitney Division	FEDERAL AVIATION ADMINISTRATIO		\$ 13,234
20 RD	22205 TO 94	Federal Aviation Administration - Non-Specified	Research and Development	\$ 4,695,160	\$ 597,947,085	N	United Technologies Corporation - Pratt & Whitney Division	DTFAWA-15-A-80010		\$ 464,916
20 RD	693J618C000009	Federal Railroad Administration - Non-Specified	Research and Development	\$ 4,695,160	\$ 597,947,085	Y			\$ 11,459	\$ 45,553
20 RD	DTRFR5316C00023	Federal Railroad Administration - Non-Specified	Research and Development	\$ 4,695,160	\$ 597,947,085	Y			\$ 62,570	\$ 71,300
21 RD	203516	Department of the Treasury - Non-Specified	Research and Development	\$ 19,453	\$ 597,947,085	Y				\$ 19,453
23 002		Appalachian Area Development	Research and Development	\$ 124,113	\$ 597,947,085	N	Appalachian Regional Commission	ARC	\$ 82,282	\$ 124,113
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	Y			\$ 1,041,851	\$ 5,529,592
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Boise State University	NNX16AT71G		\$ 2,468
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Cornell University	NNX16AK876		\$ 36,405
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Georgetown University	NATIONAL AERONAUTICS AND SPACE		\$ 9,807
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Montana State University	NNX16AJ62G		\$ 49,532
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	NAS8-03060		\$ 452,875
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	NNX17AG77G		\$ 66,762
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	South Dakota State University	NNX15AP81G		\$ 3,261
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Universities Space Research Association	80NSSC18K1313		\$ 17,757
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	University of California, Irvine	80NSSC17K0698		\$ 70,171
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	University of Georgia	NNXAF09G S05		\$ 6,427
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Villanova University	80NSSC18K0417		\$ 43,084
43 001		Science	Research and Development	\$ 6,354,397	\$ 597,947,085	N	Yale University	80NSSC18K0443		\$ 66,256
43 002		Aeronautics	Research and Development	\$ 475,504	\$ 597,947,085	Y				\$ 15,355
43 002		Aeronautics	Research and Development	\$ 475,504	\$ 597,947,085	N	University of Oklahoma	NATIONAL AERONAUTICS AND SPACE		\$ 112,206
43 002		Aeronautics	Research and Development	\$ 475,504	\$ 597,947,085	N	University of Tennessee, Knoxville, The	NNX17AJ95A		\$ 339,112
43 002		Aeronautics	Research and Development	\$ 475,504	\$ 597,947,085	N	Worcester Polytechnic Institute	NNC14AA01A		\$ 8,831
43 003		Exploration	Research and Development	\$ 174,072	\$ 597,947,085	Y				\$ 174,048
43 003		Exploration	Research and Development	\$ 174,072	\$ 597,947,085	N	Georgia Institute of Technology	NATIONAL AERONAUTICS AND SPACE		\$ 24
43 007		Space Operations	Research and Development	\$ 1,901	\$ 597,947,085	Y				\$ 1,901
43 008		Education	Research and Development	\$ 839,935	\$ 597,947,085	Y			\$ 129,718	\$ 829,937
43 012		Space Technology	Research and Development	\$ 417,474	\$ 597,947,085	Y				\$ 314,320
43 012		Space Technology	Research and Development	\$ 417,474	\$ 597,947,085	N	Georgia Institute of Technology	NATIONAL AERONAUTICS AND SPACE		\$ 13,406
43 012		Space Technology	Research and Development	\$ 417,474	\$ 597,947,085	N	Johns Hopkins University	80NSSC17K0226		\$ 4,464
43 012		Space Technology	Research and Development	\$ 417,474	\$ 597,947,085	N	Michigan Technological University	80NSSC17K0226		\$ (1,352)
43 012		Space Technology	Research and Development	\$ 417,474	\$ 597,947,085	N	Michigan Technological University	NATIONAL AERONAUTICS AND SPACE		\$ 86,636
43 RD	4200633574	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y				\$ 18,301
43 RD	80NSSC17K0122	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y				\$ 107,686
43 RD	80NSSC17K0183	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y				\$ 62,795
43 RD	80NSSC17K0313	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y				\$ 29,460
43 RD	80NSSC17K0639	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y				\$ 33,001
43 RD	80NSSC17K0640	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y				\$ 31,317
43 RD	80NSSC17K0752	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y				\$ 48,226

See notes to schedule of expenditures of federal awards.

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**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
43	RD	80NSSC18K0147	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y		\$ 53,526	\$ 240,795
43	RD	80NSSC18K0205	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 43,220
43	RD	80NSSC18K0282	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 750,137
43	RD	80NSSC18K0355	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 133,442
43	RD	80NSSC18K0360	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 25,396
43	RD	80NSSC18K0458	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 48,053
43	RD	80NSSC18K0487	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 46,813
43	RD	80NSSC18K0878	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 35,721
43	RD	80NSSC18K1178	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 61,870
43	RD	80NSSC18K1695	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 1,538
43	RD	80NSSC18K1730	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 1,683
43	RD	80NSSC18M0094	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y		\$ 175,306	\$ 720,410
43	RD	80NSSC18P1677	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 91,972
43	RD	80NSSC18P2403	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 35,775
43	RD	80NSSC19K0101	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 3,492
43	RD	80NSSC19P0042	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 25,117
43	RD	NAS5-00136	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y		\$ 639,236	\$ 1,955,655
43	RD	NNC14VB43P	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ (437)
43	RD	NNL11AA02C	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ (4,347)
43	RD	NNM14AB98P	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ (348)
43	RD	NNX15AR50G	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 1,733
43	RD	NNX16AE27G	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 51,243
43	RD	NNX16AE64G	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 12,642
43	RD	NNX16AF33G	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ 66,912
43	RD	NNX17AB07G	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y		\$ 934,342	\$ 1,576,326
43	RD	NNX17EE35P	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	Y			\$ (57)
43	RD	212877	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Actuated Medical, Inc.		\$ 37,500
43	RD	AGNC160519	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	American GNC Corporation	NNX16CJ06C	\$ 9,728
43	RD	APS-15-07 MOD 01	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Applied Physical Sciences Corporation	NNL15AA00C	\$ 196,766
43	RD	4900019733	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	BWXT NOG Technologies, Inc	NATIONAL AERONAUTICS AND SPACE	\$ 43,060
43	RD	44A-1092750	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	California Institute of Technology	NASA	\$ (22)
43	RD	1549273	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	California Institute of Technology Jet Propulsion Laboratory	NNN12AA01C	\$ 55,497
43	RD	17-250 PO 18-163	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Continuum Dynamics, Inc	NATIONAL AERONAUTICS AND SPACE	\$ 58,511
43	RD	216017	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	ElectroDynamic Applications, Inc	NATIONAL AERONAUTICS AND SPACE	\$ 57,871
43	RD	80NSSC17C0029-PSU-705-817125	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Fibertek, Inc.	80NSSC17C0029	\$ 132,662
43	RD	24704	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Global Technology Enterprises	NNX16CM24P	\$ 343
43	RD	2387-1	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Intelligent Automation, Inc.	NAVAL AIR WARFARE CENTER	\$ 16,968
43	RD	1547612	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Jet Propulsion Laboratory	NNN12AA01C	\$ 477,214
43	RD	1569843	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Jet Propulsion Laboratory	NASA	\$ 1,512
43	RD	1575913	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Jet Propulsion Laboratory	NATIONAL AERONAUTICS AND SPACE	\$ 27,682
43	RD	1575913 AMEND 4	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Jet Propulsion Laboratory	NATIONAL AERONAUTICS AND SPACE	\$ 131,996
43	RD	1596437	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Jet Propulsion Laboratory	N/A	\$ 73,581
43	RD	1607073	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Jet Propulsion Laboratory	N/A	\$ 7,952
43	RD	1621034	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Jet Propulsion Laboratory	NATIONAL AERONAUTICS AND SPACE	\$ 6,876

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
43	RD 145170	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Johns Hopkins University	NATIONAL AERONAUTICS AND SPACE		\$ 101,751
43	RD 147577	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Johns Hopkins University	NNN06AA01C		\$ 274,216
43	RD 2018-0412	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	KCF Technologies Inc	NAVAL AIR WARFARE CENTER AIRCR		\$ 18,926
43	RD REMS.201605 TO NNA17BF39T	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Monterey Technologies, Inc.	NNA13AA84B		\$ (163)
43	RD NA-1992	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Nanosonic, Inc	NATIONAL AERONAUTICS AND SPACE		\$ 40,000
43	RD 24755	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	QorTek	NNXI6CC11C		\$ 1,918
43	RD 24767	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	SET Group, LLC	NNXI7CC76P		\$ (3,493)
43	RD 26422	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	SET Group, LLC	80NSSC18C0125		\$ 94,225
43	RD AR8-19016X	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	NAS8-03060		\$ 45,521
43	RD DD7-18088X	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	NAS8-03060		\$ 8,150
43	RD GO7-18003A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	NAS8-03060		\$ 89,698
43	RD GO8-19059X	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	NAS8-03060		\$ 32,283
43	RD SV4-74018	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	NAS8-03060		\$ 373,954
43	RD SV8-88005 PHASE A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	N/A		\$ 49,842
43	RD SV8-88005 PHASE B	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Smithsonian Astrophysical Observatory	N/A		\$ 24,639
43	RD 189712	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Solid State Ceramics, Inc	NNXI6CS16C		\$ 20,604
43	RD HST-GO-13468.001-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 35,053
43	RD HST-GO-13851.001-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 31,081
43	RD HST-GO-14126.004-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 4,217
43	RD HST-GO-14249.002-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 15,757
43	RD HST-GO-14258.001-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 18,731
43	RD HST-GO-14265.004-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 9,408
43	RD HST-GO-14655.002-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 10,489
43	RD HST-GO-14664.001-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 19,148
43	RD HST-GO-14745.001-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 4,954
43	RD HST-GO-14783.002-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 1,879
43	RD HST-GO-14799.001-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	N/A		\$ 27,068
43	RD HST-GO-14932.001-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	N/A		\$ 21,027
43	RD HST-GO-14937.002-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	N/A		\$ 18,848
43	RD HST-GO-15083.001-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	NASS-26555		\$ 53,378
43	RD HST-GO-15237.003-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	N/A		\$ 3,941
43	RD HST-GO-15318.003-A	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Space Telescope Science Institute	N/A		\$ 1,900
43	RD 26912	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Thermin Industries LLC	80NSSC18P1884_4200665971		\$ 39,750
43	RD 08600-017 PO 20180993	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Universities Space Research Association	NNA16BD14C		\$ (2)
43	RD FP060761-C AMEND 2	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	University of Chicago	NNX16AB44G		\$ 3,021
43	RD WSCS00037	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	Wyle, Inc.	NND15AA05C		\$ 1,278
43	RD 00023	National Aeronautics and Space Administration - Non-Specified	Research and Development	\$ 10,498,189	\$ 597,947,085	N	XL Scientific, LLC dba Versus Research	80NSSC18P1931		\$ 15,500
45	024	Promotion of the Arts Grants to Organizations and Individuals	Research and Development	\$ 6,630	\$ 597,947,085	Y				\$ 2,630
45	130	Promotion of the Humanities Challenge Grants	Research and Development	\$ (3)	\$ 597,947,085	Y				\$ (3)
45	161	Promotion of the Humanities Research	Research and Development	\$ 128,301	\$ 597,947,085	Y				\$ 128,301
45	301	Museums for America	Research and Development	\$ 141,071	\$ 597,947,085	Y				\$ 141,071
45	312	National Leadership Grants	Research and Development	\$ 246,241	\$ 597,947,085	Y			\$ 6,853	\$ 207,157
45	RD HK-50070-13	National Endowment for the Humanities - Non-Specified	Research and Development	\$ 141,981	\$ 597,947,085	Y				\$ 90,591
45	RD RQ-230555-15	National Endowment for the Humanities - Non-Specified	Research and Development	\$ 141,981	\$ 597,947,085	Y				\$ 51,390
47	041	Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	Y			\$ 421,567	\$ 9,953,880

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Case Western Reserve University	NATIONAL SCIENCE FOUNDATION		\$ 88,586
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Highland Light Management	1721502		\$ 7,688
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Howard University	CBET-1639342		\$ 72,615
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Iowa State University	N/A		\$ 44,962
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Iowa State University	1238335		\$ 42,709
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	North Carolina State University	N/A		\$ 25,383
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	North Carolina State University	EEC-1160483		\$ 298,579
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Rensselaer Polytechnic Institute	EFRI-1433311		\$ 100,259
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Solid State Ceramics, Inc	IIP-1632476		\$ 48,580
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Spotless Materials, LLC	1843624		\$ 12,308
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	Thermax Industries LLC	IIP-1447975		\$ (78)
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	University of Florida	1729209		\$ 20,349
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	University of Notre Dame	2016-NE-2698		\$ 219,205
47 041		Engineering	Research and Development	\$ 11,019,145	\$ 597,947,085	N	University of Pennsylvania	1542707		\$ 84,120
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	Y			\$ 778,716	\$ 17,387,073
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	California Institute of Technology	1305124		\$ 24,610
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	Indiana University	NATIONAL SCIENCE FOUNDATION		\$ 26,133
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	Norfolk State University	1832031		\$ 16,695
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	University of California, Irvine	CHE-1414466		\$ 99,915
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	University of Pittsburgh	1740630		\$ 231,046
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	University of Wisconsin	1700765		\$ 108,844
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	University of Wisconsin	17700765		\$ 635
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	University of Wisconsin - Madison	1629270		\$ 109,979
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	Washington State University	1626566		\$ 5,778
47 049		Mathematical and Physical Sciences	Research and Development	\$ 18,186,906	\$ 597,947,085	N	Yale University	1616086		\$ 31,704
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	Y			\$ 382,759	\$ 7,970,418
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	Columbia University	N/A		\$ 17,998
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	Columbia University	NATIONAL SCIENCE FOUNDATION		\$ 86,603
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	Columbia University	OCE 1450528		\$ 5,300
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	Cornell University	N/A		\$ 142,721
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	Harvard University	N/A		\$ 24,991
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	Kansas State University	1639734		\$ 12,162
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	New York University	OPP-1739003		\$ 39,673
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	Ohio State University, The	1617185		\$ 15,683
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	University Corporation for Atmospheric Research	AGS-1344155		\$ 11,910
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	University of California, Davis	1748052		\$ 9,991
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	University of Colorado	AGS1135446		\$ (359)
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	University of Illinois	EAR-1331906		\$ 9,007
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	University of New Hampshire	EAR-1331841		\$ 36,286
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	University of Wisconsin	PLR-1600823		\$ 66,022
47 050		Geosciences	Research and Development	\$ 8,666,928	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	479483-19079		\$ 218,522
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	Y			\$ 155,884	\$ 7,309,199
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	N	Carnegie Mellon University	NATIONAL SCIENCE FOUNDATION		\$ 5,316
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	N	Indiana University	1421908		\$ 16,631
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	N	North Dakota State University	CNS-1544621		\$ 2,001
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	N	Northern Arizona University	1639529		\$ 65,103
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	N	Rutgers State University	1640834		\$ 76,208
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	N	University of California	1550488		\$ 3,158
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	N	University of California, Santa Barbara	CCF-1500848		\$ 69,689
47 070		Computer and Information Science and Engineering	Research and Development	\$ 7,591,535	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	ACI-1547580		\$ 44,230
47 074		Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	Y			\$ 1,033,169	\$ 7,244,231
47 074		Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	Iowa State University	1558071		\$ 99,243
47 074		Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	Michigan State University	1740874		\$ 165,206
47 074		Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	Montana State University	1716698		\$ 20,706
47 074		Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	Purdue University	1831493-DEB		\$ 17,441

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	Stanford University	1518681		\$ 153,103
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	The Washington University in St. Louis	MCB-1331194		\$ (662)
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	The Washington University in St. Louis	MCB1546840		\$ 139,269
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	University of California, San Diego	1444435		\$ 73,640
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	University of Connecticut	1703048		\$ 2,678
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	University of Florida	1758820		\$ 25,246
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	University of Maryland	DB11639145		\$ 32,626
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	University of Virginia	DEB-1237733		\$ 22,068
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	Virginia Institute of Marine Science	1754692		\$ 17,582
47	074	Biological Sciences	Research and Development	\$ 8,016,646	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	IOS-1238057		\$ 4,269
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	Y			\$ 275,431	\$ 2,613,259
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	Boise State University	N/A		\$ 52,486
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	Fordham University	N/A		\$ 3,315
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	Indiana University of Pennsylvania	1759694		\$ 5,512
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	San Diego State University	1826839		\$ 815
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	Smith-Kettlewell Eye Research Institute, The	1640914		\$ 1,406
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	University of Colorado	SES 11-32008		\$ 20,647
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	University of Massachusetts Amherst	SES 14-24210		\$ 10,954
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	University of Minnesota	1825768		\$ 17,159
47	075	Social, Behavioral, and Economic Sciences	Research and Development	\$ 2,730,080	\$ 597,947,085	N	University of Texas, Dallas	152864		\$ 4,527
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	Y			\$ 367,576	\$ 6,891,770
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	American Educational Research Association	NSF		\$ 2
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	Astronomical Society of the Pacific	DR1-1217441		\$ 8,967
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	Concord Consortium, The	293.01		\$ 208,249
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	Concord Consortium, The	NATIONAL SCIENCE FOUNDATION		\$ 38,170
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	Harvard University	DRL-1503395		\$ 4,839
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	Norfolk State University	1547771		\$ 42,883
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	North Carolina State University	1761110		\$ 57,634
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	Northwest Vista College	NSF		\$ 28,153
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	The University of Central Florida Board of Trustees	DUE-1161228		\$ 8,431
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	The University of Southern California	DGE-1807047		\$ 19,514
47	076	Education and Human Resources	Research and Development	\$ 7,747,482	\$ 597,947,085	N	University of Oklahoma, The	1561660		\$ 148,621
47	079	Office of International Science and Engineering	Research and Development	\$ 44,718	\$ 597,947,085	Y				\$ 35,869
47	079	Office of International Science and Engineering	Research and Development	\$ 44,718	\$ 597,947,085	N	University at Albany, State University of New York	1545917		\$ 8,849
47	080	Office of Cyberinfrastructure	Research and Development	\$ 116,213	\$ 597,947,085	Y				\$ 116,213
47	083	Integrative Activities	Research and Development	\$ 905,571	\$ 597,947,085	Y			\$ 183,310	\$ 746,706
47	083	Integrative Activities	Research and Development	\$ 905,571	\$ 597,947,085	N	Boise State University	NATIONAL SCIENCE FOUNDATION		\$ 158,865
47	RD 1516999	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 8,797
47	RD 1839269	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 61,995	\$ 84,242
47	RD AGS 16-32850	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 7,893
47	RD BCS 15-54834	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 42,913
47	RD BCS 16-17396	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 17,153
47	RD BCS 16-60707	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 96,719
47	RD BCS-1748374	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 6,425
47	RD CHE 15-65280	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 4,809
47	RD CHE 16-09572	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 225
47	RD CHE-1807703	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 481
47	RD CHE-1832471	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 45,010	\$ 595,096
47	RD CMMI 14-63482	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 20,456
47	RD CMMI-1762188	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 61,236
47	RD CMMI-1826221	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 26,132
47	RD CMMI-1907389	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y				\$ 3,555

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
47	RD	CNS 15-26425	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 177,778
47	RD	CNS 16-37540	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 41,560
47	RD	CNS 16-50527	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 74,233
47	RD	DEB 15-56444	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 133,957
47	RD	DEB-1762760	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 134,509
47	RD	DGE 16-63343	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 228,737
47	RD	DGE 17-23687	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 3,902
47	RD	DMR 16-54625	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 107,234
47	RD	DMR-1851987	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 31,140
47	RD	DMR-1917579	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 56,526
47	RD	DMS 16-15457	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 1,000
47	RD	DMS 16-28411	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 4,306
47	RD	DUE 16-50620	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ (1,877)
47	RD	DUE 1848609	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 22,548
47	RD	EAR 13-31726	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 52,417
47	RD	EAR 16-06738	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 81,848
47	RD	EAR 16-34108	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 3,097
47	RD	EFRI 14-33378	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 105,031
47	RD	IIP-1841474	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 38,046
47	RD	IIS 15-02176	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 1,700
47	RD	IIS 17-44401	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 294
47	RD	MCB 15-16999	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 120,449
47	RD	MCB-1715984	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 5,377
47	RD	OPP 17-23832	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 185
47	RD	PHY 16-07517	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 207,178
47	RD	PHY 16-07648	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 182,462
47	RD	PHY 16-13939	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 147,109
47	RD	PHY 16-20777	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 26,593
47	RD	SES 16-47505	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ (2)
47	RD	SMA 16-41047 TRANSFER	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	Y			\$ 71,542
47	RD	PSU231221	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	N	California State University, Los Angeles	DMR-1523588	\$ 41,691
47	RD	172914	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	N	Dordt College	N/A	\$ 4,598
47	RD	2016-NE-2699	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	N	Nanoelectronics Research Corporation	P29819	\$ 17,308
47	RD	181223 PO081721	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	N	North Carolina Central University	N/A	\$ 27,985
47	RD	UNR-17-33 PO 117GC000041	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	N	University of Nevada, Reno	N/A	\$ 5,540
47	RD	K120897	National Science Foundation - Non-Specified	Research and Development	\$ 3,207,366	\$ 597,947,085	N	Woods Hole Oceanographic Institution	OCE-1154283	\$ (7)
64	RD	206221	Department of Veterans Affairs - Non-Specified	Research and Development	\$ 7,987	\$ 597,947,085	Y			\$ 3,613
64	RD	219530	Department of Veterans Affairs - Non-Specified	Research and Development	\$ 7,987	\$ 597,947,085	Y			\$ 4,374
66	034		Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act	Research and Development	\$ 34,558	\$ 597,947,085	Y	Commonwealth of Pennsylvania	4100074732	\$ 34,558
66	461		Regional Wetland Program Development Grants	Research and Development	\$ 187,768	\$ 597,947,085	Y			\$ 153,684
66	461		Regional Wetland Program Development Grants	Research and Development	\$ 187,768	\$ 597,947,085	N	State of New Jersey Department of Environmental Protection	CD-962843-15	\$ 34,084
66	466		Chesapeake Bay Program	Research and Development	\$ 440,222	\$ 597,947,085	Y			\$ 199,839
66	466		Chesapeake Bay Program	Research and Development	\$ 440,222	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300564415 4400015622	\$ (1)
66	466		Chesapeake Bay Program	Research and Development	\$ 440,222	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300601818	\$ 43,216
66	466		Chesapeake Bay Program	Research and Development	\$ 440,222	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300615517	\$ 45,854
66	466		Chesapeake Bay Program	Research and Development	\$ 440,222	\$ 597,947,085	N	Mid-Atlantic 4R Nutrient Stewardship Association	0602.17.057424	\$ 9,163
66	469		Great Lakes Program	Research and Development	\$ 10,353	\$ 597,947,085	N	University of Minnesota	GL-00E01900	\$ 10,353
66	509		Science to Achieve Results (STAR) Research Program	Research and Development	\$ 85,347	\$ 597,947,085	Y			\$ 85,347
66	RD	NE96352201	Environmental Protection Agency - Non-Specified	Research and Development	\$ 495,423	\$ 597,947,085	Y			\$ 52,650
66	RD	PW2016-007	Environmental Protection Agency - Non-Specified	Research and Development	\$ 495,423	\$ 597,947,085	N	Amec Foster Wheeler	ENVIRONMENTAL PROTECTION AGENC	\$ 17,293
66	RD	4100077088	Environmental Protection Agency - Non-Specified	Research and Development	\$ 495,423	\$ 597,947,085	N	Commonwealth of Pennsylvania	4100077088	\$ 5,044
66	RD	4300570742 4400015622	Environmental Protection Agency - Non-Specified	Research and Development	\$ 495,423	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300570742 4400015622	\$ 9,545

See notes to schedule of expenditures of federal awards.



**THE PENNSYLVANIA STATE UNIVERSITY**  
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**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
66	RD	4300582957 4400015622	Environmental Protection Agency - Non-Specified	Research and Development	\$ 495,423	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300582957 4400015622	\$ 43,115
66	RD	4300593881	Environmental Protection Agency - Non-Specified	Research and Development	\$ 495,423	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300593881	\$ 223,929
66	RD	4300597777	Environmental Protection Agency - Non-Specified	Research and Development	\$ 495,423	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300597777	\$ 115,402
66	RD	4300605085	Environmental Protection Agency - Non-Specified	Research and Development	\$ 495,423	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300605085	\$ 28,445
77	008		U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program	Research and Development	\$ 255,872	\$ 597,947,085	Y			\$ 255,872
77	RD	31310018C0031	Nuclear Regulatory Commission - Non-Specified	Research and Development	\$ 262,541	\$ 597,947,085	Y			\$ 148,993
77	RD	NRC-HQ-12-C-04-0086	Nuclear Regulatory Commission - Non-Specified	Research and Development	\$ 262,541	\$ 597,947,085	Y			\$ 113,548
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	Y		\$ 1,061,704	\$ 6,221,837
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Altex Technologies	DE-SC0013823	\$ 354
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Arizona State University	U.S. DEPARTMENT OF ENERGY	\$ 182,598
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Brimrose Technology Corporation	DE-SC0018866	\$ 7,678
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Brimrose Technology Corporation	U.S. DEPARTMENT OF ENERGY	\$ 15,000
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Columbia University	DE-SC0016579	\$ 107,765
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Cornell University	U.S. DEPARTMENT OF ENERGY	\$ 94,206
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Florida State University	U.S. DEPARTMENT OF ENERGY	\$ 6,722
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Georgia Institute of Technology	DE-SC0012577	\$ 2,791
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Giner, Inc	U.S. DEPARTMENT OF ENERGY	\$ 3,796
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	H Quest Vanguard, Inc	DE-SC0017227	\$ 88,220
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	H Quest Vanguard, Inc	U.S. DEPARTMENT OF ENERGY	\$ 53,849
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	HAMR Industries LLC	DE-SC0018777	\$ 43,685
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Intelligent Automation, Inc	U.S. DEPARTMENT OF ENERGY	\$ 41,413
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Johns Hopkins University	DE-SC0019331	\$ 162,806
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Luna Innovations, Inc	U.S. DEPARTMENT OF ENERGY	\$ 59,590
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Massachusetts Institute of Technology	U.S. DEPARTMENT OF ENERGY	\$ 16,635
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Ohio State University, The	DE-SC0016584	\$ 194,432
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Princeton University	DE-SC0019364	\$ 45,971
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Qcoefficient, Inc	DE-SC0018855	\$ 70,000
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Stanford University	DE-SC0016162	\$ 136,083
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	UES, Inc.	DE-SC0004356 0004	\$ (399)
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	UES, Inc.	DE-SC0011335	\$ 175
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	UES, Inc.	DE-SC0013215	\$ 134,480
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	University of Arkansas	DE-SC0016529	\$ 82,158
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	University of California, Davis	DE-SC0016605	\$ 269,649
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	University of California, San Diego	DE-SC0017981	\$ 119,753
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	University of Illinois	DE-SC0010778	\$ 20,444
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	University of Illinois	DE-SC0018260	\$ 75,175
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	University of Texas at Austin, The	DE-SC0018042	\$ 78,110
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	University of Utah, The	DE-SC0019285	\$ 86,488
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Washington University in St. Louis	DE-SC0010355	\$ 48,168
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Washington University in St. Louis	DE-SC0012722	\$ 135,392
81	049		Office of Science Financial Assistance Program	Research and Development	\$ 9,183,280	\$ 597,947,085	N	Yale University	U.S. DEPARTMENT OF ENERGY	\$ 58,470
81	086		Conservation Research and Development	Research and Development	\$ 1,759,120	\$ 597,947,085	Y		\$ 173,874	\$ 1,409,206
81	086		Conservation Research and Development	Research and Development	\$ 1,759,120	\$ 597,947,085	N	Michigan State University	DE-EE0007803	\$ 94,449
81	086		Conservation Research and Development	Research and Development	\$ 1,759,120	\$ 597,947,085	N	University of Michigan	DE-EE0008456	\$ 10,752
81	086		Conservation Research and Development	Research and Development	\$ 1,759,120	\$ 597,947,085	N	University of Virginia	DE-EE0008195	\$ 244,713
81	087		Renewable Energy Research and Development	Research and Development	\$ 1,154,732	\$ 597,947,085	Y		\$ 45,056	\$ 606,577
81	087		Renewable Energy Research and Development	Research and Development	\$ 1,154,732	\$ 597,947,085	N	3M	DE-AR0000776	\$ 104,152
81	087		Renewable Energy Research and Development	Research and Development	\$ 1,154,732	\$ 597,947,085	N	Antares Group Incorporated	U.S. DEPARTMENT OF ENERGY	\$ 90,270
81	087		Renewable Energy Research and Development	Research and Development	\$ 1,154,732	\$ 597,947,085	N	Composite Technology Development, Inc.	DE-EE0007248	\$ 88,722

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,154,732	\$ 597,947,085	N	Forest Concepts LLC	U.S. DEPARTMENT OF ENERGY		\$ 136,314
81 087		Renewable Energy Research and Development	Research and Development	\$ 1,154,732	\$ 597,947,085	N	Yale University	DE-EE0007983		\$ 128,697
81 089		Fossil Energy Research and Development	Research and Development	\$ 2,653,447	\$ 597,947,085	Y			\$ 1,133,246	\$ 2,506,716
81 089		Fossil Energy Research and Development	Research and Development	\$ 2,653,447	\$ 597,947,085	N	Inventure Renewables, Inc.	DE-FE0030146		\$ 90,446
81 089		Fossil Energy Research and Development	Research and Development	\$ 2,653,447	\$ 597,947,085	N	Inventure Renewables, Inc.	U.S. DEPARTMENT OF ENERGY		\$ 20,906
81 089		Fossil Energy Research and Development	Research and Development	\$ 2,653,447	\$ 597,947,085	N	Liquid Ion Solutions LLC	DE-FE026464		\$ 35,379
81 117		Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance	Research and Development	\$ 509,247	\$ 597,947,085	Y			\$ 175,454	\$ 479,531
81 117		Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance	Research and Development	\$ 509,247	\$ 597,947,085	N	Citizens for Pennsylvania's Future	N/A		\$ 15,213
81 117		Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technical Analysis/Assistance	Research and Development	\$ 509,247	\$ 597,947,085	N	NG1 Technologies	1517-001/150-310-002S1		\$ 14,503
81 121		Nuclear Energy Research, Development and Demonstration	Research and Development	\$ 3,108,215	\$ 597,947,085	Y			\$ 823,122	\$ 2,866,924
81 121		Nuclear Energy Research, Development and Demonstration	Research and Development	\$ 3,108,215	\$ 597,947,085	N	Massachusetts Institute of Technology	DE-NE0008413		\$ 22,585
81 121		Nuclear Energy Research, Development and Demonstration	Research and Development	\$ 3,108,215	\$ 597,947,085	N	Westinghouse Electric Company LLC	DE-NE0008522		\$ 218,706
81 122		Electricity Delivery and Energy Reliability, Research, Development and Analysis	Research and Development	\$ 69,921	\$ 597,947,085	Y				\$ 69,921
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 1,698,484	\$ 597,947,085	Y			\$ 970,314	\$ 1,561,371
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 1,698,484	\$ 597,947,085	N	Ocean Renewable Power Company	DE-AR0000658		\$ 102,794
81 135		Advanced Research Projects Agency - Energy	Research and Development	\$ 1,698,484	\$ 597,947,085	N	Storagenergy Technologies, Inc.	DE-AR000818		\$ 34,319
81 RD	89303019PFE000021	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 4,858
81 RD	DE-AR0000801	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y			\$ 183,336	\$ 788,708
81 RD	DE-AR0000821	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y			\$ 501,797	\$ 1,548,843
81 RD	DE-EE0007625	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y			\$ 169,823	\$ 198,278
81 RD	DE-EE0008096	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 311,395
81 RD	DE-FE0024261	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 109,886
81 RD	DE-FE0026825 0006	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y			\$ 91,604	\$ 355,927
81 RD	DE-FE0026825 0008	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 6,716
81 RD	DE-FE0031280	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 23,383
81 RD	DE-FE0031544	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y			\$ 11,813	\$ 365,660
81 RD	DE-FG02-93ER40771	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 87,953
81 RD	DE-NE0008688	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y			\$ 5,296	\$ 152,987
81 RD	DE-SC0012375	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y			\$ 689,491	\$ 1,039,975
81 RD	DE-SC0013699	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 127,537
81 RD	DE-SC0018032	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 270,884
81 RD	DE-SC0018035	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 223,924
81 RD	DE-SC0018038	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 70,022
81 RD	DE-SC0018087	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 259,417
81 RD	DE-SC0019349	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	Y				\$ 144,869
81 RD	AHQ-9-92092-04	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Alliance for Sustainable Energy, LLC	U.S. DEPARTMENT OF ENERGY		\$ 10,000
81 RD	RHA-7-70083-01	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Alliance for Sustainable Energy, LLC	DE-AC36-08GO28308		\$ 6,877
81 RD	7F-30076	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Argonne National Laboratory	DE-AC02-06CH11357		\$ 170,970
81 RD	00144657	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Energy Alliance, LLC	DE-AC07-05ID14517		\$ (7,064)
81 RD	111923 TO 248851	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Energy Alliance, LLC	111923		\$ (226)
81 RD	163662 AMEND 4	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Energy Alliance, LLC	N/A		\$ 112,035
81 RD	188340	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Energy Alliance, LLC	U.S. DEPARTMENT OF ENERGY		\$ 123,772
81 RD	204964	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Energy Alliance, LLC	U.S. DEPARTMENT OF ENERGY		\$ 26,486
81 RD	204967	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Energy Alliance, LLC	U.S. DEPARTMENT OF ENERGY		\$ 30,000
81 RD	334640 MOD 2	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Memorial Institute	DE-AC05-76RL01830		\$ 22,773
81 RD	4000105709 MOD 15	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Memorial Institute	DE-AC05-00OR22725		\$ (10,315)
81 RD	443328	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Memorial Institute	U.S. DEPARTMENT OF ENERGY		\$ 17,124
81 RD	B626737	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Memorial Institute	DE-AC52-07NA27344		\$ 12,942

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
81	RD	419294	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Memorial Institute Pacific Northwest National Laboratory	DEPARTMENT OF ENERGY	\$ 80,783
81	RD	452458	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Memorial Institute Pacific Northwest National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 4,947
81	RD	432185	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Battelle Memorial Institute, Pacific Northwest Division	U.S. DEPARTMENT OF ENERGY	\$ 40,301
81	RD	103595	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Bechtel Bettis, Inc.	N/A	\$ (350)
81	RD	103595	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Bechtel Bettis, Inc.	US DEPARTMENT OF ENERGY	\$ 66,717
81	RD	125444	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Bechtel Bettis, Inc.	DE-NR0000031	\$ 8,492
81	RD	300324	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Brookhaven National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 62,993
81	RD	334472	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Brookhaven National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 9,913
81	RD	2014-124-16	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Cardinal Engineering LLC	N/A	\$ (121)
81	RD	25365	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Gear Research Institute	DE-SC0013223	\$ 24
81	RD	RJ407-G1	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Georgia Institute of Technology	DE-FE0031288	\$ 88,344
81	RD	25373 PO 7790-1	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	HAMR Industries LLC	DE-SC0017790	\$ (367)
81	RD	15C1391400	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Jefferson Science Associates LLC	N/A	\$ 40,892
81	RD	101490 LINE 3	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Knolls Atomic Power Laboratory	DE-NR0000031	\$ (4,544)
81	RD	101490 LINE 4	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Knolls Atomic Power Laboratory	DE-NR0000031	\$ 24,135
81	RD	101490 LINE 5	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Knolls Atomic Power Laboratory	DE-NR0000031	\$ 143,264
81	RD	101490 LINE 6	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Knolls Atomic Power Laboratory	DE-NR0000031	\$ 1,396
81	RD	133121	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Knolls Atomic Power Laboratory	89233018CNR000004	\$ 1,856
81	RD	B630324	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Lawrence Livermore National Laboratory	DE-AC52-07NA27344	\$ 48,694
81	RD	7352259	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Lawrence Berkeley National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 82,573
81	RD	7370834	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Lawrence Berkeley National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 21,308
81	RD	7380173	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Lawrence Berkeley National Laboratory	DE-AC02-05CH11231	\$ 45,098
81	RD	7434356	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Lawrence Berkeley National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 21,541
81	RD	B626737 MOD 3	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Lawrence Berkeley National Laboratory	N/A	\$ 33,091
81	RD	B629176	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Lawrence Livermore National Laboratory	DE-AC52-07NA27344	\$ 20,863
81	RD	B634531	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Lawrence Livermore National Laboratory	DE-AC52-07NA27344	\$ 18,160
81	RD	P010221754	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Leidos Inc	NATIONAL ENERGY TECHNOLOGY LAB	\$ 7,953
81	RD	PO10221754 TASK ORDR 1	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Leidos Inc	89243318CFE000003	\$ 54,782
81	RD	293402	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Los Alamos National Laboratory	DE-AC52-06NA25396	\$ 4,631
81	RD	293402 SUBCONTRACT 343839	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Los Alamos National Laboratory	DE-AC52-06NA25396	\$ 798
81	RD	293402 WO 424285	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Los Alamos National Laboratory	DE-AC52-06NA25396	\$ 140,654
81	RD	215257 TASK ORDER 1	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Mission Support And Test Services	DE-NA0003624	\$ 164,654
81	RD	ACS-7-70122-01	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	National Renewable Energy Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 25,949
81	RD	AFC-7-70044-07	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	National Renewable Energy Laboratory	DE-AC36-08GO28308	\$ 9,408
81	RD	AHQ-8-82029-01	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	National Renewable Energy Laboratory	DE-AC36-08GO28308	\$ 49,784
81	RD	4000105709 MOD 17	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Oak Ridge National Laboratory	N/A	\$ 71,226
81	RD	4000105709 MOD 19	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Oak Ridge National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 115,553
81	RD	4000153016 MOD 6	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Oak Ridge National Laboratory	DE-AC05-000R22725	\$ 31,264

See notes to schedule of expenditures of federal awards.

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
81	RD	4000158201	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Oak Ridge National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 27,278
81	RD	4000158464	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Oak Ridge National Laboratory	DOE	\$ 515,229
81	RD	4000165223	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Oak Ridge National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 10,621
81	RD	4000167936	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Oak Ridge National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 88,863
81	RD	4000169451	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Oak Ridge National Laboratory	U.S. DEPARTMENT OF ENERGY	\$ 18,112
81	RD	209064 PO F2D82345	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	PPG Industries, Inc	DE-EE0006250	\$ 139,125
81	RD	1356879 PO 1818076	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Sandia National Laboratories	DE-AC04-94AL85000	\$ 799
81	RD	1356879 PO 1910637	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Sandia National Laboratories	DE-NA0003525	\$ 79,674
81	RD	1356879 PO 1929132	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Sandia National Laboratories	N/A	\$ 200,819
81	RD	1356879 TO 1759699 REV 1	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Sandia National Laboratories	U.S. DEPARTMENT OF ENERGY	\$ 12,198
81	RD	1744827 MA 1356879	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Sandia National Laboratories	N/A	\$ 81
81	RD	27413	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Solution Spray Technologies LLC	DE-EE008307	\$ 3,976
81	RD	293402 SUB 528821	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Triad National Security, LLC	89233218CNA000001	\$ 31,380
81	RD	4000171054	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Triad National Security, LLC	U.S. DEPARTMENT OF ENERGY	\$ 12,642
81	RD	7/1/2019-8/31/2020	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	University of Michigan	NATIONAL NUCLEAR SECURITY ADMINISTRATION	\$ 675
81	RD	SUBK00008626 PO 3004992137	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	University of Michigan	U.S. DEPARTMENT OF ENERGY	\$ 88,455
81	RD	A13-0708-S003	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	University of Tennessee	DE-AC07-05ID14517	\$ (445)
81	RD	RES1000026 2.651.061.001 105	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	URS Corporation	U.S. DEPARTMENT OF ENERGY	\$ 12,832
81	RD	RES1000026 2.651.061.001 106	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	URS Corporation	U.S. DEPARTMENT OF ENERGY	\$ 14,660
81	RD	RES1000026 2.651.061.001 107	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	URS Corporation	U.S. DEPARTMENT OF ENERGY	\$ 14,455
81	RD	RES1000026 2.651.061.001 108	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	URS Corporation	U.S. DEPARTMENT OF ENERGY	\$ 9,394
81	RD	RES1000026 2.651.061.001 109	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	URS Energy and Construction, Inc	U.S. DEPARTMENT OF ENERGY	\$ 716
81	RD	4000145264	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	UT-Battelle, LLC	U.S. DEPARTMENT OF ENERGY	\$ (1)
81	RD	4000158836	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	UT-Battelle, LLC	DE-AC05-00OR22725	\$ 29,584
81	RD	4000165597	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	UT-Battelle, LLC	U.S. DEPARTMENT OF ENERGY	\$ 10,000
81	RD	4000167168	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	UT-Battelle, LLC	U.S. DEPARTMENT OF ENERGY	\$ 71,935
81	RD	111896 ITO 0033 LINE ITEM 1	Department of Energy - Non-Specified	Research and Development	\$ 9,535,983	\$ 597,947,085	N	Westinghouse Electric Company LLC	DE-NE0008222	\$ (329)
84	015		National Resource Centers Program for Foreign Language and Area Studies or Foreign Language and International Studies Program and Foreign Language and Area Studies Fellowship Program	Research and Development	\$ 266,849	\$ 597,947,085	Y			\$ 266,849
84	017		International Research and Studies	Research and Development	\$ 100,433	\$ 597,947,085	Y			\$ 80,275
84	017		International Research and Studies	Research and Development	\$ 100,433	\$ 597,947,085	N	Delaware State University	U.S. DEPARTMENT OF EDUCATION	\$ 20,158
84	022		Overseas Programs - Doctoral Dissertation Research Abroad	Research and Development	\$ 46,398	\$ 597,947,085	Y			\$ 46,398
84	200		Graduate Assistance in Areas of National Need	Research and Development	\$ 91,390	\$ 597,947,085	Y			\$ 91,390
84	229		Language Resource Centers	Research and Development	\$ 130,402	\$ 597,947,085	Y			\$ 130,402
84	305		Education Research, Development and Dissemination	Research and Development	\$ 2,198,163	\$ 597,947,085	Y			\$ 1,019,744
84	305		Education Research, Development and Dissemination	Research and Development	\$ 2,198,163	\$ 597,947,085	N	Portland State University	INSTITUTE OF EDUCATION SCIENCE	\$ 69,533
84	305		Education Research, Development and Dissemination	Research and Development	\$ 2,198,163	\$ 597,947,085	N	Texas A & M University	R305A150057	\$ 256,359
84	305		Education Research, Development and Dissemination	Research and Development	\$ 2,198,163	\$ 597,947,085	N	University of Virginia	N/A	\$ 6,029
84	327		Special Education Educational Technology Media, and Materials for Individuals with Disabilities	Research and Development	\$ 519,545	\$ 597,947,085	Y			\$ 519,545
84	367		Supporting Effective Instruction State Grants	Research and Development	\$ 70,702	\$ 597,947,085	N	National Writing Project	U367D15004	\$ 6,975
84	411		Education Innovation and Research	Research and Development	\$ 161,950	\$ 597,947,085	Y			\$ 108,123
									\$	\$ 161,950

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84	RD	P015A140138 ACTION 5	Department of Education - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y			\$ 146,416	
84	RD	P015B140138 ACTION 5	Department of Education - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y			\$ 9,310	
84	RD	R305A140113-15 ACTION 2	Department of Education - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y			\$ 25,033	
84	RD	R305A150391	Department of Education - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y			\$ 511,004	
84	RD	R305A150488	Department of Education - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y			\$ 702,590	
84	RD	R305A160403 ACT 1	Department of Education - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y		\$ 98,953	\$ 186,880	
84	RD	R305A160401	Institute of Education Sciences - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y		\$ 21,734	\$ 290,484	
84	RD	R305H150047	Institute of Education Sciences - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y		\$ 5,603	\$ 5,603	
84	RD	R324A150126-15A ACTION 2	Institute of Education Sciences - Non-Specified	Research and Development	\$ 1,877,449	\$ 597,947,085	Y		\$ 129	\$ 129	
93	061		Innovations in Applied Public Health Research	Research and Development	\$ (163)	\$ 597,947,085	Y			\$ (163)	
93	077		Family Smoking Prevention and Tobacco Control Act Regulatory Research	Research and Development	\$ 1,006,017	\$ 597,947,085	Y		\$ 17,413	\$ 1,006,017	
93	088		Advancing System Improvements for Key Issues in Women's Health	Research and Development	\$ 4,761	\$ 597,947,085	N	U.S. Committee for Refugees and Immigrants	1 ASTWH160047-01-00	\$ 4,761	
93	092		Affordable Care Act (ACA) Personal Responsibility Education Program	Research and Development	\$ 22,609	\$ 597,947,085	N	Commonwealth of Pennsylvania	4100081321	\$ 1,506	\$ 22,147
93	092		Affordable Care Act (ACA) Personal Responsibility Education Program	Research and Development	\$ 22,609	\$ 597,947,085	N	Commonwealth of Pennsylvania	4100070981		\$ 462
93	103		Food and Drug Administration Research	Research and Development	\$ 136,105	\$ 597,947,085	Y			\$ 123,479	
93	103		Food and Drug Administration Research	Research and Development	\$ 136,105	\$ 597,947,085	N	Children's Hospital of Philadelphia	U.S. FOOD AND DRUG ADMINISTRAT		\$ 7,809
93	103		Food and Drug Administration Research	Research and Development	\$ 136,105	\$ 597,947,085	N	University of Vermont, The	R01FD005686		\$ 4,817
93	110		Maternal and Child Health Federal Consolidated Programs	Research and Development	\$ 352,920	\$ 597,947,085	Y		\$ 27,677	\$ 339,408	
93	110		Maternal and Child Health Federal Consolidated Programs	Research and Development	\$ 352,920	\$ 597,947,085	N	Children's Hospital of Philadelphia	HEALTH RESOURCES AND SERVICES		\$ 13,512
93	113		Environmental Health	Research and Development	\$ 2,795,281	\$ 597,947,085	Y		\$ 78,339	\$ 2,642,782	
93	113		Environmental Health	Research and Development	\$ 2,795,281	\$ 597,947,085	N	Boston University	1R01ES025791-01A1		\$ 67,000
93	113		Environmental Health	Research and Development	\$ 2,795,281	\$ 597,947,085	N	Harvard University	1R01ES028033-01A1		\$ 36,970
93	113		Environmental Health	Research and Development	\$ 2,795,281	\$ 597,947,085	N	Harvard University	NATIONAL INSTITUTES OF HEALTH		\$ 49,940
93	121		Oral Diseases and Disorders Research	Research and Development	\$ 1,871,228	\$ 597,947,085	Y		\$ 237,996	\$ 1,871,228	
93	172		Human Genome Research	Research and Development	\$ 1,042,459	\$ 597,947,085	Y		\$ 37,756	\$ 906,750	
93	172		Human Genome Research	Research and Development	\$ 1,042,459	\$ 597,947,085	N	Johns Hopkins University	424HG010263		\$ 135,709
93	173		Research Related to Deafness and Communication Disorders	Research and Development	\$ 815,484	\$ 597,947,085	Y		\$ 215,573	\$ 671,158	
93	173		Research Related to Deafness and Communication Disorders	Research and Development	\$ 815,484	\$ 597,947,085	N	Osmic Enterprises Inc	4R44AG051311-02 REVISED		\$ 9,541
93	173		Research Related to Deafness and Communication Disorders	Research and Development	\$ 815,484	\$ 597,947,085	N	University of Georgia	1R01DC013904		\$ 80,091
93	213		Research and Training in Complementary and Integrative Health	Research and Development	\$ 877,229	\$ 597,947,085	Y		\$ 48,799	\$ 849,150	
93	213		Research and Training in Complementary and Integrative Health	Research and Development	\$ 877,229	\$ 597,947,085	N	Carnegie Mellon University	NATIONAL INSTITUTES OF HEALTH		\$ 3,972
93	213		Research and Training in Complementary and Integrative Health	Research and Development	\$ 877,229	\$ 597,947,085	N	Mount Sinai Medical Center	4 UH3 AT009149-01		\$ 24,107
93	226		Research on Healthcare Costs, Quality and Outcomes	Research and Development	\$ 644,661	\$ 597,947,085	Y		\$ 108,657	\$ 258,450	
93	226		Research on Healthcare Costs, Quality and Outcomes	Research and Development	\$ 644,661	\$ 597,947,085	N	RAND Corporation	U19HS024067		\$ 352,653
93	226		Research on Healthcare Costs, Quality and Outcomes	Research and Development	\$ 644,661	\$ 597,947,085	N	University of Pennsylvania	5R01HS024918-03 REVISED		\$ 33,558
93	233		National Center on Sleep Disorders Research	Research and Development	\$ 472,359	\$ 597,947,085	Y			\$ 472,359	
93	239		Policy Research and Evaluation Grants	Research and Development	\$ 3,097	\$ 597,947,085	N	University of Wisconsin - Madison	1IH79AE00010301		\$ 3,097
93	242		Mental Health Research Grants	Research and Development	\$ 5,876,599	\$ 597,947,085	Y		\$ 599,452	\$ 5,257,619	
93	242		Mental Health Research Grants	Research and Development	\$ 5,876,599	\$ 597,947,085	N	Geisinger Health System	1R01MH107431-01		\$ 171,791
93	242		Mental Health Research Grants	Research and Development	\$ 5,876,599	\$ 597,947,085	N	Quadrant Biosciences Inc.	2R42MH111347-02A1		\$ 76,125
93	242		Mental Health Research Grants	Research and Development	\$ 5,876,599	\$ 597,947,085	N	University of Chicago	1R21MH110716-01A1		\$ 47,751
93	242		Mental Health Research Grants	Research and Development	\$ 5,876,599	\$ 597,947,085	N	University of Kansas	5R01MH079252-08		\$ 102,238
93	242		Mental Health Research Grants	Research and Development	\$ 5,876,599	\$ 597,947,085	N	University of Pittsburgh	2R01MH048463-24		\$ 136,958
93	242		Mental Health Research Grants	Research and Development	\$ 5,876,599	\$ 597,947,085	N	University of Rochester	5R01MH097293-05		\$ 9,273
93	242		Mental Health Research Grants	Research and Development	\$ 5,876,599	\$ 597,947,085	N	Washington University in St. Louis	1R01MH115128-01A1		\$ 61,174
93	262		Occupational Safety and Health Program	Research and Development	\$ 334,421	\$ 597,947,085	N	Bassett Healthcare Network	5U54OH007542-17		\$ (2)

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 262		Occupational Safety and Health Program	Research and Development	\$ 334,421	\$ 597,947,085	N	Bassett Healthcare Network	CENTERS FOR DISEASE CONTROL AN		\$ 163,639
93 262		Occupational Safety and Health Program	Research and Development	\$ 334,421	\$ 597,947,085	N	Colorado State University	NATIONAL INSTITUTE FOR OCCUPAT	\$ 63,031	\$ 110,848
93 273		Alcohol Research Programs	Research and Development	\$ 2,263,032	\$ 597,947,085	Y			\$ 414,286	\$ 2,113,728
93 273		Alcohol Research Programs	Research and Development	\$ 2,263,032	\$ 597,947,085	N	Binghamton University, State University of New York	5P50AA017823		\$ 11,951
93 273		Alcohol Research Programs	Research and Development	\$ 2,263,032	\$ 597,947,085	N	Carnegie Mellon University	NATIONAL INSTITUTES OF HEALTH		\$ 21,535
93 273		Alcohol Research Programs	Research and Development	\$ 2,263,032	\$ 597,947,085	N	University of Minnesota	1R01AA023504		\$ 3,006
93 273		Alcohol Research Programs	Research and Development	\$ 2,263,032	\$ 597,947,085	N	University of Tennessee Health Science Center, The	5R01AA021951-03		\$ 6,209
93 273		Alcohol Research Programs	Research and Development	\$ 2,263,032	\$ 597,947,085	N	Utah State University	1R01AA025331-01		\$ 72,795
93 273		Alcohol Research Programs	Research and Development	\$ 2,263,032	\$ 597,947,085	N	Washington University	7R21AA024321		\$ 33,808
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	Y			\$ 1,171,046	\$ 5,733,600
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	Children's Hospital Los Angeles	5U01DA036926-03		\$ 18,716
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	Children's Hospital Los Angeles	NATIONAL INSTITUTE ON DRUG ABU		\$ 61,613
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	Iowa State University	R01DA13709		\$ 9,903
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	RAND Corporation	R01DA045800		\$ 19,028
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	Stanford University	5U01DA044399		\$ 169,385
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	Syracuse University	7R01DA039924-02		\$ 18,283
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	University of Michigan	1R01DA039901-01		\$ 44,572
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	University of Minnesota	5R01DA037904-05		\$ 26,749
93 279		Drug Abuse and Addiction Research Programs	Research and Development	\$ 6,223,699	\$ 597,947,085	N	University of Minnesota	7R01DA037904-04		\$ 87,830
93 286		Discovery and Applied Research for Technological Innovations to Improve Human Health	Research and Development	\$ 1,724,162	\$ 597,947,085	Y			\$ 12,143	\$ 1,228,533
93 286		Discovery and Applied Research for Technological Innovations to Improve Human Health	Research and Development	\$ 1,724,162	\$ 597,947,085	N	University of Minnesota	1U01EB026978-01		\$ 253,368
93 286		Discovery and Applied Research for Technological Innovations to Improve Human Health	Research and Development	\$ 1,724,162	\$ 597,947,085	N	University of Minnesota	1U01EB025144-01		\$ 5,169
93 286		Discovery and Applied Research for Technological Innovations to Improve Human Health	Research and Development	\$ 1,724,162	\$ 597,947,085	N	University of Minnesota	5U01EB025144-02		\$ 237,092
93 301		Small Rural Hospital Improvement Grant Program	Research and Development	\$ (11,772)	\$ 597,947,085	Y				\$ (11,772)
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 213,088	\$ 597,947,085	N	Case Western Reserve University	5R01MD009699-04		\$ 11,320
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 213,088	\$ 597,947,085	N	Case Western Reserve University	NATIONAL CENTER ON MINORITY HE		\$ 8,404
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 213,088	\$ 597,947,085	N	Ohio State University, The	5R01MD011575-03		\$ 23,469
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 213,088	\$ 597,947,085	N	Ohio State University, The	NATIONAL INSTITUTES OF HEALTH		\$ 21,413
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 213,088	\$ 597,947,085	N	Princeton University	NATIONAL INSTITUTES OF HEALTH		\$ 52,724
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 213,088	\$ 597,947,085	N	University of Arizona, The	1R01MD011600-01A1		\$ 21,853
93 307		Minority Health and Health Disparities Research	Research and Development	\$ 213,088	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	R01MD013338-01		\$ 73,905
93 310		Trans-NIH Research Support	Research and Development	\$ 2,445,903	\$ 597,947,085	Y			\$ 71,280	\$ 1,260,568
93 310		Trans-NIH Research Support	Research and Development	\$ 2,445,903	\$ 597,947,085	N	Duke Clinical Research Institute	5U2COD023375-02		\$ 5,887
93 310		Trans-NIH Research Support	Research and Development	\$ 2,445,903	\$ 597,947,085	N	Harvard Pilgrim Health Care, Inc.	1 U01 EB023683-01		\$ (3,181)
93 310		Trans-NIH Research Support	Research and Development	\$ 2,445,903	\$ 597,947,085	N	New York Institute of Technology	3 U18 EB021789-02S1		\$ 24,104
93 310		Trans-NIH Research Support	Research and Development	\$ 2,445,903	\$ 597,947,085	N	New York Institute of Technology	5 U18 EB021789-02		\$ 2,344
93 310		Trans-NIH Research Support	Research and Development	\$ 2,445,903	\$ 597,947,085	N	New York University	5UG3OD023332-02		\$ 157,156
93 310		Trans-NIH Research Support	Research and Development	\$ 2,445,903	\$ 597,947,085	N	New York University	NATIONAL INSTITUTES OF HEALTH		\$ 477,140
93 310		Trans-NIH Research Support	Research and Development	\$ 2,445,903	\$ 597,947,085	N	University of Oregon	1UG3OD023389		\$ 521,885
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 3,951,817	\$ 597,947,085	Y				\$ 3,863,371

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 3,951,817	\$ 597,947,085	N	University of Alabama, The	5UL1TR001417-04		\$ 28,803
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 3,951,817	\$ 597,947,085	N	University of Pennsylvania	5-UL1-TR-001878-03		\$ 20,968
93 350		National Center for Advancing Translational Sciences	Research and Development	\$ 3,951,817	\$ 597,947,085	N	University of Pittsburgh	5ULTR001857-03		\$ 38,675
93 351		Research Infrastructure Programs	Research and Development	\$ 707,010	\$ 597,947,085	Y			\$ 67,970	\$ 687,883
93 351		Research Infrastructure Programs	Research and Development	\$ 707,010	\$ 597,947,085	N	Automated Medical Inc	NATIONAL INSTITUTES OF HEALTH		\$ 19,127
93 361		Nursing Research	Research and Development	\$ 638,686	\$ 597,947,085	Y			\$ 29,271	\$ 173,833
93 361		Nursing Research	Research and Development	\$ 638,686	\$ 597,947,085	N	University of Maryland	1R01NR015982-03		\$ 323,115
93 361		Nursing Research	Research and Development	\$ 638,686	\$ 597,947,085	N	University of Miami	5R01NR014851-05		\$ 129,845
93 361		Nursing Research	Research and Development	\$ 638,686	\$ 597,947,085	N	Yale University	5R01NR016191-04		\$ 11,893
93 387		National and State Tobacco Control Program	Research and Development	\$ 21,373	\$ 597,947,085	N	University of Pittsburgh	R01HL128388		\$ 21,373
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 2,380,150	\$ 597,947,085	Y			\$ 151,974	\$ 2,104,813
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 2,380,150	\$ 597,947,085	N	Temple University	1R01CA229542-01		\$ 56,733
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 2,380,150	\$ 597,947,085	N	University of Puerto Rico	NATIONAL CANCER INSTITUTE		\$ 9,498
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 2,380,150	\$ 597,947,085	N	University of Toledo	5R01CA219144-03		\$ 55,718
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 2,380,150	\$ 597,947,085	N	University of Wisconsin	1P01CA180945-01		\$ 78,323
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 2,380,150	\$ 597,947,085	N	Washington University in St. Louis	5U01CA200060-03		\$ 5,999
93 393		Cancer Cause and Prevention Research	Research and Development	\$ 2,380,150	\$ 597,947,085	N	Washington University in St. Louis	5U01CA200060-04		\$ 69,066
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 1,059,017	\$ 597,947,085	Y			\$ 6,987	\$ 613,523
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 1,059,017	\$ 597,947,085	N	Kaiser Foundation Research Institute	5R01CA206196-02		\$ 17,960
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 1,059,017	\$ 597,947,085	N	Kaiser Foundation Research Institute	NATIONAL INSTITUTES OF HEALTH		\$ 264,984
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 1,059,017	\$ 597,947,085	N	Northwestern University	5R01CA154908-09		\$ 72,912
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 1,059,017	\$ 597,947,085	N	University of Michigan	1R01CA215574-01A1		\$ 51,069
93 394		Cancer Detection and Diagnosis Research	Research and Development	\$ 1,059,017	\$ 597,947,085	N	University of Michigan	NATIONAL INSTITUTES OF HEALTH		\$ 38,569
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	Y			\$ 50,229	\$ 213,920
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	Actuated Medical, Inc.	1R43CA225169-01		\$ 14,770
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	Children's Hospital of Philadelphia	NATIONAL INSTITUTES OF HEALTH		\$ 2,000
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	Children's Hospital of Philadelphia	U10 CA98543-08		\$ 123,857
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	ECOG-ACRIN Cancer Research Group	NATIONAL INSTITUTES OF HEALTH		\$ 10,970
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	NRG Oncology	NATIONAL INSTITUTES OF HEALTH	\$ 2,941	\$ 3,315
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	University of Louisville	5R01CA185972-04		\$ 4,952
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	University of Louisville	5R01CA185972-05		\$ 51,521
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	University of Texas Southwestern Medical Center	N/A		\$ 15,431
93 395		Cancer Treatment Research	Research and Development	\$ 681,575	\$ 597,947,085	N	University of Virginia	5P01CA171983-05	\$ 35,019	\$ 240,839
93 396		Cancer Biology Research	Research and Development	\$ 1,925,071	\$ 597,947,085	Y			\$ 83,684	\$ 1,535,850
93 396		Cancer Biology Research	Research and Development	\$ 1,925,071	\$ 597,947,085	N	Loma Linda University	NATIONAL INSTITUTES OF HEALTH		\$ 181,794
93 396		Cancer Biology Research	Research and Development	\$ 1,925,071	\$ 597,947,085	N	Loma Linda University	R01CA209829		\$ (8,796)
93 396		Cancer Biology Research	Research and Development	\$ 1,925,071	\$ 597,947,085	N	University of Virginia	1R01CA178393-01A1		\$ 216,223
93 397		Cancer Centers Support Grants	Research and Development	\$ 5,683	\$ 597,947,085	Y				\$ 5,683
93 398		Cancer Research Manpower	Research and Development	\$ 416,033	\$ 597,947,085	Y				\$ 178,754
93 433		ACL National Institute on Disability, Independent Living, and Rehabilitation Research	Research and Development	\$ 1,017,585	\$ 597,947,085	Y			\$ 524,337	\$ 1,017,585
93 550		Transitional Living for Homeless Youth	Research and Development	\$ 5,679	\$ 597,947,085	N	SafeNet	90CX7100-01-00		\$ 5,679
93 575		Child Care And Development Block Grant	Research and Development	\$ 748,091	\$ 597,947,085	N	Child Care Consultants Inc	N/A		\$ 17,760
93 626		State Health Insurance Assistance Program	Research and Development	\$ 47,643	\$ 597,947,085	N	Colorado State University	NATIONAL INSTITUTE FOR OCCUPAT	\$ 18,714	\$ 47,643

See notes to schedule of expenditures of federal awards.

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 670		Child Health and Human Development Extramural Research	Research and Development	\$ 47,178	\$ 597,947,085	N	Yale University	90CA1833-03-02		\$ 47,178
93 738		PPHF: Racial and Ethnic Approaches to Community Health Program financed solely by Public Prevention and Health Funds	Research and Development	\$ 232,315	\$ 597,947,085	Y			\$ 5,673	\$ 232,315
93 788		Opioid STR	Research and Development	\$ 522,384	\$ 597,947,085	N	Commonwealth of Pennsylvania	41000785866	\$ 97,099	\$ 334,395
93 788		Opioid STR	Research and Development	\$ 522,384	\$ 597,947,085	N	Commonwealth of Pennsylvania	27929		\$ 45,511
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	Y			\$ 307,570	\$ 4,966,732
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	Arizona State University	5R01HL123078-03		\$ 73,500
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	University of Florida	5U01 HL 119178-05		\$ 29,203
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	University of Kentucky	1U01HL133359-01A1		\$ 17,160
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	University of Kentucky	5U01HL133359-02		\$ 113,911
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	University of Minnesota	5R01HL130099-02		\$ 778
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	University of Minnesota	R01HL130099-03		\$ 98,891
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	University of Nevada, Reno	1R01HL137852-01A1		\$ 53,724
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	University of Nevada, Reno	5R01HL137852-02		\$ 57,925
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	University of Pennsylvania	1-R01-HL-138306-01A1		\$ 78,165
93 837		Cardiovascular Diseases Research	Research and Development	\$ 5,531,561	\$ 597,947,085	N	Yale University	R01HL125918		\$ 37
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	Y			\$ 42,671	\$ 1,047,394
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	COPD Foundation	NATIONAL INSTITUTES OF HEALTH		\$ 17,118
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	University of California, Santa Cruz	1U01HL137183-01		\$ 44,458
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	University of California, Santa Cruz	5U01HL137183-03		\$ 11,147
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	University of North Carolina	1U24HL138998-01		\$ 12,707
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	University of North Carolina	5U24HL138998-02		\$ 28,109
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	University of Pittsburgh	5U01HL123020-05		\$ 36,421
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	University of Pittsburgh	5U01HL123099-04		\$ 91,321
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	University of Pittsburgh	5U01HL128954-03		\$ (7,512)
93 838		Lung Diseases Research	Research and Development	\$ 1,298,071	\$ 597,947,085	N	University of Pittsburgh	5U01HL128954-04		\$ 16,908
93 839		Blood Diseases and Resources Research	Research and Development	\$ 127,259	\$ 597,947,085	N	All Children's Research Institute Inc	NATIONAL INSTITUTES OF HEALTH		\$ 2,342
93 839		Blood Diseases and Resources Research	Research and Development	\$ 127,259	\$ 597,947,085	N	University of Maryland	R21HL135545		\$ 23,464
93 839		Blood Diseases and Resources Research	Research and Development	\$ 127,259	\$ 597,947,085	N	University of Miami	NATIONAL INSTITUTES OF HEALTH		\$ 101,453
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	Y			\$ 765,643	\$ 3,033,181
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	Children's Research Institute	5P50AR060836-04		\$ 2,302
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	Columbia University	1R01AR071316-01A1		\$ 17,006
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	University of Massachusetts	5R01AR072036-02		\$ 35,536
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	University of North Carolina	5R37AR018687-43		\$ 58,282
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	University of Pennsylvania	1-R01-AR-070873-01A1		\$ 379
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	University of Pennsylvania	5-R01-AR-070873-02		\$ 29,300
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	University of Pennsylvania	5U54AR057319-14		\$ 3,260
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	University of Texas Health Science Center	NATIONAL INSTITUTES OF HEALTH		\$ 44,048
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	Virginia Commonwealth University	7R01AR068132-17		\$ 3,743
93 846		Arthritis, Musculoskeletal and Skin Diseases Research	Research and Development	\$ 3,245,285	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	N/A		\$ 18,248
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	Y			\$ 1,011,674	\$ 6,485,570
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Actuated Medical, Inc.	NATIONAL INSTITUTES OF HEALTH		\$ 20,778
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Augusta University	2U24 DK076169-11		\$ 3,060
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Children's Hospital of Philadelphia	5R01DK054937-19		\$ (27,162)
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Children's Hospital of Philadelphia	NATIONAL INSTITUTES OF HEALTH		\$ 181,075

See notes to schedule of expenditures of federal awards.



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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Columbia University	NATIONAL INSTITUTES OF HEALTH		\$ 40,326
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Georgia State University	1R21DK115180-01		\$ 4,946
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Icahn School of Medicine at Mount Sinai	NATIONAL INSTITUTES OF HEALTH		\$ 20,347
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Kaiser Foundation Research Institute	2R56DK099882-05		\$ 18,313
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	Kaiser Foundation Research Institute	NATIONAL INSTITUTES OF HEALTH		\$ 26,868
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	University of California, San Francisco	5R01DK098233-04		\$ 15,629
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	University of Pennsylvania	5U01DK106892-04		\$ 29,104
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	University of Texas at San Antonio, The	R01D108185		\$ 31,111
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	University of Texas Health Science Center at San Antonio, The	2R25DK078381-12		\$ 22,072
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	Research and Development	\$ 6,899,966	\$ 597,947,085	N	University of Texas Health Science Center at San Antonio, The	5R25DK078381-13		\$ 12,867
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	Y			\$ 335,350	\$ 4,860,926
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	Actuated Medical, Inc.	NATIONAL INSTITUTES OF HEALTH		\$ 38,641
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	Augusta University	1R01NS090083-01A1		\$ (451)
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	Columbia University	NATIONAL INSTITUTES OF HEALTH		\$ 15,092
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	Gladstone Institutes	5U54NS091046-02		\$ (5)
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	Gladstone Institutes	NATIONAL INSTITUTES OF HEALTH		\$ 56,227
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	Massachusetts General Hospital	1R01NS102735-01A1		\$ 62,001
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	Mayo Clinic	N/A		\$ 13,259
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	University of California, San Diego	5U01NS087964-02		\$ 51,196
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	University of California, San Diego	5U01NS087964-04		\$ 114,051
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	University of Pennsylvania	5-U01-NS-094340-03		\$ 8,542
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	University of Pittsburgh	2R01NS076511-06		\$ 188,076
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	Research and Development	\$ 5,491,157	\$ 597,947,085	N	University of Pittsburgh	5R01NS096755-03		\$ 33,078
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	Y			\$ 1,150,639	\$ 10,171,050
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Boston Children's Hospital	NATIONAL INSTITUTES OF HEALTH		\$ 616,926
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Boston College	N/A		\$ 12,659
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Children's Hospital of Philadelphia	NATIONAL INSTITUTES OF HEALTH		\$ 19,531
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Columbia University	5R01A1124678-03		\$ 88,594
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Cornell University	2R01AI092571-06A1		\$ 187,097
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Johns Hopkins University	1R01A1117032-01		\$ 72,250
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Johns Hopkins University	1R21A1121768-02		\$ (1)
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Medical College of Wisconsin	5R01A1125334-02		\$ 17,634

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Microbiotix, Inc.	1R01A1132276		\$ 124,028
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Microbiotix, Inc.	R43A 141132		\$ 72,037
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	National Jewish Health	U01 AI097073-04		\$ 28,624
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	PathoVax	1R44A1136236-01		\$ 33,837
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Respana Therapeutics Inc	1R41A1136294-01A1		\$ 35,110
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	The Jackson Laboratory	1U19A1142733-01		\$ 8,397
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of Arizona, The	7R21AL132353-02		\$ 87,397
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of California	1UM1A1110498-02		\$ 7,601
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of California, San Diego	2R01A1090141-05		\$ 46,987
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of Louisville	1R01A127979-01A1		\$ (1)
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of Louisville	5R01A1127970-02		\$ 19,708
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of Michigan	1R01A1110780-01A1		\$ 187,462
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of Nebraska	1R03A1130174-01A1		\$ 10,122
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of North Carolina	1R01A121558-01		\$ 48,387
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of Washington	1R21AL123690-01A1		\$ 15,388
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	University of Washington	5R21A1123690-02		\$ 55,595
93 855		Allergy and Infectious Diseases Research	Research and Development	\$ 12,199,479	\$ 597,947,085	N	Utah State University	HHSN272201700041I		\$ 233,060
93 857		Measuring Interoperability Progress through Individuals' Access and Use of the Electronic Health Data	Research and Development	\$ 46,322	\$ 597,947,085	N	University of Texas at Austin, The	1R01HL129077-01A1		\$ 46,322
93 858		National Collaboration to Support Health, Wellness and Academic Success of School-Age Children	Research and Development	\$ 87,894	\$ 597,947,085	N	University of Georgia	5U01GM110744-04		\$ 87,894
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	Y			\$ 908,646	\$ 15,862,476
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	Arizona State University	1R01GM122082-01		\$ 133,474
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	Carnegie Mellon University	NATIONAL INSTITUTES OF HEALTH		\$ 76,205
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	Cincinnati Children's Hospital Medical Center	NATIONAL INSTITUTES OF HEALTH		\$ 1,067
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	Cornell University	N/A		\$ 3,565
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	Duke University	7R01GM112048-03		\$ 5,974
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	Florida State University	5P41GM122698-02		\$ 78,977
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	Florida State University	P41GM122698		\$ (7,618)
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	Georgetown University	1R01GM123007-01		\$ 14,955
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	University of Florida	2R01GM059969-19A1		\$ 156,242
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	University of Georgia	1R01GM124203-01		\$ 24,701
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	University of Massachusetts, Worcester	1R01GM125872-01A1		\$ 65,849
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	University of Miami	1R01GM105004-01		\$ 6,971
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	University of North Carolina	5R01GM083059-10		\$ 35,532
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	University of North Carolina	5R01GM115597-03		\$ 53,305
93 859		Biomedical Research and Research Training	Research and Development	\$ 17,389,157	\$ 597,947,085	N	University of North Carolina	5R01GM115597-04		\$ 22,027
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	Y			\$ 2,284,249	\$ 9,626,443
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Arizona State University	NATIONAL INSTITUTES OF HEALTH		\$ 103,858
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Boston Children's Hospital	EUNICE KENNEDY SHRIVER NATONA		\$ 6,318
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Cincinnati Children's Hospital Medical Center	4R01HD069431-05		\$ 11,101
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Georgetown University	NATIONAL INSTITUTES OF HEALTH		\$ 64,241
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Georgia State University	NATIONAL INSTITUTES OF HEALTH		\$ 8,780
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Icahn School of Medicine at Mount Sinai	NATIONAL INSTITUTES OF HEALTH		\$ 86,421
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Johns Hopkins University	N/A		\$ 4,242
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	New York University	N/A		\$ 2,292

See notes to schedule of expenditures of federal awards.

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	New York University	1R01HD094830-01 REVISIED		\$ 36,549
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	New York University	5U01HD076595-03		\$ 38,828
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Princeton University	5R01HD076592-05		\$ 34,751
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	Thomas Jefferson University	5R01HD086911-03		\$ 38,195
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	University of California, Los Angeles	5R01HD092471-02		\$ 770
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	University of North Carolina	5R01HD080786-04		\$ 158,801
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	University of Pittsburgh	5P2CHD086843-04		\$ 49,666
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	University of Wisconsin	7R01HD081361-05		\$ 105,736
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	University of Wisconsin	R01HD080201-01A1		\$ 172,339
93 865		Child Health and Human Development Extramural Research	Research and Development	\$ 10,582,839	\$ 597,947,085	N	University of Wisconsin - Madison	1R21HD91459-01		\$ 33,508
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	Y			\$ 406,096	\$ 4,849,448
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Albert Einstein College of Medicine	NATIONAL INSTITUTES OF HEALTH		\$ 181,839
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Beth Israel Deaconess Medical Center	3R01AG030618-06S1		\$ 43,636
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Beth Israel Deaconess Medical Center	R01AG030618		\$ 347,854
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Elon University	1R15AG052903-01		\$ 10,282
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Hebrew Rehabilitation Center	R24AG054259		\$ 86,896
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Icahn School of Medicine at Mount Sinai	5R21AG050072-02		\$ 85,818
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Iowa State University	1 R01 AG049416		\$ 38,730
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Kent State University	NATIONAL INSTITUTES OF HEALTH		\$ 16,280
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Klein Buendel, Inc.	1R41AG057239-01		\$ 61,446
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Klein Buendel, Inc.	2R24AG049750-02		\$ 51,364
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Massachusetts General Hospital	1R56AG062208		\$ 117,214
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Mobile Sleep Technologies LLC	1 R43 AG056250-01		\$ (389)
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Mobile Sleep Technologies LLC	NATIONAL INSTITUTES OF HEALTH		\$ 124,990
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	National Bureau of Economic Research	NATIONAL INSTITUTES OF HEALTH		\$ 45,510
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	Northwestern University	NATIONAL INSTITUTES OF HEALTH		\$ 27,069
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	University of California	3R01AG046938-03S1		\$ 23,803
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	University of Kentucky	2R01AG026307-11		\$ 34,659
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	University of Maryland	R01AG050516		\$ 38,794
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	University of Maryland	R01AG050516-03		\$ 171,681
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	University of Southern California	R56AG037985		\$ 1,276
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	University of Wisconsin	N/A	\$ 16,947	\$ 444,770
93 866		Aging Research	Research and Development	\$ 6,809,827	\$ 597,947,085	N	University of Wisconsin	NATIONAL INSTITUTES OF HEALTH		\$ 6,857
93 867		Vision Research	Research and Development	\$ 1,079,218	\$ 597,947,085	Y			\$ 350,212	\$ 1,025,721
93 867		Vision Research	Research and Development	\$ 1,079,218	\$ 597,947,085	N	Emory University	NATIONAL EYE INSTITUTE		\$ 10,500
93 867		Vision Research	Research and Development	\$ 1,079,218	\$ 597,947,085	N	Massachusetts Eye and Ear	NATIONAL EYE INSTITUTE		\$ 4,727
93 867		Vision Research	Research and Development	\$ 1,079,218	\$ 597,947,085	N	Skyran Biologics Inc	1R41EY029192-01		\$ 38,270
93 879		Medical Library Assistance	Research and Development	\$ 283,022	\$ 597,947,085	N	Columbia University	NATIONAL LIBRARY OF MEDICINE		\$ 31,156
93 918		Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease	Research and Development	\$ 493,626	\$ 597,947,085	Y			\$ 32,574	\$ 493,626
93 928		Special Projects of National Significance	Research and Development	\$ 174,895	\$ 597,947,085	Y			\$ 30,837	\$ 174,895
93 959		Block Grants for Prevention and Treatment of Substance Abuse	Research and Development	\$ 146,407	\$ 597,947,085	N	Commonwealth of Pennsylvania	27929		\$ 113

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93	959	Block Grants for Prevention and Treatment of Substance Abuse	Research and Development	\$ 146,407	\$ 597,947,085	N	Commonwealth of Pennsylvania	27266		\$ 127,002
93	989	International Research and Research Training	Research and Development	\$ 94,564	\$ 597,947,085	Y			\$ 70,200	\$ 94,788
93	RD	VUMC 63079	Centers for Disease Control and Prevention - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Vanderbilt University	200-2017-M-94349		\$ 8,468
93	RD	8901210918 AMENDMENT 2	Centers for Disease Control and Prevention - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Children's Hospital of Philadelphia	CENTERS FOR DISEASE CONTROL AN		\$ 7,710
93	RD	8901210919	Centers for Disease Control and Prevention - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Children's Hospital of Philadelphia	CENTERS FOR DISEASE CONTROL AN		\$ 15,321
93	RD	196142	Centers for Disease Control and Prevention - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Commonwealth of Pennsylvania	196142		\$ 365
93	RD	1H79TI081432-01	Department of Health and Human Services - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y			\$ 66,832	\$ 288,724
93	RD	HHSP233201750005A LINE ITEM #1	Department of Health and Human Services - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 2,782
93	RD	27007-3209610519	Department of Health and Human Services - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Boston Children's Hospital	U.S. DEPARTMENT OF HEALTH AND		\$ 54,971
93	RD	4300570493 182225	Department of Health and Human Services - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300570493 182225	\$ 8,400	\$ 12,877
93	RD	4300623749	Department of Health and Human Services - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300623749		\$ 10,272
93	RD	201401968-01	Department of Health and Human Services - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	University of California, Davis	IHS-1310-07894		\$ 6,059
93	RD	211609	Food and Drug Administration - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 9,362
93	RD	HHSF223201610124C	Food and Drug Administration - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 82,750
93	RD	HHSF223201710369P	Food and Drug Administration - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 93,373
93	RD	4300595254	Health Resources and Services Administration - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300595254		\$ 128,610
93	RD	4300603659	Health Resources and Services Administration - Non-Specified	\$ 17,923,686	\$ 597,947,085	N	Commonwealth of Pennsylvania	4300603659		\$ 95,631
93	RD	1 DP1 HD086071-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 279,363
93	RD	1 F31 AT009814-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 14,887
93	RD	1 F32 GM128311-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 53,795
93	RD	1 K01 HL133520-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ (222)
93	RD	1 K08 HS024585-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 127,901
93	RD	1 K22 CA190440-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 11,019
93	RD	1 P01 HL134609-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 2,063,793
93	RD	1 R01 AG055636-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 17,925
93	RD	1 R01 AG059682-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 11,087
93	RD	1 R01 AI125565-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 60,193
93	RD	1 R01 AR070887-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 76,296
93	RD	1 R01 AT009484-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 10,993
93	RD	1 R01 CA237153-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 15,262
93	RD	1 R01 DK099350-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 117,285
93	RD	1 R01 DK110060-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 632,152
93	RD	1 R01 GM105963-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y			\$ 35,650	\$ 97,853
93	RD	1 R01 GM116044-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 6,280
93	RD	1 R01 GM117014-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 35,319
93	RD	1 R01 GM121613-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 330,318
93	RD	1 R01 GM127954-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 89,408
93	RD	1 R01 GM130691 01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 74,253
93	RD	1 R01 HD074807-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y			\$ 33,214	\$ 34,957
93	RD	1 R01 HD079410-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 297,858
93	RD	1 R01 HD083323-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 17,686
93	RD	1 R01 HD088448-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 577,212
93	RD	1 R01 HG009906-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 257,749
93	RD	1 R01 HL127316-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 30,194
93	RD	1 R01 HL130363-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 196,554
93	RD	1 R01 HL131921-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 123,633
93	RD	1 R01 HL137809-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 147,295
93	RD	1 R01 HL147344-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 23,696
93	RD	1 R01 MH118308-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 36,139
93	RD	1 R01 NS092662-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 81,494
93	RD	1 R01 NS099630-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 147,982
93	RD	1 R01 NS108407-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y			\$ 16,078	\$ 389,578
93	RD	1 R03 DA047582-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 5,266
93	RD	1 R21 AG057218-01A1	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y			\$ 9,533	\$ 145,666
93	RD	1 R21 AI138152-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 118,557
93	RD	1 R21 AI139706-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y				\$ 88,272
93	RD	1 R21 AT010118-01	National Institutes of Health - Non-Specified	\$ 17,923,686	\$ 597,947,085	Y			\$ 34,523	\$ 158,482

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 RD	1 R21 CA196924-01A1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 53,740
93 RD	1 R35 GM122595-01	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 111,352
93 RD	1 R01 HD076994-01A	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 36,483
93 RD	1 T32 GM118294-01	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ (636)
93 RD	1 TL1 TR002016-01	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 158,503
93 RD	1 U01 AR071077-01	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 160,751
93 RD	1 U01 DA041632-01	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 61,280
93 RD	1 UH2 AG052167-01	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 15,813	\$ 15,813
93 RD	1/1/2019-12/31/2019	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 134,536
93 RD	1-H97HA28893-01-00	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 15,738	\$ 101,573
93 RD	1R01HD083381-01A1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 132,704
93 RD	2 H3HRH00009-15-0	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 243,706
93 RD	2 R01 DK015658-45A1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 72,195
93 RD	2 R01 DK082580-06	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 348
93 RD	2 R01 HD059783-06A1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 100,368	\$ 274,647
93 RD	2 R01 HD066982-05A1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 33,110	\$ 116,945
93 RD	2 R01 HL097111-07A1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 279,320
93 RD	2 R01 MH099851 06	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 354,571
93 RD	2 R01 NR012757-06	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 313,005
93 RD	2 R01 NS088367-06A1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 54,552
93 RD	2 R56 AG005214-23A1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 58,555	\$ 239,741
93 RD	200-2016-90385	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 107,885
93 RD	3 R01 ES019672-06S1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 108,655
93 RD	4 R01 DK099364-04	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 127,729
93 RD	4 R33 MH107631-03	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 3,841
93 RD	4 UH3 AG052167-04	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 9,003	\$ 541,386
93 RD	5 P50 DA036107-05	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 46,981
93 RD	5 R01 HD046064-14	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 138,696
93 RD	5 R01 HL119245-04	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 32,023	\$ 167,517
93 RD	5 R01 MH109692-03	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 55,942
93 RD	5 U01 DK082183-09	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 56,931	\$ 488,780
93 RD	5/1/2019-4/30/2020	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 97,598
93 RD	5P50HD089922	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 1,977	\$ 462,294
93 RD	6/1/2019-5/31/2020	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 298,154
93 RD	7 K01 DK100562-06	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 51,650
93 RD	7 R01 CA204044-02	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 8,218	\$ 100,438
93 RD	7 R01 DK064165-15	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 347,349
93 RD	7 R01 DK106072-03	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 324,404
93 RD	7 R01 GM114015-04	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 12,202
93 RD	7 R01 GM123247-03	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y			\$ 113,513	\$ 383,373
93 RD	7/1/2017-6/30/2020	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 162,197
93 RD	7-R01-AG049735-03	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 98,466
93 RD	GM 129133-02	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 16,718
93 RD	HHSN276201800170P	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 24,030
93 RD	P50DA039838	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	Y				\$ 8,504
93 RD	205809	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Actuated Medical, Inc.	NATIONAL INSTITUTES OF HEALTH		\$ 77,033
93 RD	310567 AMENDMENT 9	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Albert Einstein College of Medicine	R01NS082432		\$ 6,214
93 RD	31135X	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Albert Einstein College of Medicine	NATIONAL INSTITUTES OF HEALTH		\$ 363,454
93 RD	ATHN2015002-HCT5	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	American Thrombosis & Hemostasis Network	NATIONAL INSTITUTES OF HEALTH		\$ 3,841
93 RD	193371	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Boehringer Ingelheim	IUI0HL109086-01	\$ 73,700	\$ 82,079
93 RD	143322 AALL0434	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Children's Hospital of Philadelphia	NATIONAL INSTITUTES OF HEALTH		\$ 9,390
93 RD	203-7903	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Duke Clinical Research Institute	NATIONAL INSTITUTES OF HEALTH		\$ 20,192

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93	RD	225492-NICHD-2016-SAP3-OPPORT6	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Duke Clinical Research Institute	HHSN-275201000003I	\$ (577)
93	RD	6/4/2019-6/3/2020	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Duke Clinical Research Institute	NATIONAL INSTITUTES OF HEALTH	\$ 1,709
93	RD	203-4789 AMEND 03	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Duke University	NATIONAL INSTITUTES OF HEALTH	\$ 38,179
93	RD	CE01-203/SPS 219225	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Duke University	N/A	\$ 1,426
93	RD	NIH TO #25	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Duke University	NATIONAL INSTITUTES OF HEALTH	\$ 227
93	RD	T929855	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Emory University	NATIONAL EYE INSTITUTE	\$ 31,090
93	RD	800007142-01	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Florida International University	NATIONAL INSTITUTES OF HEALTH	\$ 21,180
93	RD	33880-5	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Georgia Regents University	NATIONAL INSTITUTES OF HEALTH	\$ 529
93	RD	0254-3543-4609 (PROJECT 1)	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Icahn School of Medicine at Mount Sinai	NIH	\$ 219,718
93	RD	210285	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Jackson Laboratory, The	NATIONAL INSTITUTES OF HEALTH	\$ 181,050
93	RD	2002668606	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Johns Hopkins University	NATIONAL INSTITUTES OF HEALTH	\$ 6,776
93	RD	MUSC16-049-8B901	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Medical University of South Carolina, The	NATIONAL CANCER INSTITUTE	\$ 159,764
93	RD	F4330-03 AMENDMENT 04	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	New York University	NATIONAL INSTITUTES OF HEALTH	\$ 240,177
93	RD	F8621-02	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	New York University	NATIONAL INSTITUTES OF HEALTH	\$ 31,027
93	RD	60036745 MHMC	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Northwestern University	NATIONAL INSTITUTES OF HEALTH	\$ 14,603
93	RD	60042865 PSU AMEND A02	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Northwestern University	NATIONAL INSTITUTES OF HEALTH	\$ 119,522
93	RD	NCORP04-STURGEON	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	NRG Oncology	NATIONAL CANCER INSTITUTE	\$ 10,462 \$ 11,718
93	RD	16-143-100551-010	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Old Dominion University	NATIONAL INSTITUTES OF HEALTH	\$ 43,073
93	RD	701-7137112	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Rhode Island Hospital	R01HL110791-05	\$ 4,895
93	RD	PSU R41DKI05656	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Sidero Bioscience LLC	N/A	\$ 59,657
93	RD	79050-1141744-PSU YR2	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	State University of New York, Binghamton	5P50AA017823	\$ 43,917
93	RD	1132270-2-74838 AMEND 4	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Stony Brook University, State University of New York	5R01HD07335205	\$ 122,233
93	RD	87017-1	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Alabama, The	HHSN272201100016I	\$ 8,608
93	RD	87017-2	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Alabama, The	HHSN272201100016I	\$ 12,440
93	RD	9891SC	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of California	SUM1ALI110498-04	\$ 18,364
93	RD	UCHC6-67063357 AMEND 3	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Connecticut	R01DK103663	\$ 63,674
93	RD	SUBK00005527	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Michigan	N/A	\$ 29,164
93	RD	572292 AMEND 1 PO 4128596	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Pennsylvania	5R01HD091350-02	\$ 194,942

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93	RD	6/1/2019-5/31/2020	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Pennsylvania	NATIONAL INSTITUTES OF HEALTH	\$ 1,723
93	RD	RIS#35476	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Pennsylvania	NATIONAL INSTITUTES OF HEALTH	\$ 390
93	RD	0061271(414279-1)	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Pittsburgh	5U01HL123009-05	\$ 62,744
93	RD	4/1/2019-3/31/2020	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Pittsburgh	NATIONAL INSTITUTES OF HEALTH	\$ 14,202
93	RD	9011986 (130031-3)	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Pittsburgh	6U1QHP28736-05-01	\$ 154
93	RD	9011986-(130031-3) AMEND 3	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Pittsburgh	4U1QHP287360304	\$ 76,740
93	RD	CNVA00057145 (412802-1)	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Pittsburgh	NATIONAL INSTITUTES OF HEALTH	\$ 7,124
93	RD	417218/URFAO;GR510660	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Rochester	N/A	\$ 5,373
93	RD	417413/URFAO;GR510660	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Rochester	NATIONAL INSTITUTES OF HEALTH	\$ 798
93	RD	98880674 PO 50674601	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Southern California	6R01AG047992-02	\$ 24,795
93	RD	12/1/2018-8/31/2019	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Texas Health Science Center	NATIONAL INSTITUTES OF HEALTH	\$ 80,551
93	RD	656K250 AMEND 4	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	University of Wisconsin	7R01HD081361-02	\$ 243,065
93	RD	PT108771-SC104640	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Virginia Commonwealth University	PT108771-SC104640	\$ 182,727
93	RD	GR101891 (CON-80001103)	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Yale University	5U010HD055925-10	\$ 49,274
93	RD	GR101945 (CON-80001115)	National Institutes of Health - Non-Specified	Research and Development	\$ 17,923,686	\$ 597,947,085	N	Yale University	5U10HD055925-10	\$ 22,115
97	077		Homeland Security Research, Development, Testing, Evaluation, and Demonstration of Technologies Related to Nuclear Threat Detection	Research and Development	\$ (6,636)	\$ 597,947,085	Y			\$ (6,636)
97	RD	2014-DN-077-ARI078-05	Department of Homeland Security - Non-Specified	Research and Development	\$ 214,914	\$ 597,947,085	Y			\$ 177,628
98	001		USAID Foreign Assistance for Programs Overseas	Research and Development	\$ 1,306,096	\$ 597,947,085	Y			\$ 683,136
98	001		USAID Foreign Assistance for Programs Overseas	Research and Development	\$ 1,306,096	\$ 597,947,085	N	Johns Hopkins University	U.S. AGENCY FOR INTERNATIONAL	\$ 69,167
98	001		USAID Foreign Assistance for Programs Overseas	Research and Development	\$ 1,306,096	\$ 597,947,085	N	Solidarity Center	N/A	\$ 34,995
98	001		USAID Foreign Assistance for Programs Overseas	Research and Development	\$ 1,306,096	\$ 597,947,085	N	University of California, Davis	EPP-A-00-09-00004	\$ 64,917
98	001		USAID Foreign Assistance for Programs Overseas	Research and Development	\$ 1,306,096	\$ 597,947,085	N	Virginia Polytechnic Institute and State University	AID-OAA-L-15-00001	\$ 65,063
98	RD	S16056	Agency for International Development - Non-Specified	Research and Development	\$ 128,917	\$ 597,947,085	N	Kansas State University	AID-OAA-L-14-00006	\$ 24,603
99	RD	03050 TO 0007	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 1,303
99	RD	11-C-0323	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ (4,488)
99	RD	11-G-5134/0005	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 397,698
99	RD	12-G-2807 TO 0008	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ (60)
99	RD	12-G-3050	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ (1,887)
99	RD	12-G-3050 TO-0011	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ (1,151)
99	RD	12-G-3050/0013	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ (315)
99	RD	12-G-3050/0014	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ (957)
99	RD	12-G-3050/0015	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 87,683
99	RD	12-G-3050/0016	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ (72)
99	RD	12-G-3050/0017	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 8
99	RD	13-C-0086	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 5,723
99	RD	13-G-2500	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 349
99	RD	13-G-2500 DO 0005	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ (458)
99	RD	13-G-2500 TO 0006	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 587
99	RD	13-G-2500/0006	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 429,911
99	RD	13-G-4323/0004	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 9
99	RD	13-G-4323/18F4018	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 188,643

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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
99 RD	13-G-4323/18F4027	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 462,317
99 RD	14-C-0150	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 751,797	\$ 4,417,179
99 RD	14-C-0188	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 13,040	\$ 30,975
99 RD	15-G-2529	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 751,676	\$ 834,500
99 RD	15-G-2529 TO 0001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (1,343)
99 RD	15-G-2529 TO 001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (343)
99 RD	15-G-2529 TO 002	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (1)
99 RD	15-G-2529/0001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 316,491
99 RD	15-G-2529/0004	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 1,119,789
99 RD	15-G-2529/0005	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 87,901
99 RD	15-G-2529/19F2513	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 270,652
99 RD	16021000002 TO 001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 125,642
99 RD	16-C-0026	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (217)
99 RD	16-C-0089	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 921,364	\$ 3,348,823
99 RD	16-C-0188	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 4,762
99 RD	16C5317	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 605,605
99 RD	17-G-2163/0001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 201,754
99 RD	17-G-2163/DO 18F2178	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 353,762
99 RD	17-G-2165/DO 18F2196	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 2,995,509	\$ 3,307,634
99 RD	18-G-2165/19F2201	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 222,498	\$ 260,065
99 RD	18-G-2165/19F2202	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 241,024	\$ 285,320
99 RD	18-G-2165/19F2203	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 69,474
99 RD	18-G-2165/DO 18F2182	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 5,436,192	\$ 6,020,509
99 RD	18-G-2165/ORDER 18F2197	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 579,914	\$ 644,860
99 RD	19-C-0009	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 53,924
99 RD	19-C-3518	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 189,663
99 RD	2010-0928224-006	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (310)
99 RD	2010-098224-006 TO 0006	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (27)
99 RD	201324G001 TO 002	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 2
99 RD	201324G001/0007	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 193,059	\$ 211,281
99 RD	201324G001-002	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 2,915
99 RD	2013324G001 TO 0007	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (985)
99 RD	2013324G001 TO 005	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 323
99 RD	2013324G001 TO 006	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (524)
99 RD	2013324G001 TO 007	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (2,104)
99 RD	2013324G001 TO 010	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 59
99 RD	2013324G001 TO 03	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (6,087)
99 RD	2013324G001/006	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 4
99 RD	2013324G001/007	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 4,035	\$ 4,035
99 RD	2013324G001/009	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 1
99 RD	2013324G001/011	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 305,834
99 RD	2013324G001/012	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 1,725,090	\$ 12,643,641
99 RD	2013324G001-001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (576)
99 RD	2013324G001-002	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (2,291)
99 RD	2013324G001-004	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 10
99 RD	2013324G001-008	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (85)
99 RD	2016034G004	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y			\$ 41,741	\$ 663,578
99 RD	2016-16021000002 TO 001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 13,623
99 RD	2016-16021000002/0005	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 276,892
99 RD	2016-16021000002/004	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (65)
99 RD	2016-16021000002/007	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 4,244
99 RD	2016-16021000002-02	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (128)
99 RD	2016-1602100002/0005	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 41,062
99 RD	2016-1602100002-003	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (322)
99 RD	2018101G001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 555,695
99 RD	26539	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 313,318
99 RD	27110	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 26,314
99 RD	3050 / 0007	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (548)
99 RD	3050 / 0010	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 11

See notes to schedule of expenditures of federal awards.



**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
99	RD 5317	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (512)
99	RD UNNUMBERED	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 122,126
99	RD USG	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 417
99	RD USG 3050 TO 0005	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (451)
99	RD USG 3050/0003	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ 45
99	RD USG 3050/0005 CLIN 0003	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	Y				\$ (166)
99	RD 20180043	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	CFD Research Corporation	W81XWH-17-C-0216		\$ 29,845
99	RD 140500084 SLIN 001	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Concurrent Technologies Corporation	14-C-0144		\$ 15
99	RD 140500084 SLIN 002	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Concurrent Technologies Corporation	14-C-0144		\$ 21
99	RD 140900106	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Concurrent Technologies Corporation	14-C-0144		\$ 103,271
99	RD 25961	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	General Dynamics Corporation	B16-2016166G003		\$ (4,682)
99	RD 51ESM907599	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	General Dynamics Electric Boat	B16-2016166G003		\$ 3
99	RD 124817	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Johns Hopkins University	12-190		\$ (1,552)
99	RD 124818 /TO 140089	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Johns Hopkins University	16-G-1512		\$ 2,279
99	RD 437-01	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Kessler Foundation	HC0185		\$ 514
99	RD G02756 PO P0189769	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Miami University	G-1617-04-0372		\$ 44,508
99	RD 702-111020-3	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	MRIGlobal	17-84		\$ 46,624
99	RD 7500145432	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Northrop Grumman Corporation	NRO000-16-C-0340		\$ 679
99	RD 21646	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Polarix Corporation	W31P4Q-14-C-0007		\$ (666)
99	RD 186245	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Quadrant Biosciences Inc.	1 R41 MH111347-01		\$ 672
99	RD LI00163644 CLIN 00011 SLIN 002	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	UNNUMBERED	\$ 166,405	\$ 452,113
99	RD LI00163644 CLIN 0003AA	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	N/A	\$ 20,784	\$ 20,784
99	RD LI00163644 CLIN 0005AK SLIN 6	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	UNNUMBERED		\$ 15,080
99	RD LI00163644 CLIN 0011	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	N/A		\$ 27,604
99	RD LI00163644 CLIN 0011AA	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	N/A		\$ (1)
99	RD LI00163644 CLIN 0015	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	N/A		\$ 37,064
99	RD LI00163644 CLIN 0015AA	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	N/A		\$ (3,019)
99	RD LI00163644 CLIN 0022AA	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	N/A		\$ 1,736
99	RD LI00163644 CLIN 0024	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	N/A		\$ 6,116
99	RD LI00163644 ECP 13 CLIN 0003	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Raytheon Company	UNNUMBERED		\$ 864
99	RD PO 2943	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	SRI International	N00173-16-F0251		\$ (2,221)
99	RD 6/1/2016-6/30/2018	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Tobacco Centers of Regulatory Science	P50 DA036107		\$ 36,218
99	RD 8/1/2016-6/30/2018	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Tobacco Centers of Regulatory Science	P50 DA036107		\$ 9,240
99	RD 70081071	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	United States Marine Inc	N544-2017-012		\$ 12,390
99	RD 090051SC-PSU-ARL-01	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Zeta Associates	09-C-0051		\$ 79,836
99	RD 160151-PSU-ARL-01 CLIN 0015AA	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Zeta Associates	16-C-0151		\$ 56,235
99	RD 160151-PSU-ARL-01 CLIN 0016AA	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Zeta Associates	16-C-0151		\$ 141,117
99	RD 369310SC-PSU-ARL-01	United States Government - Non-Specified	Research and Development	\$ 40,456,144	\$ 597,947,085	N	Zeta Associates	4103369310		\$ 1,680
84	007	Federal Supplemental Educational Opportunity Grant	Student Financial Assistance	\$ 5,522,734	\$ 635,185,299	Y				\$ 5,522,734
84	033	Federal Work Study Program	Student Financial Assistance	\$ 2,528,065	\$ 635,185,299	Y				\$ 2,528,065
84	038	Federal Perkins Loan Program	Student Financial Assistance	\$ 37,052,513	\$ 635,185,299	Y				\$ 37,052,513
84	063	Federal Pell Grant Program	Student Financial Assistance	\$ 82,555,395	\$ 635,185,299	Y				\$ 82,555,395
84	268	Federal Direct Loan Program	Student Financial Assistance	\$ 507,515,367	\$ 635,185,299	Y				\$ 507,515,367
93	342	Health Professions Student Loan Program	Student Financial Assistance	\$ 11,225	\$ 635,185,299	Y				\$ 11,225
10	001	Agricultural Research Basic and Applied Research	N/A	\$ 1,120,661	\$ -	N	University of Arkansas	58-8250-4-002		\$ 63,970
10	025	Plant and Animal Disease, Pest Control, and Animal Care	N/A	\$ 1,460,066	\$ -	Y				\$ 776,910

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
10 025		Plant and Animal Disease, Pest Control, and Animal Care	N/A	\$ 1,460,066	\$ -	N	Commonwealth of Pennsylvania	4300565807 4400015622		\$ 12,847
10 103		2009 Aquaculture Grant Program	N/A	\$ 6,925	\$ -	N	University of Vermont	2015-38640-23777		\$ 6,925
10 170		Specialty Crop Block Grant Program - Farm Bill	N/A	\$ 233,190	\$ -	N	Commonwealth of Pennsylvania	4100077037		\$ (6)
10 170		Specialty Crop Block Grant Program - Farm Bill	N/A	\$ 233,190	\$ -	N	Commonwealth of Pennsylvania	44155554		\$ 14,056
10 170		Specialty Crop Block Grant Program - Farm Bill	N/A	\$ 233,190	\$ -	N	Commonwealth of Pennsylvania	44166071		\$ 338
10 170		Specialty Crop Block Grant Program - Farm Bill	N/A	\$ 233,190	\$ -	N	Commonwealth of Pennsylvania	44166076		\$ 13,677
10 170		Specialty Crop Block Grant Program - Farm Bill	N/A	\$ 233,190	\$ -	N	Commonwealth of Pennsylvania	44187273		\$ 12,135
10 215		Sustainable Agriculture Research & Education	N/A	\$ 383,336	\$ -	N	University of Vermont	2014-38640-22161		\$ 5,568
10 215		Sustainable Agriculture Research & Education	N/A	\$ 383,336	\$ -	N	University of Vermont	2015-38640-23777		\$ 11,778
10 215		Sustainable Agriculture Research & Education	N/A	\$ 383,336	\$ -	N	University of Vermont	2016-38640-25380		\$ 14,442
10 215		Sustainable Agriculture Research & Education	N/A	\$ 383,336	\$ -	N	University of Vermont	2018-38640-28415		\$ 21,218
10 303		Integrated Programs	N/A	\$ 642,349	\$ -	N	Utah State University	2017-51150-27127		\$ 4,337
10 309		Specialty Crop Research Initiative	N/A	\$ 315,336	\$ -	N	Cornell University	2015-51181-24393		\$ 29,428
10 310		Agriculture and Food Research Initiative (AFRI)	N/A	\$ 7,047,946	\$ -	Y				\$ 38,633
10 311		Beginning Farmer and Rancher Development Program	N/A	\$ 291,043	\$ -	Y			\$ 1,800	\$ 38,994
10 311		Beginning Farmer and Rancher Development Program	N/A	\$ 291,043	\$ -	N	University of Vermont	20157001723898		\$ 57,285
10 328		National Food Safety Training, Education, Extension, Outreach, and Technical Assistance Competitive Grants Program	N/A	\$ 107,568	\$ -	Y				\$ 97,878
10 328		National Food Safety Training, Education, Extension, Outreach, and Technical Assistance Competitive Grants Program	N/A	\$ 107,568	\$ -	N	University of Vermont	USDA NATIONAL INSTITUTE OF FOO		\$ 9,690
10 329		Crop Protection and Pest Management Competitive Grants Program	N/A	\$ 427,940	\$ -	Y				\$ 183,408
10 336		Veterinary Services Grant Program	N/A	\$ 18,894	\$ -	Y				\$ 18,894
10 351		Rural Business Development Grant	N/A	\$ 32,001	\$ -	Y				\$ 32,001
10 458		Crop Insurance Education in Targeted States	N/A	\$ 108,631	\$ -	N	Commonwealth of Pennsylvania	44176580		\$ 26,741
10 458		Crop Insurance Education in Targeted States	N/A	\$ 108,631	\$ -	N	Commonwealth of Pennsylvania	44176584		\$ 39,098
10 460		Risk Management Education Partnerships	N/A	\$ 30,228	\$ -	Y				\$ 30,228
10 500		Cooperative Extension Service	N/A	\$ 28,393,433	\$ -	Y			\$ 12,736	\$ 14,353,405
10 536		CACFP Training Grants	N/A	\$ 39,664	\$ -	N	Commonwealth of Pennsylvania	4300610243		\$ 39,664
10 547		Professional Standards for School Nutrition Employees	N/A	\$ 214,639	\$ -	N	Commonwealth of Pennsylvania	4300569610 4400015622		\$ 214,639
10 558		Child and Adult Care Food Program	N/A	\$ 95,751	\$ -	N	Commonwealth of Pennsylvania	N/A		\$ 95,751
10 559		Summer Food Service Program for Children	Child Nutrition	\$ 26,105	\$ 26,105	N	Commonwealth of Pennsylvania	377-14-067-8		\$ 1,747
10 559		Summer Food Service Program for Children	Child Nutrition	\$ 26,105	\$ 26,105	N	Commonwealth of Pennsylvania	N/A		\$ 5,974
10 559		Summer Food Service Program for Children	Child Nutrition	\$ 26,105	\$ 26,105	N	Commonwealth of Pennsylvania	PDE		\$ 18,384
10 560		State Administrative Expenses for Child Nutrition	N/A	\$ 162,255	\$ -	N	Commonwealth of Pennsylvania	4300582087 4400015622		\$ 83,657
10 560		State Administrative Expenses for Child Nutrition	N/A	\$ 162,255	\$ -	N	Commonwealth of Pennsylvania	4300591061		\$ 78,598
10 561		State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	SNAP	\$ 22,098,331	\$ 22,098,331	N	Commonwealth of Pennsylvania	4100069151	\$ 18,870,109	\$ 22,098,331
10 575		Farm to School Grant Program	N/A	\$ 7,009	\$ -	N	Commonwealth of Pennsylvania	4300515725		\$ 7,009
10 674		Wood Utilization Assistance	N/A	\$ 44,797	\$ -	Y				\$ 44,797
10 675		Urban and Community Forestry Program	N/A	\$ 360,337	\$ -	Y				\$ 360,337
10 678		Forest Stewardship Program	N/A	\$ 109,845	\$ -	Y				\$ 106,678
10 868		Rural Energy for America Program	N/A	\$ 43,184	\$ -	Y				\$ 43,184
10 902		Soil and Water Conservation	N/A	\$ 62,203	\$ -	Y				\$ 25,373
10 902		Soil and Water Conservation	N/A	\$ 62,203	\$ -	N	University of Minnesota	USDA NATURAL RESOURCES CONSERV		\$ 1,827
10 912		Environmental Quality Incentives Program	N/A	\$ 158,604	\$ -	Y				\$ 41,171
10 U01 44187248		Agricultural Marketing Service - Non-Specified	N/A	\$ 16,646	\$ -	N	Commonwealth of Pennsylvania	44187248		\$ 16,646
10 U02 16-CR-11138100-009		Department of Agriculture - Non-Specified	N/A	\$ 331,984	\$ -	Y				\$ 12,357
10 U02 2015-68004-23179		Department of Agriculture - Non-Specified	N/A	\$ 331,984	\$ -	Y				\$ 60,731
10 U02 2017-41590-27105		Department of Agriculture - Non-Specified	N/A	\$ 331,984	\$ -	Y			\$ 45,892	\$ 163,200
10 U02 2017-70020-27236		Department of Agriculture - Non-Specified	N/A	\$ 331,984	\$ -	Y				\$ 24,916
10 U02 44-027-0246000376		Department of Agriculture - Non-Specified	N/A	\$ 331,984	\$ -	Y				\$ 39,776
10 U02 5/1/2019-4/28/2020		Department of Agriculture - Non-Specified	N/A	\$ 331,984	\$ -	Y				\$ 31,004
11 U01 ED17HDQ0200061		Department of Commerce - Non-Specified	N/A	\$ 57,030	\$ -	Y				\$ 50,000
11 U01 YA132318CN0007		Department of Commerce - Non-Specified	N/A	\$ 57,030	\$ -	Y				\$ 7,030
11 U02 ED16PHB3030065		Economic Development Administration - Non-Specified	N/A	\$ 106,268	\$ -	Y				\$ 106,268
11 U04 DA IPA AGREE_ #IP1803		National Institute of Standards and Technology - Non-Specified	N/A	\$ 252,806	\$ -	Y				\$ 252,806
12 300		Basic and Applied Scientific Research	N/A	\$ 7,261,054	\$ -	Y				\$ 10,000
12 900		Language Grant Program	N/A	\$ 110,699	\$ -	Y				\$ 110,699

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY  
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
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CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
12 901		Mathematical Sciences Grant	N/A	\$ 23,491	\$ -	Y			\$	27,299
12 905		CyberSecurity Core Curriculum	N/A	\$ 63,433	\$ -	Y			\$	61,858
12 U01	IPA	Defense Advanced Research Projects Agency - Non-Specified	N/A	\$ 226,643	\$ -	Y			\$	28,409
12 U01	IPA AGREEMENT	Defense Advanced Research Projects Agency - Non-Specified	N/A	\$ 226,643	\$ -	Y			\$	198,234
12 U02	SP4703-17-C-0021	Defense Contract Audit Agency - Non-Specified	N/A	\$ 124,600	\$ -	Y			\$	124,600
12 U03	YENCHKO IPA 2018	Defense Intelligence Agency - Non-Specified	N/A	\$ 244,593	\$ -	Y			\$	244,593
12 U04	7/2/2018-7/1/2020	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	266,716
12 U04	9/1/2017-8/31/2019	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	291,528
12 U04	DN IPA AGREEMENT 2014/2016	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	1,792
12 U04	IPA AGREEMENT WENCHEL 2016	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	25,853
12 U04	N00024-12-D-6404 DO 0495	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	11,232
12 U04	NONE	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	53
12 U04	UNNUMBERED	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	1,021,173
12 U04	UNNUMBERED IPA	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	248,835
12 U04	WENCHEL IPA 2018	Department of the Navy - Non-Specified	N/A	\$ 2,107,098	\$ -	Y			\$	239,916
12 U05	H98230-18-1-0020	National Security Agency - Non-Specified	N/A	\$ 80,621	\$ -	Y			\$	80,621
12 U06	LONG IPA 2017	United States Marine Corps - Non-Specified	N/A	\$ 244,577	\$ -	Y			\$	244,577
16 575		Crime Victim Assistance	N/A	\$ 32,678	\$ -	N	Commonwealth of Pennsylvania	N/A	\$	32,678
16 582		Crime Victim Assistance/Discretionary Grants	N/A	\$ 59,747	\$ -	N	Commonwealth of Pennsylvania	26563	\$	59,747
16 726		Juvenile Mentoring Program	N/A	\$ 56,291	\$ -	N	National 4-H Council	OFFICE OF JUVENILE JUSTICE AND	\$	56,291
16 738		Edward Byrne Memorial Justice Assistance Grant Program	N/A	\$ 138,685	\$ -	N	Commonwealth of Pennsylvania	4300608825	\$	43,892
16 738		Edward Byrne Memorial Justice Assistance Grant Program	N/A	\$ 138,685	\$ -	N	County of Mercer	U.S. DEPARTMENT OF JUSTICE	\$	22,047
16 U01	2016-NE-BX-K001	Office of Justice Programs - Non-Specified	N/A	\$ 901,150	\$ -	Y			\$	901,150
17 245		Trade Adjustment Assistance	N/A	\$ 977,791	\$ -	N	Commonwealth of Pennsylvania	N/A	\$	941,644
17 245		Trade Adjustment Assistance	N/A	\$ 977,791	\$ -	N	Commonwealth of Pennsylvania	PDLI	\$	36,147
17 259		WIOA Youth Activities	WIOA	\$ (75)	\$ (75)	N	Lehigh Valley Workforce Investment Board, Inc.	N/A	\$	(75)
17 600		Mine Health and Safety Grants	N/A	\$ 156,254	\$ -	N	Commonwealth of Pennsylvania	4300602078	\$	78,080
17 600		Mine Health and Safety Grants	N/A	\$ 156,254	\$ -	N	Commonwealth of Pennsylvania	4300614139	\$	78,174
17 603		Brookwood-Sago Grant	N/A	\$ 34,133	\$ -	Y			\$	34,133
19 040		Public Diplomacy Programs	N/A	\$ 4,555	\$ -	N	Partners of Americas	SPE5001GR032	\$	4,555
20 106		Airport Improvement Program	N/A	\$ 64,929	\$ -	Y			\$	64,929
39 003		Donation of Federal Surplus Personal Property	N/A	\$ 5,009	\$ -	N	Commonwealth of Pennsylvania	N/A	\$	5,009
39 U01	47PA0118C0008	General Services Administration - Non-Specified	N/A	\$ 200,707	\$ -	Y			\$	107,360
39 U01	GS-21F-025CA	General Services Administration - Non-Specified	N/A	\$ 200,707	\$ -	Y			\$	93,347
43 008		Education	N/A	\$ 839,935	\$ -	N	Texas State University	NNX14AQ30A	\$	9,998
45 024		Promotion of the Arts Grants to Organizations & Individuals	N/A	\$ 6,630	\$ -	N	Arts Midwest	N/A	\$	4,000
45 025		Promotion of the Arts Partnership Agreements	N/A	\$ 8,500	\$ -	N	Mid-Atlantic Arts Foundation	NATIONAL ENDOWMENT FOR THE ART	\$	8,500
45 312		National Leadership Grants	N/A	\$ 246,241	\$ -	Y			\$	39,084
45 313		Laura Bush 21st Century Librarian Program	N/A	\$ 86,119	\$ -	Y			\$	86,119
47 049		Mathematical and Physical Sciences	N/A	\$ 18,186,906	\$ -	Y			\$	144,494
47 076		Education and Human Resources	N/A	\$ 7,747,482	\$ -	Y			\$	290,249
47 U01	AGS-1723290	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	Y			\$	625
47 U01	DEB 16-19072	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	Y			\$	5,000
47 U01	DUE-1833891	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	Y			\$	42,400
47 U01	HRD 16-49184	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	Y			\$	27
47 U01	ICER-1736333	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	Y			\$	397,327
47 U01	MCB 16-15032	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	Y			\$	101
47 U01	PHY-1836779	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	Y			\$	2,759
47 U01	PHY-1845141	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	Y			\$	3,461
47 U01	181223 PO081721	National Science Foundation - Non-Specified	N/A	\$ 452,922	\$ -	N	North Carolina Central University	N/A	\$	1,222
59 037		Small Business Development Centers	N/A	\$ 95,946	\$ -	N	Kutztown University of Pennsylvania	SMALL BUSINESS ADMINISTRATION	\$	46,664
59 037		Small Business Development Centers	N/A	\$ 95,946	\$ -	N	Kutztown University of Pennsylvania	US SMALL BUSINESS ADMINISTRA	\$	49,282
64 U01	7/1/2016-12/31/2022	Department of Veterans Affairs - Non-Specified	N/A	\$ 603,577	\$ -	Y			\$	8,577

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
64	U01	VA119A-14-D-0029- TO12-36	Department of Veterans Affairs - Non-Specified	N/A	\$ 603,577	\$ -	N	Victor 12, Inc	VETERANS ADMINISTRATION	\$ 595,000
66	436	Surveys, Studies, Investigations, Demonstrations, & Training Grants & Cooperative Agreement	N/A	\$ 11,900	\$ -	N	Rural Community Assistance Partnership, Inc.	83938801		\$ 156
66	436	Surveys, Studies, Investigations, Demonstrations, & Training Grants & Cooperative Agreement	N/A	\$ 11,900	\$ -	N	Rural Community Assistance Partnership, Inc.	X7-83697601-1		\$ 11,744
66	441	Healthy Watersheds Consortium Grant Program	N/A	\$ 16,331	\$ -	N	Commonwealth of Pennsylvania	4400015622		\$ 16,331
66	466	Chesapeake Bay Program	N/A	\$ 440,222	\$ -	N	Conservation Foundation of Lancaster County	N/A		\$ 22,456
66	466	Chesapeake Bay Program	N/A	\$ 440,222	\$ -	N	National Fish And Wildlife Foundation	0602.15.049722	\$ 40,451	\$ 117,827
66	466	Chesapeake Bay Program	N/A	\$ 440,222	\$ -	N	National Fish And Wildlife Foundation	N/A		\$ 1,868
66	708	Pollution Prevention Grants Program	N/A	\$ 81,022	\$ -	Y				\$ 81,022
66	U01	NP96344901	Environmental Protection Agency - Non-Specified	N/A	\$ 94,928	\$ -	Y			\$ 28,314
66	U01	4400015622	Environmental Protection Agency - Non-Specified	N/A	\$ 94,928	\$ -	N	Commonwealth of Pennsylvania	4400015622	\$ 30,768
66	U01	215838	Environmental Protection Agency - Non-Specified	N/A	\$ 94,928	\$ -	N	Extension Foundation	ENVIRONMENTAL PROTECTION AGENC	\$ 11,705
66	U01	SA-2017-55	Environmental Protection Agency - Non-Specified	N/A	\$ 94,928	\$ -	N	Extension Foundation	X8-83698001-0	\$ 24,141
81	041	State Energy Program	N/A	\$ 353,764	\$ -	N	Commonwealth of Pennsylvania	4300586520		\$ 60,612
81	041	State Energy Program	N/A	\$ 353,764	\$ -	N	Commonwealth of Pennsylvania	4300586950		\$ 293,152
81	049	Office of Science Financial Assistance Program	N/A	\$ 9,183,280	\$ -	Y				\$ 6,028
84	002	Adult Education - Basic Grants to States	N/A	\$ 607,456	\$ -	N	Commonwealth of Pennsylvania	064-180039		\$ 7,000
84	002	Adult Education - Basic Grants to States	N/A	\$ 607,456	\$ -	N	Commonwealth of Pennsylvania	099-18-0002	\$ 12,318	\$ 12,475
84	002	Adult Education - Basic Grants to States	N/A	\$ 607,456	\$ -	N	Commonwealth of Pennsylvania	099-19-0002		\$ 148,098
84	002	Adult Education - Basic Grants to States	N/A	\$ 607,456	\$ -	N	Commonwealth of Pennsylvania	099-19-0005		\$ 213,426
84	002	Adult Education - Basic Grants to States	N/A	\$ 607,456	\$ -	N	Commonwealth of Pennsylvania	N/A		\$ 226,457
84	021	Overseas Program - Group Projects Abroad	N/A	\$ 55,847	\$ -	Y				\$ 55,847
84	027	Special Education Grants to States	Special Education (IDEA)	\$ 482,385	\$ 482,385	N	Commonwealth of Pennsylvania	062-180042		\$ 36,659
84	027	Special Education Grants to States	Special Education (IDEA)	\$ 482,385	\$ 482,385	N	Commonwealth of Pennsylvania	062-19-0042		\$ 445,726
84	042	TRIO Student Support Services	TRIO	\$ 714,931	\$ 3,521,023	Y				\$ 714,931
84	044	TRIO Talent Search	TRIO	\$ 1,001,934	\$ 3,521,023	Y				\$ 1,001,934
84	047	TRIO Upward Bound	TRIO	\$ 1,278,687	\$ 3,521,023	Y				\$ 1,220,770
84	047	TRIO Upward Bound	TRIO	\$ 1,278,687	\$ 3,521,023	N	Northwest Tri-County Intermediate Unit	N/A		\$ 57,917
84	048	Career And Technical Education - Basic Grants to States	N/A	\$ 225,861	\$ -	N	Commonwealth of Pennsylvania	FA-119-18-0003		\$ (11,327)
84	048	Career And Technical Education - Basic Grants to States	N/A	\$ 225,861	\$ -	N	Commonwealth of Pennsylvania	FA-119-19-0001		\$ 237,188
84	066	TRIO Educational Opportunity Centers	TRIO	\$ 227,720	\$ 3,521,023	Y				\$ 227,720
84	126	Rehabilitation Services Vocational Rehabilitation Grants to States	N/A	\$ 2,241,343	\$ -	N	Commonwealth of Pennsylvania	4300579829 4400015622		\$ 19,046
84	126	Rehabilitation Services Vocational Rehabilitation Grants to States	N/A	\$ 2,241,343	\$ -	N	Commonwealth of Pennsylvania	211119		\$ 508,464
84	126	Rehabilitation Services Vocational Rehabilitation Grants to States	N/A	\$ 2,241,343	\$ -	N	Commonwealth of Pennsylvania	N/A		\$ 1,713,490
84	126	Rehabilitation Services Vocational Rehabilitation Grants to States	N/A	\$ 2,241,343	\$ -	N	Commonwealth of Pennsylvania	PDLI OVR		\$ 343
84	129	Rehabilitation Long-Term Training	N/A	\$ 106,332	\$ -	Y				\$ 106,332
84	217	TRIO McNair Post-Baccalaureate Achievement	TRIO	\$ 297,751	\$ 3,521,023	Y				\$ 297,751
84	305	Education Research, Development and Dissemination	N/A	\$ 2,198,163	\$ -	Y				\$ 846,498
84	325	Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	N/A	\$ 268,496	\$ -	Y				\$ 268,496
84	365	English Language Acquisition State Grants	N/A	\$ 342,875	\$ -	Y			\$ 69,746	\$ 342,875
84	367	Supporting Effective Instruction State Grants	N/A	\$ 70,702	\$ -	N	Commonwealth of Pennsylvania	4100081419		\$ 44,413
84	367	Supporting Effective Instruction State Grants	N/A	\$ 70,702	\$ -	N	National Writing Project	U.S. DEPARTMENT OF EDUCATION		\$ 15,516
84	367	Supporting Effective Instruction State Grants	N/A	\$ 70,702	\$ -	N	National Writing Project	U367D150004		\$ 3,798
84	U01	4/1/1998-12/31/2099	Department of Education - Non-Specified	N/A	\$ 710,205	\$ -	Y			\$ 69,484
84	U01	H325D170024	Department of Education - Non-Specified	N/A	\$ 710,205	\$ -	Y			\$ 1,173
84	U01	H325K170130	Department of Education - Non-Specified	N/A	\$ 710,205	\$ -	Y			\$ 214,029
84	U01	P103A180026	Department of Education - Non-Specified	N/A	\$ 710,205	\$ -	Y			\$ 187,719
84	U01	P335A170009	Department of Education - Non-Specified	N/A	\$ 710,205	\$ -	Y			\$ 237,800
93	107	Area Health Education Centers	N/A	\$ 466,587	\$ -	Y			\$ 324,563	\$ 466,587
93	113	Environmental Health	N/A	\$ 2,795,281	\$ -	Y				\$ (1,411)
93	173	Research Related to Deafness and Communication Disorders	N/A	\$ 815,484	\$ -	Y				\$ 54,694
93	236	Grants to States to Support Oral Health Workforce Activities	N/A	\$ 5,001	\$ -	N	Pennsylvania Coalition for Oral Health	T12HP27539		\$ 5,001

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY  
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93 241		State Rural Hospital Flexibility Program	N/A	\$ 466,789	\$ -	Y				\$ 466,789
93 242		Mental Health Research Grants	N/A	\$ 5,876,599	\$ -	Y				\$ 13,670
93 243		Substance Abuse& Mental Health Services Projects of Regional & National Significance	N/A	\$ 9,999	\$ -	N	York/Adams Mental Health Intellectual & Development Disabilities Program	1-U79-SM061750-01		\$ 9,999
93 262		Occupational Safety & Health Program	N/A	\$ 334,421	\$ -	N	Marshfield Clinic Research Institute	5U54OH009568-09		\$ 23,980
93 262		Occupational Safety & Health Program	N/A	\$ 334,421	\$ -	N	Marshfield Clinic Research Institute	5U54OH009568-10-00		\$ 35,956
93 279		Drug Abuse and Addiction Research Programs	N/A	\$ 6,223,699	\$ -	Y				\$ 34,020
93 354		Public Health Emergency Response:Cooperative Agreement for Emergency Response	N/A	\$ 80,723	\$ -	N	Commonwealth of Pennsylvania	182225		\$ 80,723
93 398		Cancer Research Manpower	N/A	\$ 416,033	\$ -	Y				\$ 237,279
93 558		Temporary Assistance for Needy Families	TANF	\$ 119,030	\$ 119,030	N	Lehigh Valley Workforce Investment Board, Inc.	N/A		\$ 38,047
93 558		Temporary Assistance for Needy Families	TANF	\$ 119,030	\$ 119,030	N	Lehigh Valley Workforce Investment Board, Inc.	U.S. DEPARTMENT OF HEALTH AND		\$ 80,983
93 563		Child Support Enforcement	N/A	\$ 3,049,995	\$ -	N	Commonwealth of Pennsylvania	4000018811		\$ 4,180
93 563		Child Support Enforcement	N/A	\$ 3,049,995	\$ -	N	Commonwealth of Pennsylvania	N/A		\$ 3,045,815
93 575		Child Care & Development Block Grant	CCDF	\$ 748,091	\$ 730,331	N	Berks County	U.S. DEPARTMENT OF HEALTH AND		\$ 596,630
93 575		Child Care & Development Block Grant	CCDF	\$ 748,091	\$ 730,331	N	Child Care Consultants, Inc.	U.S. DEPARTMENT OF HEALTH AND		\$ 65,147
93 575		Child Care & Development Block Grant	CCDF	\$ 748,091	\$ 730,331	N	Georgia Department of Early Care and Learning	U.S. DEPARTMENT OF HEALTH AND		\$ 53,446
93 575		Child Care & Development Block Grant	CCDF	\$ 748,091	\$ 730,331	N	Vermont Department for Children and Families	10601VTCCDF		\$ 15,108
93 758		Preventive Health and Health Services Block Grant funded solely with Prevention and Public Health Funds (PPHF)	N/A	\$ (6,317)	\$ -	N	Commonwealth of Pennsylvania	4100074815		\$ (6,317)
93 788		Opioid STR	N/A	\$ 522,384	\$ -	Y				\$ 142,478
93 837		Cardiovascular Diseases Research	N/A	\$ 5,531,561	\$ -	Y				\$ 41,535
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	N/A	\$ 6,899,966	\$ -	Y				\$ 9,532
93 847		Diabetes, Digestive, and Kidney Diseases Extramural Research	N/A	\$ 6,899,966	\$ -	N	University of South Florida	N/A		\$ 5,530
93 853		Extramural Research Programs in the Neurosciences and Neurological Disorders	N/A	\$ 5,491,157	\$ -	Y				\$ 50,524
93 859		Biomedical Research and Research Training	N/A	\$ 17,389,157	\$ -	Y				\$ 855,455
93 879		Medical Library Assistance	N/A	\$ 283,022	\$ -	Y				\$ 242,469
93 879		Medical Library Assistance	N/A	\$ 283,022	\$ -	N	University of Pittsburgh	5UG4LM012342-03		\$ 9,397
93 884		Grants for Primary Care Training and Enhancement	N/A	\$ 527,767	\$ -	Y				\$ 527,767
93 913		Grants to States for Operation of State Offices of Rural Health	N/A	\$ 5	\$ -	Y				\$ 5
93 940		HIV Prevention Activities Health Department Based	N/A	\$ 308,909	\$ -	N	Commonwealth of Pennsylvania	4400015622 4300570616	\$ 11,633	\$ 308,909
93 945		Assistance Programs for Chronic Disease Prevention and Control	N/A	\$ (803)	\$ -	N	Commonwealth of Pennsylvania	4100074815		\$ (803)
93 959		Block Grants for Prevention and Treatment of Substance Abuse	N/A	\$ 146,407	\$ -	N	Commonwealth of Pennsylvania	4300588345		\$ 19,292
93 968		Funding in Support of the Pennsylvania Rural Health Model	N/A	\$ 275,000	\$ -	N	Commonwealth of Pennsylvania	4400015622		\$ 275,000
93 976		Primary Care Medicine and Dentistry Clinician Educator Career Development Awards	N/A	\$ 14,545	\$ -	Y				\$ 14,545
93 989		International Research and Research Training	N/A	\$ 94,564	\$ -	Y				\$ (224)
93 991		Preventive Health and Health Services Block Grant	N/A	\$ 75,256	\$ -	N	Commonwealth of Pennsylvania	4100081397		\$ 75,256
93 U01	ATB-202	Department of Health and Human Services - Non-Specified	N/A	\$ 878,755	\$ -	N	AtoxBio	U.S. DEPARTMENT OF HEALTH AND		\$ 1,383
93 U01	211115	Department of Health and Human Services - Non-Specified	N/A	\$ 878,755	\$ -	N	Child Care Consultants, Inc.	U.S. DEPARTMENT OF HEALTH AND		\$ 4,804
93 U01	141597-216	Department of Health and Human Services - Non-Specified	N/A	\$ 878,755	\$ -	N	Commonwealth of Pennsylvania	141597-216		\$ 6,391
93 U01	1C1CMS331021-01-00	Department of Health and Human Services - Non-Specified	N/A	\$ 878,755	\$ -	N	Joslin Diabetes Center	N/A		\$ 1,289
93 U01	200868	Department of Health and Human Services - Non-Specified	N/A	\$ 878,755	\$ -	N	Northwest Institute of Research	4100029171		\$ (3)
93 U01	178209	Department of Health and Human Services - Non-Specified	N/A	\$ 878,755	\$ -	N	Pennsylvania Association of Community Health Centers	N/A		\$ 4,559
93 U01	UNIV OF PA	Department of Health and Human Services - Non-Specified	N/A	\$ 878,755	\$ -	N	University of Pennsylvania	N/A		\$ 860,332
93 U02	4300564573 4300605091	Food and Drug Administration - Non-Specified	N/A	\$ 4,629	\$ -	N	Commonwealth of Pennsylvania	4300564573 4300605091		\$ 4,629
93 U03	9/1/2018-8/31/2019	Health Resources and Services Administration - Non-Specified	N/A	\$ 6,264	\$ -	Y				\$ 6,264
93 U04	1 F30 CA214010-01	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	Y				\$ 14,457
93 U04	1 F30 ES030607-01	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	Y				\$ 4,474

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY  
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
FOR THE YEAR ENDED JUNE 30, 2019**

CFDA Number	Additional Award Identification	Name of Federal Award	Cluster Name	Federal Program Total	Cluster Total	Direct Award	Name of Pass-through Entity	Identifying number assigned by the Pass-through Entity	Amount Passed Through to Subrecipients	Amount Expended
93	U04	1 K02 HP30809-01-00	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	Y			\$ 168,055
93	U04	1 TL1 TR002016-01	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	Y			\$ 183,425
93	U04	2 H95RH00125-26-00	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	Y			\$ 186,739
93	U04	2 U77HP06111-13-00	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	Y		\$ 203,327	\$ 250,266
93	U04	4/1/2019-3/31/2020	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	Y			\$ 49,304
93	U04	219446	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	N	Daiichi Sankyo, Inc.	DS1040-A-U103	\$ 6,267
93	U04	LTS13930	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	N	Genzyme Corporation	CTO1677	\$ 3,219
93	U04	TRINITY-CLEEX11XUS29	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	N	Norvats Pharmaceuticals Corporation	139556	\$ 9,366
93	U04	BRE 15-016	National Institutes of Health - Non-Specified	N/A	\$ 850,343	\$ -	N	Pfizer Inc	CTO #1825	\$ (25,229)
99	U01	PC-15-8-067	Peace Corps - Non-Specified	N/A	\$ 16,875	\$ -	Y			\$ 16,875
99	U02	R2810-ONC-1423	United States Government - Non-Specified	N/A	\$ 3,266	\$ -	N	Regeneron Pharmaceuticals, Inc	PSHCI 15-053	\$ 3,266
								<b>Total</b>	<b>\$ 85,146,184</b>	<b>\$ 1,300,445,399</b>

See notes to schedule of expenditures of federal awards.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

**1. BASIS OF PRESENTATION AND ACCOUNTING**

The purpose of the Schedule of Expenditures of Federal Awards (“the Schedule”) is to present a summary of the activities of The Pennsylvania State University (“the University”) for the year ended June 30, 2019 which have been financed by the United States Government. The federal award information is presented in accordance with the provisions of Office of Management and Budget (“OMB”) Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (“Uniform Guidance”). The Schedule is prepared on the accrual basis of accounting.

Expenditures for federal awards are determined using the cost accounting principles and procedures set forth in OMB Circular A-21, *Cost Principles for Educational Institutions*, and the uniform administrative requirements as set forth in OMB Circular A-110, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations*, or the administrative and cost principles contained in Uniform Guidance, as applicable. Amounts passed through to subrecipients represent amounts paid to a third party for effort performed in support of the University’s federal awards.

Because the Schedule presents only a selected portion of the activities of the University, it is not intended to, and does not, present the financial position, results of operations or cash flows of the University.

The University’s consolidated financial statements are prepared on the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America (GAAP). The Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) is the source of Authoritative GAAP. The University’s consolidated financial statements include statements of financial position, activities and cash flows. In accordance with FASB ASC requirements, net assets and the changes in net assets are classified as with donor restrictions or without donor restrictions.

Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years. Pass-through entity identifying numbers are presented where available.

**2. INDIRECT COST RATE**

The University has not elected to use the 10% de minimis indirect cost rate.

**3. FEDERAL LOAN PROGRAMS**

The University administers the following federal loan programs:

Title	CFDA No.	Federal Capital Contribution for the Year Ended June 30, 2019	Loan Expenditures And Disbursements	Outstanding Balance at June 30, 2019
Federal Perkins Loan Program	84.038	\$ -	\$ -	\$ 37,052,513
Health Professions Student Loan Program	93.342	-	-	11,225

The above expenditures for the loan programs include disbursements and expenditures such as loans to students and administrative expenditures. The Schedule only includes administrative allowances charged to the loan program.

#### 4. FEDERAL DIRECT LOAN PROGRAM

The University participates in the Federal Direct Student Loan Program (CFDA No. 84.268) including Federal Stafford Loans and Federal PLUS Loans. Loan disbursements under the program for the year ended June 30, 2019 totaled \$507,515,367.

#### 5. SUMMARY SCHEDULE

Programs:	CFDA No.	Subrecipient Expenditures	Expenditures
Research and development cluster:			
Direct funding		\$ 62,239,344	\$ 535,292,290
Pass-through funds – Commonwealth of Pennsylvania		145,171	2,526,413
Pass-through funds – other institutions		<u>3,169,094</u>	<u>60,128,382</u>
Total research and development cluster		<u>65,553,609</u>	<u>597,947,085</u>
Student financial aid cluster (direct):			
Department of Education:			
Federal Supplemental Educational Opportunity Grant	84.007	-	5,522,734
Federal Work Study Program	84.033	-	2,528,065
Federal Perkins Loan Program	84.038	-	37,052,513
Federal Pell Grant Program	84.063	-	82,555,395
Federal Direct Loan Program	84.268	-	507,515,367
Department of Health and Human Services:			
Health Professions Student Loan Program	93.342	-	<u>11,225</u>
Total student financial aid cluster		-	<u>635,185,299</u>
Other programs:			
Rehabilitation Services			
Vocational Rehabilitation Grants to States	84.126	-	2,241,343
Other direct funding		658,064	32,343,405
Other pass-through funds – Commonwealth of Pennsylvania		18,894,060	29,628,710
Other pass-through funds – other institutions		<u>40,451</u>	<u>3,099,557</u>
Total other programs		<u>19,592,575</u>	<u>67,313,015</u>
Total programs		<u>\$ 85,146,184</u>	<u>\$1,300,445,399</u>



## **INDEPENDENT AUDITORS' REPORT 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  
The Pennsylvania State University  
University Park, Pennsylvania

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of The Pennsylvania State University and its subsidiaries (the "University"), which comprise the consolidated statement of financial position as of June 30, 2019, and the related consolidated statement of activities and cash flows for the year then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated October 25, 2019.

The consolidated financial statements of the University include various subsidiaries as outlined in Note 1 to the consolidated financial statements. The financial statements of Penn State Health, including subsidiaries Nittany Health, Inc.; Saint Joseph's Medical Group; Saint Joseph's Regional Health Network; Penn State Health Community Medical Group; Central PA Health Network; Hampden Medical Center; and the Milton S. Hershey Medical Center and The Corporation for Penn State subsidiaries, including The Pennsylvania State University Philanthropic Fund; Ben Franklin Technology Center of Central & Northern PA; and Penn State Research Foundation, which were audited by us; and the financial statements of Nittany Insurance Company, which was audited by other auditors, were audited in accordance with generally accepted auditing standards, but were not audited in accordance with *Government Auditing Standards* and, accordingly, are not covered by our reports in accordance with *Government Auditing Standards* and accordingly this report does not include reporting on internal control over financial reporting or instances of reportable noncompliance associated with these entities.

### **Internal Control Over Financial Reporting**

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

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify a deficiency in internal control, described in the accompanying schedule of findings and questioned costs as item 2019-1, that we consider to be a significant deficiency.

### **Compliance and Other Matters**

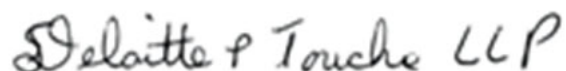
As part of obtaining reasonable assurance about whether the University's consolidated financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct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

### **The University's Response to Findings**

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

### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the 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.

The image shows a handwritten signature in cursive script that reads "Deloitte & Touche LLP". The signature is written in dark ink on a white background.

October 25, 2019



**Deloitte & Touche LLP**  
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USA  
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## **INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM; REPORT ON INTERNAL CONTROL OVER COMPLIANCE; AND REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS REQUIRED BY THE UNIFORM GUIDANCE**

To the Board of Trustees of  
The Pennsylvania State University  
University Park, Pennsylvania

### **Report on Compliance for Each Major Federal Program**

We have audited The Pennsylvania State University and its subsidiaries (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, 2019. The University's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Our audit, described below, did not include the operations of Penn State Health, including subsidiaries Nittany Health, Inc.; Saint Joseph's Medical Group; Saint Joseph's Regional Health Network; Penn State Health Community Medical Group; Central PA Health Network; and Hampden Medical Center and The Corporation for Penn State subsidiaries, including Nittany Insurance Company; Penn State Recycling Markets Center; The Pennsylvania State University Philanthropic Fund; Research Park Management Corporation; Research Park Hotel Corporation; Ben Franklin Technology Center of Central & Northern PA; and Penn State Research Foundation, because these subsidiaries did not receive federal awards subject to audit in accordance with the Uniform Grant Guidance. The University's consolidated financial statements include the Pennsylvania College of Technology ("PCT"), which expended \$56,043,452 in federal awards which are not included in the University's schedule of expenditures of federal awards during the year ended June 30, 2019. Our audit, described below, did not include the operation of PCT because PCT engaged other auditors to perform an audit in accordance with the *OMB Compliance Supplement* for the year ended June 30, 2019.

### **Management's Responsibility**

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

### **Auditors' Responsibility**

Our responsibility is to express an opinion on compliance for each of the University's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the

audit requirements of Title 2 U.S. *Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

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

### ***Opinion on Each Major Federal Program***

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2019.

### **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 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.

**Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance**

We have audited the consolidated financial statements of the University as of and for the year ended June 30, 2019, and have issued our report thereon dated October 25, 2019, which contained an unmodified opinion on those consolidated financial statements. 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 the 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 expenditure of federal awards is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

*Deloitte & Touche LLP*

March 16, 2020

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF FINDINGS AND QUESTIONED COSTS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

<b>SECTION I—SUMMARY OF AUDITORS’ RESULTS</b>		
<i>Financial Statements</i>		
Type of report the auditor issued on whether the financial statements audited were prepared in accordance with GAAP: <b>UNMODIFIED</b>		
<b>Internal control over financial reporting:</b>		
• Material weakness (es) identified?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
• Significant deficiency (ies) identified?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> none reported
Noncompliance material to financial statements noted?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
<b>Federal Awards</b>		
Internal control over major federal programs:		
• Material weakness (es) identified?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
• Significant deficiency (ies) identified?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> none reported
Type of auditor’s report issued on compliance for major federal programs: <b>Unmodified.</b>		
Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no
<b>Identification of major federal programs:</b>		
<ul style="list-style-type: none"> <li>• Student Financial Assistance Cluster - (See “Schedule of Expenditures of Federal Awards” for Cluster CFDA)</li> <li>• Rehabilitation Services Vocational Rehabilitation Grants to States– CFDA 84.126</li> </ul>		
Dollar threshold used to distinguish between Type A and Type B programs:	\$ 3,901,336	
Auditee qualified as low-risk auditee?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no

# THE PENNSYLVANIA STATE UNIVERSITY

## SECTION II — FINANCIAL STATEMENT FINDINGS

2019-1 **Criteria** - Pledges (both binding and non-binding) are required to be reconciled between the University's financial accounting records and the University's Advanced Web Access pledge tracking system to ensure that both the contributions receivable and the non-binding pledges footnote disclosures in the Consolidated Statements of Financial Position are complete and accurate.

**Condition** - This condition was identified by management during discussions held between Financial Reporting staff and Development department ("Development") staff to assess the procedural impact of two of the new FASB accounting standards updates that were effective for the year ended June 30, 2019 (ASU 2016-14, "*Not-for-Profit Entities (Topic 958): Presentation of Financial Statements of Not-for-Profit Entities*" and ASU 2018-08, "*Not-for-Profit Entities (Topic 958): Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made*"). During these discussions, it was noted that the pledge detail provided annually by Development did not include all estate pledges, which impacted the footnote disclosure of non-binding pledges. A large subset of non-binding estate pledges was excluded from the detail. Additionally, the detail included certain non-binding pledges, other than estate pledges, that were not identified as non-binding, which resulted in an overstatement of contributions receivable within the Consolidated Statements of Financial Position.

**Cause** - The significant deficiency was a result of a combination of a prior period misstatement of contributions receivable and a misstatement of the prior period non-binding pledges footnote disclosure.

**Effect** - The effect was an understatement of non-binding pledges footnote disclosure, and an overstatement of contributions receivable within the Consolidated Statements of Financial Position.

**Recommendation** - We recommend that management remediate the controls associated with the communication between Financial Reporting staff and Development. As part of the remediated control, we recommend that management create a process whereby pledge information generated by the Development department is evaluated in accordance with Generally Accepted Accounting Principles ("GAAP") to determine if the pledges represent binding contributions or non-binding pledges to donate. Further, management should increase the frequency of such communications to the extent that the communications are sufficient to prevent material misstatements of contributions within the annual consolidated financial statements.

**Views of Responsible Officials** - The frequency of communications between Financial Reporting staff and Development staff is increasing in the form of quarterly meetings, with meetings held in October 2019 and January 2020 and the remaining meetings scheduled for fiscal year 2020. In addition, Development staff will now be providing Financial Reporting staff with all pledge data from their AWA system to ensure nothing is omitted. Management is currently in the process of developing a procedure to evaluate the appropriate classification of pledges in AWA as either binding or non-binding in accordance with GAAP with plans to have this procedure in place by June 30, 2020.

## SECTION III—FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

The audit disclosed no items required to be disclosed in this section.

**THE PENNSYLVANIA STATE UNIVERSITY**  
**SCHEDULE OF STATUS ON PRIOR YEAR FINDINGS**  
**FOR THE YEAR ENDED JUNE 30, 2019**

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Prior year audit Schedule of Findings and Questioned Costs did not contain any findings; therefore no items required to be reported in this section.

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<b>REFERENCE # 2019-1</b>	<b>FINANCIAL STATEMENT FINDING</b>
<b>Finding</b>	Pledges (both binding and non-binding) are required to be reconciled between the University’s financial accounting records and the University’s Advanced Web Access pledge tracking system to ensure that both the contributions receivable and the non-binding pledges footnote disclosures in the Consolidated Statements of Financial Position are complete and accurate. This condition was identified by management during discussions held between Financial Reporting staff and Development department (“Development”) staff to assess the procedural impact of two of the new FASB accounting standards updates that were effective for the year ended June 30, 2019 (ASU 2016-14, “Not-for-Profit Entities (Topic 958): Presentation of Financial Statements of Not-for-Profit Entities” and ASU 2018-08, “Not-for-Profit Entities (Topic 958): Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made”). During these discussions, it was noted that the pledge detail provided annually by Development did not include all estate pledges, which impacted the footnote disclosure of non-binding pledges. A large subset of non-binding estate pledges was excluded from the detail. Additionally, the detail included certain non-binding pledges, other than estate pledges, that were not identified as non-binding, which resulted in an overstatement of contributions receivable within the Consolidated Statements of Financial Position. The significant deficiency was a result of a combination of a prior period misstatement of contributions receivable and a misstatement of the prior period non-binding pledges footnote disclosure. The effect was an understatement of non-binding pledges footnote disclosure, and an overstatement of contributions receivable within the Consolidated Statements of Financial Position.
<b>Recommendation</b>	We recommend that management remediate the controls associated with the communication between Financial Reporting staff and Development. As part of the remediated control, we recommend that management create a process whereby pledge information generated by the Development department is evaluated in accordance with Generally Accepted Accounting Principles (“GAAP”) to determine if the pledges represent binding contributions or non-binding pledges to donate. Further, management should increase the frequency of such communications to the extent that the communications are sufficient to prevent material misstatements of contributions within the annual consolidated financial statements.
<b><u>Corrective Action Plan</u></b>	The frequency of communications between Financial Reporting staff and Development staff is increasing in the form of quarterly meetings, with meetings held in October 2019 and January 2020 and the remaining meetings scheduled for fiscal year 2020. In addition, Development staff will now be providing Financial Reporting staff with all pledge data from their AWA system to ensure nothing is omitted. Management is currently in the process of developing a procedure to evaluate the appropriate classification of pledges in AWA as either binding or non-binding in accordance with GAAP with plans to have this procedure in place by June 30, 2020.
<b>Action Date</b>	Ongoing
<b>Final Implementation Date</b>	June 30, 2020
<b><u>Name And Phone # Of Person Responsible</u></b>	Joseph J. Doncsecz, Associate Vice President for Finance and Corporate Controller (814) 865-1355